



Student Study Project

on

Effect of Brassinosteroids on the Seed Germination and Morphological Characters of Plumbago Zeylanica

by

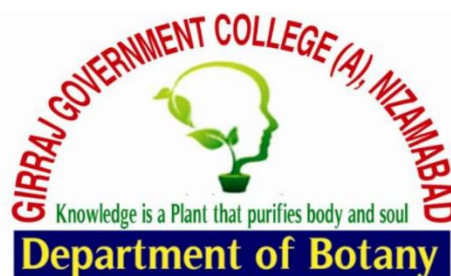
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Under Supervision

Of

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DECLARATION

We hereby declare that the study project entitled “[Effect of Brassinosteroids on Seed Germination and Morphological Characters of Plumbago zeylanica](#)” being submitted to Commissionerate of Collegiate Education, Telangana State. The original work done by us under the supervision of [Deepak Parmar](#) and has not been submitted previously and not formed the basis for the award of any other degree, diploma, fellowship or any other similar titles.

Akula Meghana

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Pilli Unjala

Pitla Vishishta

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CERTIFICATE

This is to certify that the Study project entitled “Effect of Brassinosteroids on Seed Germination and Morphological Characters of *Plumbago zeylanica*” submitted to CCE TS, Hyderabad by Akula Meghana (1905-5005-572-001), Lingari Harini (1905-5005-572-041), Pilli Unjala (1905-5005-572-055), Pitla Vishishta (1905-5005-572-056), Thirukovela Vasavi(1905-5005-572-071) is bonafide work carried out by the students of B.Sc. 3rd Year under the supervision of Deepak Parmar and have successfully completed the Jignasa students study project -2021. The entire project work-done by him/her is found: Excellent/Good/Satisfactory.

Introduction

Certain substances affect the growth quite miraculously. These substances are referred to as hormones. Hormone is a Greek word derived from *hormao* which means to urge or to stimulate (1). Thimann (1948) suggested the use of term phytohormone for hormones of plants. According to him phytohormones are organic substances which are naturally produced in plants, control the growth or other physiological functions at a site remote from its place of production and active in extremely minute quantities. So, hormones are organic substances synthesized in one tissue migrates to another tissue of the plant wherein very minute quantity affects the growth.

Steroids play a role as essential hormones in plants as well as in animals. Plants produce many steroids, some of which are recognized as hormones in animals (2,3,4).

Mitchell et al (5) found that pollen from rape plant (*Brassica napus* L.) and alder tree (*Alnus glutinosa* L.), produced an unusual response that combined elongation swelling and curvature. They proposed that the pollen of rape plant contains a new group of lipoidal hormones, termed brassins. The extraction and identification by Grove et al (6) confirmed BRs as the sixth plant hormone.

Brassinosteroids are found in gymnosperms, monocotyledonous and dicotyledonous plants, and in algae. New studies confirm that BS are obligatory plant constituents, with the highest concentrations being found in the reproductive organs and in growing tissues like pollen grains, immature seeds and shoots.

Brassinosteroids (BRs) are a class of polyhydroxylated steroidal hormones have multiple function on various physiological and metabolic process, such as cell elongation, cell division, senescence, vascular differentiation, reproduction, photomorphogenesis, and responses to various stresses (11,12).

BR application causes pronounced elongation of hypocotyls, epicotyls, and peduncles of dicots, as well as coleoptiles and mesocotyls of monocots.

Studies in *Pisum sativum* L. provided that BRs are essential for plant growth and development (10).

In Groundnut plants treatment with brassinolide and 13-epibrassinolide resulted in a substantial increase in the vegetative growth of the plant. The growth promotion in groundnut by exogenous application of brassinosteroids was associated with enhanced nucleic acid levels (13). In wheat increase in photosynthesis was observed with homobrassinolide treatment (14).

Plumbago zeylanica

Plumbago zeylanica L. is a multifunctional medicinal herb of Angiosperms belonging to family Plumbaginaceae. A native of South Asia, the species is distributed throughout the tropics and subtropics. The sap of *P. zeylanica* causes discoloration of the skin resembling the color of lead accounting for its latin name *Plumbago* and the popular name leadwort. *Plumbago* is commonly known as Chitraka in Hindi which means one which renders discoloration to skin.

It is widely distributed in India from Central India to West Bengal, Maharashtra and grows in all districts of Tamilnadu, Andhra Pradesh, Telangana, Karnataka and Kerala mostly in wild.

Plant has many secondary metabolites like plumbagin, biplumbagin, chloroplumbagin zeylanone, isozeylanone, sitosterol, stigmasterol, campesterol, and hydroflavinolplumbaginol, chitanone, glucopyranoside and sitosterol

Different parts of *Plumbago zeylanica* L. have been utilized since time unknown for its wide variety of medicinal properties and is a very potent medicinal herb. In Ayurveda, it is considered as rasayan.

The plant is used for protective role in enlarged liver and spleen. It is suggested as a rejuvenator and also used in chronic colds and cough. [13, 14]. It has also been used in digestive disorders like loss of appetite and indigestion. Plant is also suggested in piles, worms, colitis, ascites and liver diseases. Flowers are used as digestant [15]. Leaves has aphrodisiac property, used in curing the infections and dysentery. Leaves are also used in treatment of scabies. Seeds are used in preparation of decoction which is given to reduce the muscular pain [16,17].

Plant has antibiotic, anti-malarial, anti-diabetic, anti-cancer activity.

Objectives:

- (1) to evaluate the effect of homobrassinolide (HBL) on seed germination and morphological growth of *P. zeylanica* ;
- (2) to identify its most active concentrations (i.e., to find out the suitable dose of application of homobrassinolide for obtaining a higher yield of *P. zeylanica*;
- (3) to get an idea about the appropriate number and stage of the crop with regard to the application of homobrassinolide for obtaining a better yield;
- (4) to study the effect of pre-sowing with homobrassinolide on the seed germination of *P. zeylanica*;
- (4) to study the effects foliar spray treatments of BRs on morphological parameters (shoot length and number of leaves, leaf area and root length);

Materials and Methods:

To understand the impact of Homobrassinolide on the *Plumbago zeylanica*, two experimental approaches were adopted. They were:

- A. Seed germination and Seedling growth studies,
- B. Whole plant studies.

Seedling Germination and Seedling Growth

Healthy seeds of uniform size of *Plumbago zeylanica* were selected by a primary method of floating them in water and viable seeds, which settled down in water, were taken for study. Then the seeds were dried and scarified with sand. Then the seeds were surface sterilized with 0.5% (v/v) sodium hypochlorite and washed thoroughly with sterile distilled water. They were soaked for 24 hours in either in:

1. Distilled water (Control)
2. 4 μ M, 8 μ M and 16 μ M Homobrassinolide.

Twenty seeds from each treatment were placed in each of sterile petridishes layered with germination paper. The petridishes were supplied with 5 ml of the respective test solutions. The seeds were allowed to germinate in dark at room temperature. 5 ml more of test solutions were added on 4th day of the experiment.

Number of seeds germinated at the end of 12, 24, 36 hours. Emergence of radicle was taken as the criteria for germination.

Then the seeds were observed for 15 days (at every alternate days i.e., 2 day, 4 day, 6 day, 8 day, 10 day, 12 day and 15 day).

OBSERVATIONS

Following Germination and Seedling Growth parameters were determined according to following formulae at final days of observation:

(A) Germinability (%G) = Total No. of Seeds Germinated X 100 / Total No. of Seeds Sown

(B) Germination Rate Index (GRI) = No. of normal seedlings of days x / Days X X = No. of days from seed soaking

(C) Coefficient of Velocity of Germination (CVG)- Kotowski (1926) $CVG = \frac{\text{Sum of } n \times 100}{\text{Sum of } (nt)}$;

Where, n = No. of seeds emerged on the day Where, t = time or days of soaking

(E) Relative Seed Germination (RSG) $RSG = \frac{\text{No. of seeds germinated in the extract} \times 100}{\text{No. of seeds germinated in the control}}$

(F) Relative Root Elongation (RRE) $RRE = \frac{\text{Mean root elongation in the extract} \times 100}{\text{Mean root elongation in the control}}$

(G) Growth Index (GI) = % seed germination x % root elongation/100

(I) Vigour Index (VI) = Germination % x Seedling length (Abdul-Baki and Anderson, 1973).

Whole Plant Studies

Whole plant studies was done based on Morphological parameters.

6 Plumbago seeds were sown in each earthen pot at a depth of 1.5 cm. Plumbago plants were watered at regular intervals

Exogenous application of Homobrassinolide (HBL) to Plumbago plants were supplied at three different concentrations (4 μ M, 8 μ M and 16 μ M)on 40th, 50th , 60th 70th and 80th day from germination. The experimental work was carried out in triplicates.

The control Plumbago plants were also maintained in triplicates which were supplied with exogenous spray of distilled water.

To investigate the effect of Homobrassinolide on the morphological growth of the PZ, the root length, root diameter, shoot length, leaf area, fresh weight and dry weight were recorded. The plants were uprooted carefully from the pots and dipped in water to removed the sand particles and later plants were blotted.

Root length:

The length of the root was measured using a scale and values are expressed in centimeters.

Root Diameter:

The diameter of the root was measured using a screw guage and expressed in centimeters.

Shoot Length:

The length of the shoot was measured using a scale and values are expressed in centimeters.

Number of Leaves per plant:

The Number of Leaves was recorded by direct counting method

Leaf area per plant (cm²):

Leaf areas per plant was determined following the formula of Carleton and Foote (1965).

Leaf area (cm²) = maximum leaf length x maximum leaf width x 0.75. (0.75 = Correction factor)

The leaf areas was multiplied by total number of leaves to calculate total leaf area per plant

Result Analysis

Seed Germination Test:

The present study on different seed germination parameters and seedling growth revealed an overall increase in seed germination and seedling growth parameters with Homobrassinolide. All concentrations increased the germination percentage (G%) against the control. The germination percentage was 65%, 40%, 35% with 16 μ M, 8 μ M and 4 μ M concentrations respectively when compared to the control which was 20% on the second DAP. The germination percentage was 75%, 50%, 40% with 16 μ M, 8 μ M and 4 μ M concentrations respectively when compared to the control which was 25% on the fourth DAP.

The germination rate index (GRI) increased in all the treatments. GRI was 6.5, 4, 3.5 with 16 μ M, 8 μ M and 4 μ M concentrations respectively when compared to the control which was 2 on the second DAP. GRI was 3.75, 2.5, 2 with 16 μ M, 8 μ M and 4 μ M concentrations respectively when compared to the control which was 1.75 on the fourth DAP.

Co-efficient of Velocity of germination (CVG) also significantly increased in all the treatments. The CVG was 86%, 80% and 77% with 16 μ M, 8 μ M and 4 μ M concentrations respectively over control on the second DAP. CVG observed was 78%, 71% and 66% with 16 μ M, 8 μ M and 4 μ M concentrations respectively over control on the fourth DAP.

Relative Seed Germination (RSG) also increased in all the treatments. RSG was 325, 200 and 175 with 16 μ M, 8 μ M and 4 μ M concentrations respectively when compared to control on the second DAP. 300, 200 and 160 RSG with 16 μ M, 8 μ M and 4 μ M concentrations respectively was recorded on the fourth DAP when compared to the control.

Relative Root Elongation (RRE) also increased with all the treatments. RRE was 152%, 149% and 124% with 16 μ M, 8 μ M and 4 μ M concentrations respectively on the second DAP when compared to the control. RRE was 180%, 149% and 144% with 16 μ M, 8 μ M and 4 μ M concentrations respectively on the fourth DAP when compared to the control.

Germination Index (GI) also significantly increased with all the treatments of BRs. GI was 99, 59 and 43 with 16 μ M, 8 μ M and 4 μ M concentrations respectively on the second DAP when compared to the control. GI was 135, 79, 57 with 16 μ M, 8 μ M and 4 μ M concentrations respectively on the fourth DAP when compared to the control.

Vigour Index (VI) increased significantly with all the treatments of BRs. VI was 171, 103, 75 with 16 μ M, 8 μ M and 4 μ M concentrations respectively on the second DAP when compared to the control. VI was 261, 153, 111 with 16 μ M, 8 μ M and 4 μ M concentrations respectively on the fourth DAP when compared to the control.

Whole Plant Studies: Morphological Parameters



	Control	4 μ m	8 μ m	16 μ m
Root Length	39 \pm 3.5	59 \pm 7.76	53.33 \pm 2.84	68 \pm 6.8
Root Diameter	3.8 \pm .211	4.7 \pm 0.3	5.03 \pm .61	7.03 \pm .606
Shoot Length	34 \pm 2.3	41.66 \pm 5.2	51.33 \pm 5.92	52.66 \pm 6.35
Number of Leaves	23 \pm 1.6	56 \pm 5.6	69 \pm 8.6	89 \pm 5.5
Leaf Length	1325.4	3679.2	4825.17	6492.3

Maximum growth of Root Length (74%), Root Diameter (92%), Shoot Length(64%), Number of Leaves (221%), Leaf area (6492 cm²) was observed in 16 μ m concentration when compared with the control. Brassinosteroids stimulates cell elongation and cell division which is underlined by physiological ways such as control of modification of cell wall, carbohydrate assimilation(18).

Conclusion:

Pre-treatment and exogenous application of Homobrassinolide increased the Seed germination and seedling growth and also the morphological parameters in *P. zeylanica* which is dose dependent. The most active concentration for seed germination and seedling growth and growth in the morphological parameters is 16 μ m concentration.

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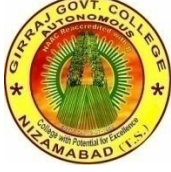
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A STUDY PROJECT

ON

**“THE NEW WAY OF BUSINESS WITH SPECIAL REFERENCE
TO FOOD BOOKING APPS”**

(A Comprehensive Study on ZOMATO in Nizamabad)



Submitted

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Submitted to

Commissionerate of Collegiate Education, Hyderabad in partial fulfillment of the

“JIGNASA” Competitions



Department of Commerce and Business Management

Girraj Government College(A), Nizamabad, Telangana State

(Affiliated to Telangana University, Dichpally, Nizamabad)

2021-22

AKNOWLEDGEMENTS

We are grateful to the Commissioner, Commissionerate of Collegiate Education, Hyderabad for their kindness in permitting us to do this Study Project.

It is a great privilege to work under our guide who is a source of energy and scholarly advices. The valuable learning's, practical insight, unflinching support and constant encouragement given by the respected guru, **Dr.G.Linganna** M.Com.,B.Ed.,Ph.D.

We express our wholehearted gratitude to **Dr.E.Laxminarayana, Principal (FAC)** for their co-operation and encouragement. We place our heartfelt thanks to **Dr.S.Suresh** HOD Commerce and Business Management, **PVV Satya Varaprasad** Asst. Professor of Commerce, **Dr.N.Jyothi** Asst. Professor of Commerce, Smt. **K.Ranjitha** Asst. Professor of Commerce and **Dr. B.Sumalatha** Asst. Professor of Commerce and other faculty Members & Non-Teaching staff of this college.

We record with pleasure the deep affection shown by our parents and all other our family members and friends for their valuable help and affection shown throughout our career.

We dedicated this study project to this college.

Names of the Students

- 1. Nikitamaheshwari*
- 2. Vanshitha Lakhane*
- 3. Meghana Bansal*
- 4. Deekha Thakur*
- 5. Shariya Fatima*
- 6. Nayaka Namitha*

DECLARATION BY STUDENTS

We, hereby declare that this Project Report titled “The New Way of Business with special reference to food Booking Apps –A Comprehensive Study on Zomato” submitted by us to Commissionerate of Collegiate Education, Hyderabad in partial fulfillment of the “JIGNASA” Competitions in Commerce, is a bonafide work undertaken by us and it is not submitted to any other University or Institution for the award of any degree/diploma certificate or published anytime before.

Names of the Students

- 1. Nikitamaheshwari*
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- 3. Meghana Bansal*
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- 6. Nayaka Namitha*

CERTIFICATE BY SUPERVISOR

This is to certify that the Study Project entitled “The New Way of Business With Special Reference To Food Booking Apps” (A Comprehensive Study on ZOMATO in Nizamabad) is Submitted to Commissionerate of Collegiate Education, Hyderabad in partial fulfillment of the “JIGNASA” Competitions in Commerce is a record of study project carried out by B.B.A. II year students, Girraj Government College (A), Nizamabad of Telangana State under my supervision and guidance and the study project has not formed the basis for any Degree/Diploma /Associate ship/Fellowship or similar title to any candidate of any University.

Signature of the Supervisor

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CHAPTER 1 – INTRODUCTION

1.1 INTRODUCTION:

Currently there are a lot of mobile apps that can help businesses get their activities in front of customers. People are searching for high-quality information and high-quality services delivered in a short amount of time. People these days rely on the internet and mobile apps to fulfill their needs and satisfy their desires. With each passing day, the number of people who use the internet and other mobile apps grows. The following are examples of mobile apps that cater to the requirements and desires of customers:-

YONO: It is an application which helps customers to do various banking related transactions.

PAYTM: It is an application which helps in making mobile recharges etc....

Similarly there are various applications for online food bookings like **SWIGGY, ZOMATO, FOODPANDA, UBEREATS** etc...

Online food ordering is the process of food delivery or takeout from a local restaurants or food cooperative through a web page or app (application). Many of these services allow customers to keep accounts with them in order to make frequent ordering from their respective app (application). Payment can be amongst others either by Credit Card, Debit Card, Net Banking, PayPal, Paytm, Google pay or Cash on delivery with the restaurant returning a percentage to the online food company.

1.2 HISTORY:

The first online food order was “**PIZZA**” from “**PIZZA HUT**” in 1994. The first online food ordering service, “**WORLD WIDE WAITER**” now known as waiter.com, was founded in the year 1995.

With the increased smart phone penetration, food delivery startups started to receive more attention. By 2015, online ordering began overtaking phone ordering.

As of 2019, there are 175.9 million users using various online food ordering apps (applications).

1.3 OBJECTIVES OF THE STUDY:

- To present the working system of online food delivery apps.
- To analyze that how it is beneficial from customer perspective.
- To analyze that how it is beneficial from business perspective.
- To discuss on how this ZOMATO creates employment opportunities to job aspirants.
- To know customer perception towards food apps with special reference to ZOMATO.
- To know the delivery boy perception regarding ZOMATO.

1.4 NEED AND IMPORTANCE OF THE STUDY:

The primary goal of this research is to determine how well consumers are aware of these food delivery apps and their favorable attitude toward them, especially ZOMATO. And, from the perspective of a delivery boy, we can see how it creates job opportunities for them regardless of their educational levels, as well as how they obtain their client ratings.

1.5 METHODOLOGY:

The current research makes use of both primary and secondary data.

Questionnaires are used to obtain primary data from both the customer and the delivery boy's perspectives. The following variables are considered while creating customer perspective questionnaires. They are:

- Whether the customer is aware about the app or not?
- Gender
- Age Group
- Residential Status
- Occupation etc...

Questionnaires for Delivery boy perspective is prepared by taking into account the following factors. They are:

- Gender
- Age Group
- Educational Qualification
- Part time worker (or) Full time worker etc....

1.6 SAMPLE DESIGN:

Convenient sampling method is used for sampling design.

1.7 STATISTICAL TOOLS USED:

The data is collected, analyzed and interpreted by using simple statistical tools like:

- Simple Percentages
- Pie Charts
- Bar Charts

1.8 LIMITATIONS OF THE STUDY:

- Despite the fact that online food ordering has grown quite popular and is utilized in many metropolitan areas, we have only obtained data from Nizamabad due to time constraints.
- Due to time constraints, data is only gathered from 50 samples from the customer's viewpoint;
- Due to a time restriction, the data for the delivery boy's viewpoint is only obtained from 10 samples.

1.9 REVIEW OF LITERATURE:

Dr.Mitali Gupta (2019), the changing urban way of life of the normal Indian is sufficiently emotional to be ideal for the food-on-the- go and fast home delivery models to develop at higher rates. The regularly expanding populace swarmed metro urban communities and longer travel times are drivers for the helpful, prepared to eat and less expensive alternatives of having food and foodstuffs conveyed at your doorstep. Organizations that know about the colossal potential for development may wander

straight in, yet just the fittest will endure. Organizations who keep their offer and their image dynamic in purchaser's brains, will take the greatest offer of the Indian online food benefit.

Aditya Tribhuvan (2020), to conclude this research on customer's perception of food apps, it is thus inferred that a majority of people use food apps as it's the best way to save time and is convenient. Furthermore, ordering via food apps is a precise operation. Among the respondents, the most preferred food app is Swiggy, and cash on delivery is the safest and most secure form of payment. The study also states that all age and income groups use food apps, and they are happy with the service quality, hygiene, and packaging system, which make people order from food apps. It enhance my understanding of people's preferences, the efficacy in time management, affordability, food preferences, discounts available and door-to-door service without compromising on quality.

Gopi Mistry, Palash Veervasant (2020), From the research we can relate our interpretation with consumer behaviour. Factors like gender, affordability, education, on time delivery, behaviour of peer service provider, diversity of payment options affects consumer preference towards selection of online food delivery platform. Zomato ranks as highest in most of the above aspects. Hence Zomato is the most preferred online food delivering app

CHAPTER 2 – INTRODUCTION TO ZOMATO

2.1 ORGANIZATION PROFILE:

Zomato is an Indian restaurant search and discovery service founded in 2008 by DEEPINDER GOYAL and PANKAJ CHADDAH.



It currently operates in 24 countries. It provides information and reviews of restaurants, including images of menu where the restaurant does not have its own website and also online delivery services in some countries.

Type of business	: Private
Available in	: English, Turkish, Portuguese, Indonesia, Spanish, Italian, Czech, Slovak, Polish and Vietnamese
Founded	: July, 2008
Headquarters	: DLF, Phase V, Gurugram, Haryana, India
Founders	: Deepinder Goyal & Pankaj Chaddah.
Key people	: Deepinder Goyal (Founder & CEO), Gaurav Gupta (COO), Mohit Gupta (CEO Food Delivery Business), Gunjan Patidar (CTO), Sameer Maheshwary (CFO).
Industry	: Consumer Services.
Services	: Restaurant search & discovery, Online ordering, Table reservations & Management, POS Systems, Subscription services.
Employees	: 4811 Employees & 102970 Followers (approximately).
Website	: Zomato.com
Registration	: Optional
Users	: 19.1cr (Approximately), 191 million visits (monthly).

Since their inception in 2008, they have expanded significantly and today, have a team of more than 5000 Zomans, that represent 32 nationalities and helps million of users every day to decide way to eat through 1.4 million listed restaurants or deliver over 28 million food orders per month.

Investment:

Zomato has received investments worth \$443.8 million through 10 rounds of funding. Top investors include Ant Financial, Sequoia Capital, Temasek Holdings, Info Edge & Vy Capital. It earned a total funding of \$693.5 million and generates revenues of \$74 million and a market valuation of \$2.8 billion.

Note: All the above mentioned figures are approximate values according to year 2019.

Acquisitions:

Next Table, Urbanspoon – Largest acquisition for \$52 million in January.

Parameters:

Zomato has 4 main parameters to gain as a successful business.

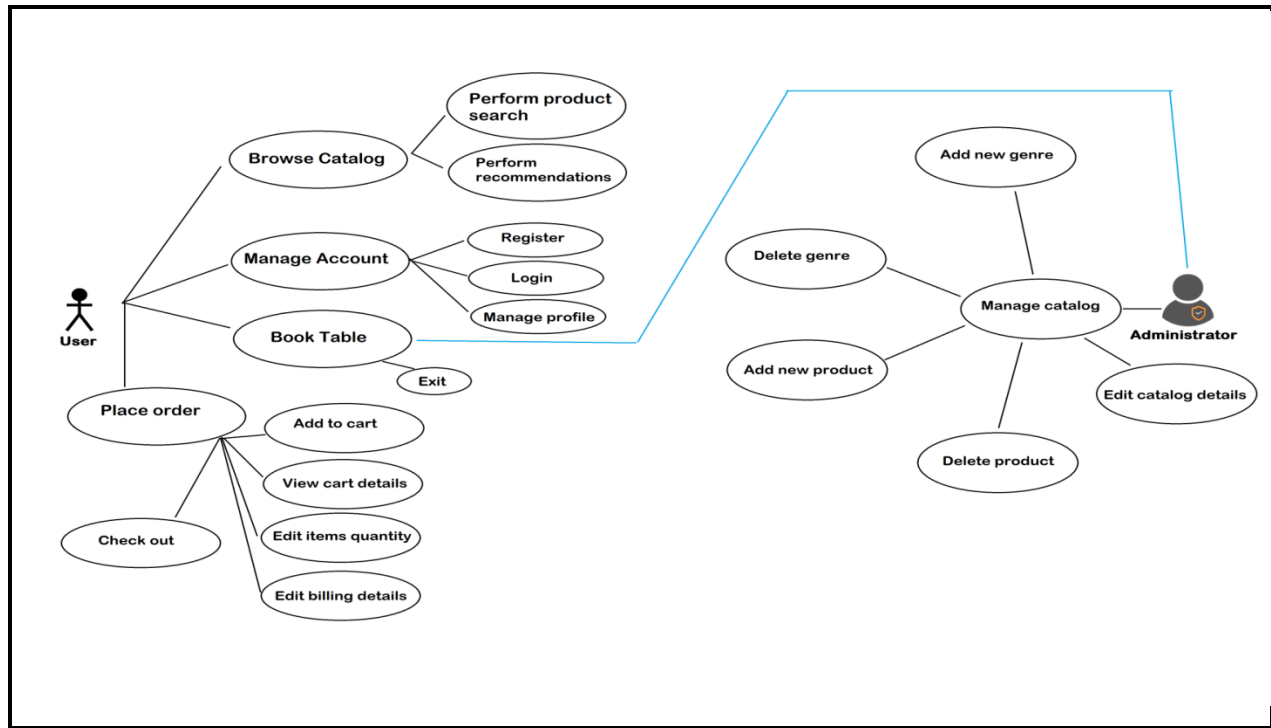
They are:

1. Quality
2. Accessibility
3. Assortment
4. Affordability

SWOT Analysis of Zomato

STRENGTHS	WEAKNESS	OPPURTUNITIES	THREATS
<ul style="list-style-type: none"> ➤ Quick Delivery ➤ Trained people for making delivery ➤ Better customer support ➤ Wide range of restaurants ➤ Innovation culture ➤ Financial leverage ➤ Technology 	<ul style="list-style-type: none"> ➤ High staff ➤ Diverse app features ➤ Not customized for each target market 	<ul style="list-style-type: none"> ➤ Global expansion ➤ Delivery services 	<ul style="list-style-type: none"> ➤ Growing potential competitors

2.2 Working System



From user point of view:

First the user browses the catalog and then performs product search and performs recommendations. Then in the second stage, the user has to manage the accounts. He can perform this action in the following ways:

- If he is a new user, then he needs to register with the particular app by giving his name, mail-id and mobile number.
- If he is already an existing user, then he has to login with his user name and password
- If he is already an existing user and did not completely fill his profile, he need to fill it which is known as managing profile or profile management

After managing account if he is interested with any restaurant which he had browsed, he can book a table in a particular restaurant in which he is interested. Once a table is booked by any user, the information will be sent to the administrator. There the administrator checks and gives the information to the user regarding the availability. If the table is available user will give his confirmation to the administrator otherwise he will exit. Then the next stage is the user placing an order from a particular restaurant which he

is willing or interested. If he is willing to place an order for only one own item, then he can select it and directly place an order. If the user is willing to place more than one item then he will be first selecting the item then keep on adding it to his cart. Once his selection is completed, he can view items which are added to his cart. Before placing an order he need to tech I re-check the items which were added to the cart and while doing this process, if the user want to edit the quantity of any of the selected item he can make it. After reviewing his selection he can place an order. Once the order is placed he cannot edit or modify the quantity or items and he needs to book a new order of he wish to. After an order is placed by the user then he has the following payment modes:

- Debit card
- Credit card
- Net banking
- COD (Cash on delivery)
- Use coupon codes

When a customer wishes to make a payment using debit/credit card he need to enter his card number, expiry date, card holder name and CVV and then click on continue.

Once he click on continue, the page will be redirected to payment gateway and then receives an OTP. When once the third I received OTP is put it into the box and click on continue. Then the payment is made successful.

Where as in net banking, the customer has to give his net banking credentials to payment gateway and can proceed to book an order.

COD means, the amount will be paid directly to the delivery boy at the time of receiving the placed order.

We can receive coupon codes by our usage level and sometimes by sharing the app with friends. We can redeem these coupons with in a limited time as specified by the app.

Once all these steps are done, the customer receives his order he can check out. Meanwhile he can track the location of delivery boy through GPS.

Registration Process of a New User

Step 1: Install Zomato app from Google play store or app store on your Android or I-phone device respectively.

Step 2: When an app is installed on your device and when you open it the following page is displayed. you can continue using any of the mentioned social logins or you can continue with email.

Step 3: When you click on continue with email, and then the following form will be displayed.

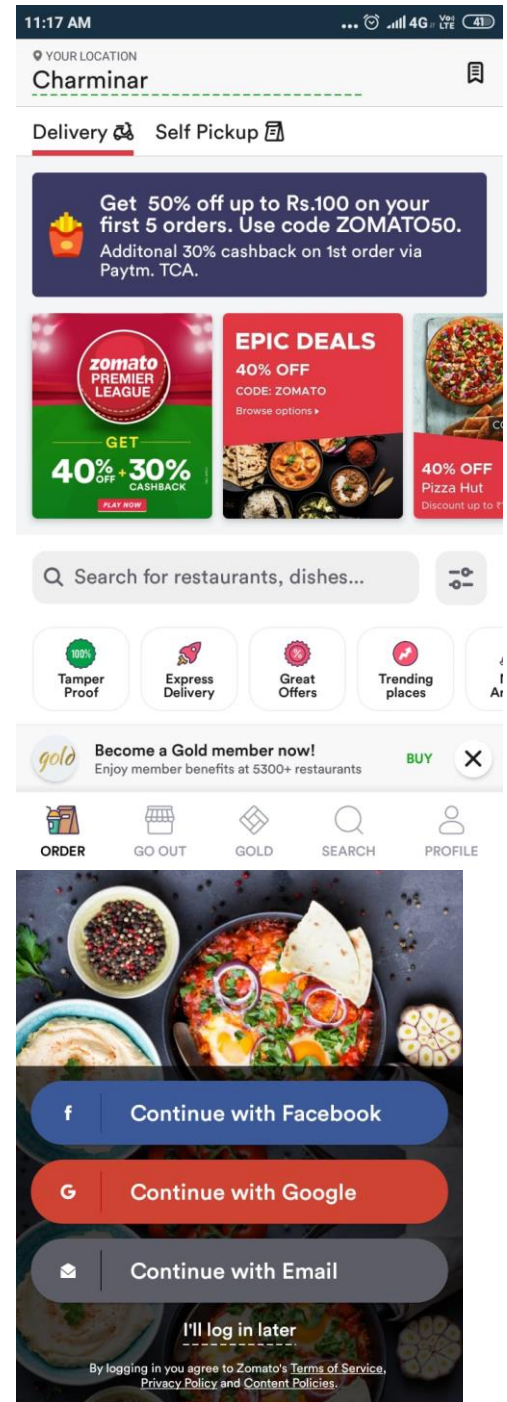
If you are already an existing user, you need to enter your email, username and password and then click on login.

Step 4: If you are a new user, then click on “New to Zomato? Signup” button. When once you click on it the following page will be displayed as shown below.

You need to enter your name, email and password and click the checkbox agreeing the conditions and then click on signup.

Step 5: When once you click on sign up, the following page will be displayed. Where you can see various options like deliver, self pickup and can see various deals.

You can also manage your profile by clicking on profile. You can give the default delivery address



From Administrator Point of View

From administrator point of view he can add any new genre (hotel), delete any genre. He can also add various new products so that he can attract the customers easily. And at the same time he can also delete any product based on the feedback given by customers. He can also edit the details of any catalog as per the user requirements.

From Delivery Boy Point of View

As the customers use a Zomato app for placing an order, similarly the delivery boy uses “The Zomato Runner” app to register himself with Zomato and receive the placed orders. The Zomato delivery boys are called as Zomans.

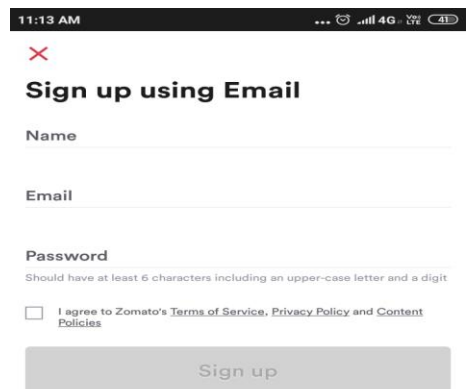
The major requirements for a delivery boy is he should possess own two wheeler as well as a smart phone and should have a complete knowledge on using the device.

Usually the Zomans are paid on weekly basis. Zomans earn Rs 40 per order and are also given incentives based on the rating given by the customers and can also earn tips from customers. The Zomans earn around Rs 12k to Rs 20k per month approximately. If a Zoman is working on a Full time basis he earns Rs.1500 and if a Zoman is working on Part time basis he can earn Rs.700 per week approximately.

Advantages:

Advantages for Business:

- It will increase the sales.
- It will increase the brand loyalty.
- It will increase the food delivery applications and big data.



The screenshot shows a mobile app interface for signing up using an email. At the top, there is a status bar with the time 11:13 AM, signal strength, 4G connectivity, and battery level. Below the status bar, there is a red 'X' icon and the text 'Sign up using Email'. The form consists of three input fields: 'Name', 'Email', and 'Password'. The 'Password' field has a note below it: 'Should have at least 6 characters including an upper-case letter and a digit'. Below the password field, there is a checkbox with the text 'I agree to Zomato's Terms of Service, Privacy Policy and Content Policies'. At the bottom of the form, there is a grey button labeled 'Sign up'.

Advantages for Customers:

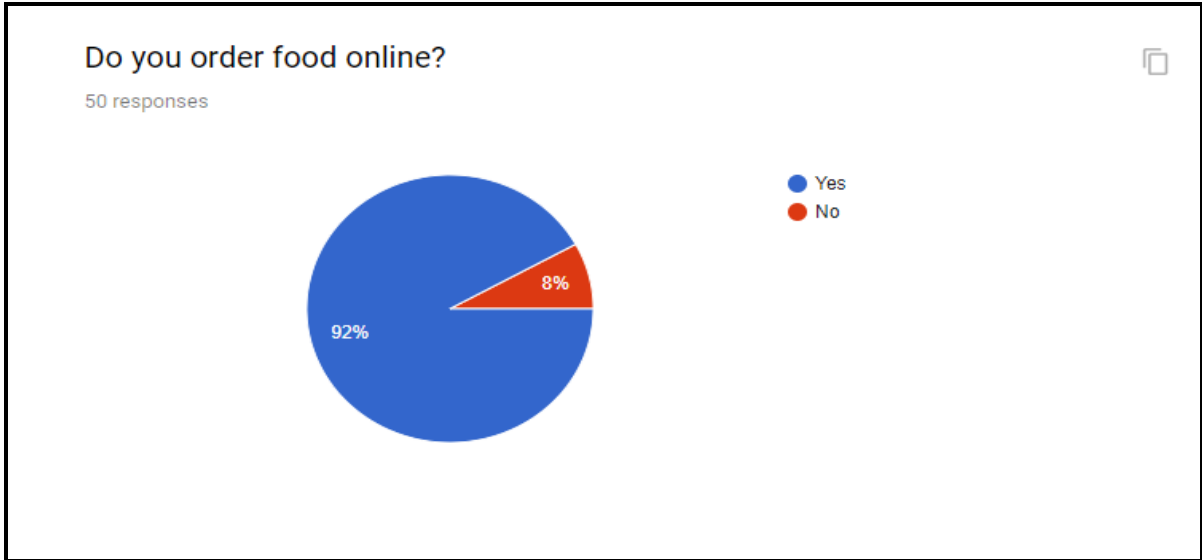
- It helps people to discover great places around them.
- Customers can quickly order with location based deals.
- It makes easy for the customers to buy the food using apps.
- Order tracking is easy.

Advantages for Delivery Boy:

- Due to an increase in online orders by customers there is a chance in increasing his income.
- It also gives an employment opportunity for the semi skilled people.
- He can explore new places and can interact with many new people.

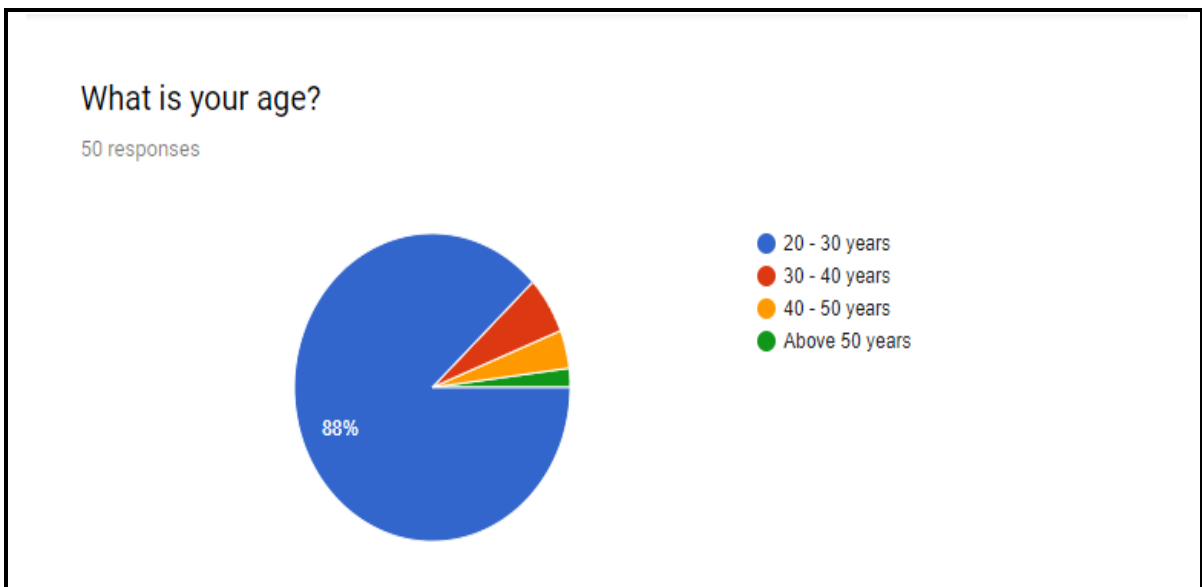
CHAPTER 3 – ANALYSIS OF DATA

Chapter 3.1: Customer Perspective:



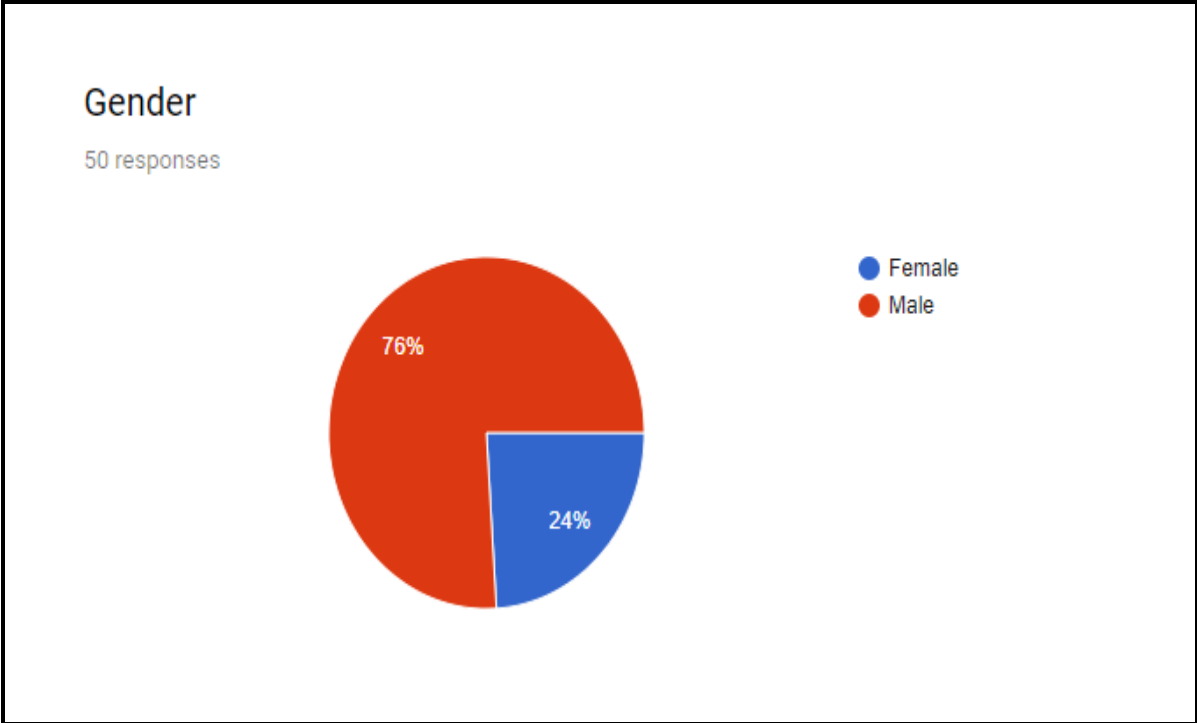
(Source: Primary Data)

From the above figure 3.1(a) it is clearly shown that 92% of the people or customers are aware about the online food delivery and 8% of the people or customers are not aware about the online food delivery.



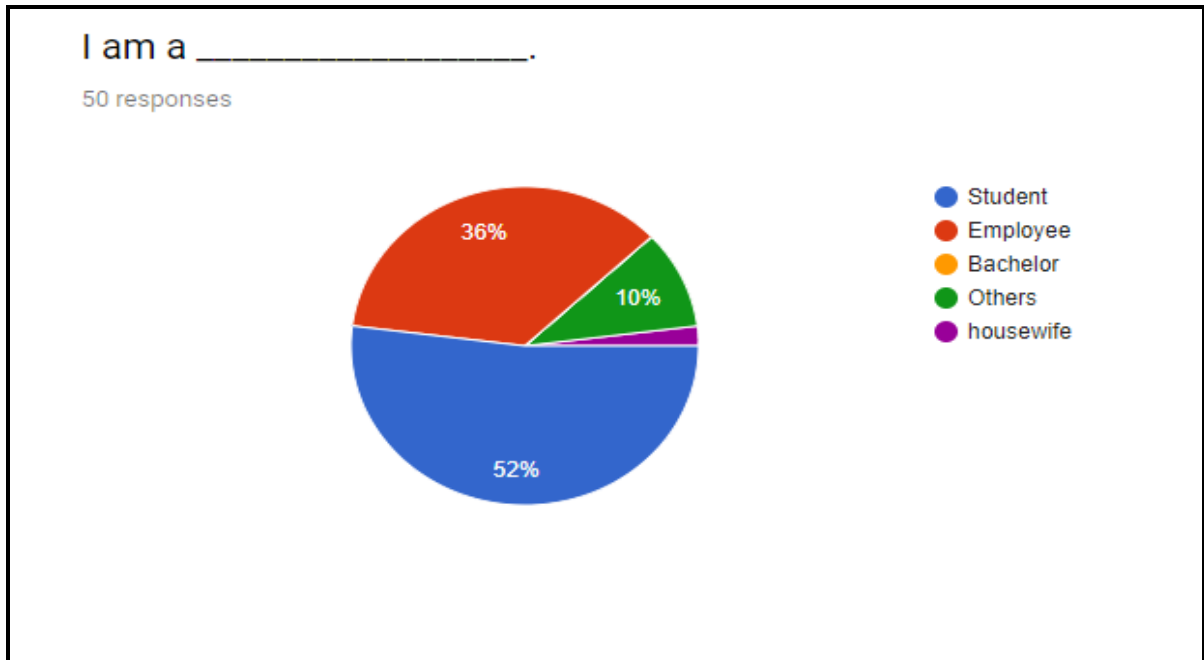
(Source: Primary Data)

From the above figure 3.1(b) it is clearly shown that for a sample of 50 customers 88% people lie in between the age group of 20-30 years; 7% people lie in between the age group of 30-40 years; 3% of people lie in between the age group of 40-50 years and 2% of people lie in between the age group of above 50 years.



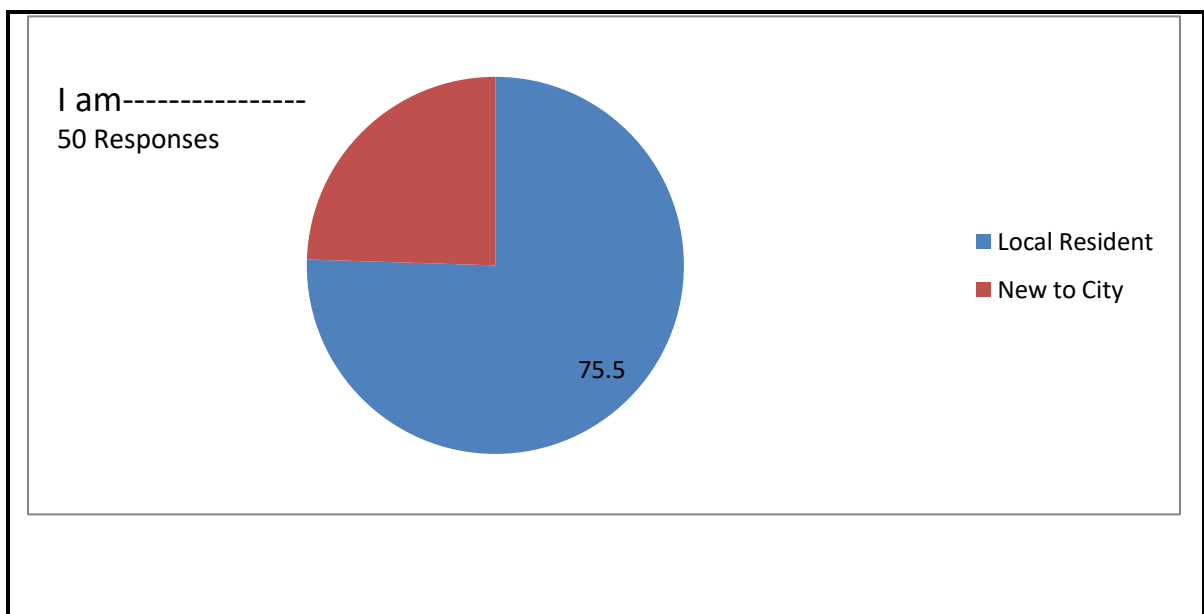
(Source: Primary Data)

From the above figure 3.1(c) it is clear that out of a selected sample of 50 customers 76% of the customers are male and 24% of the customers are female.



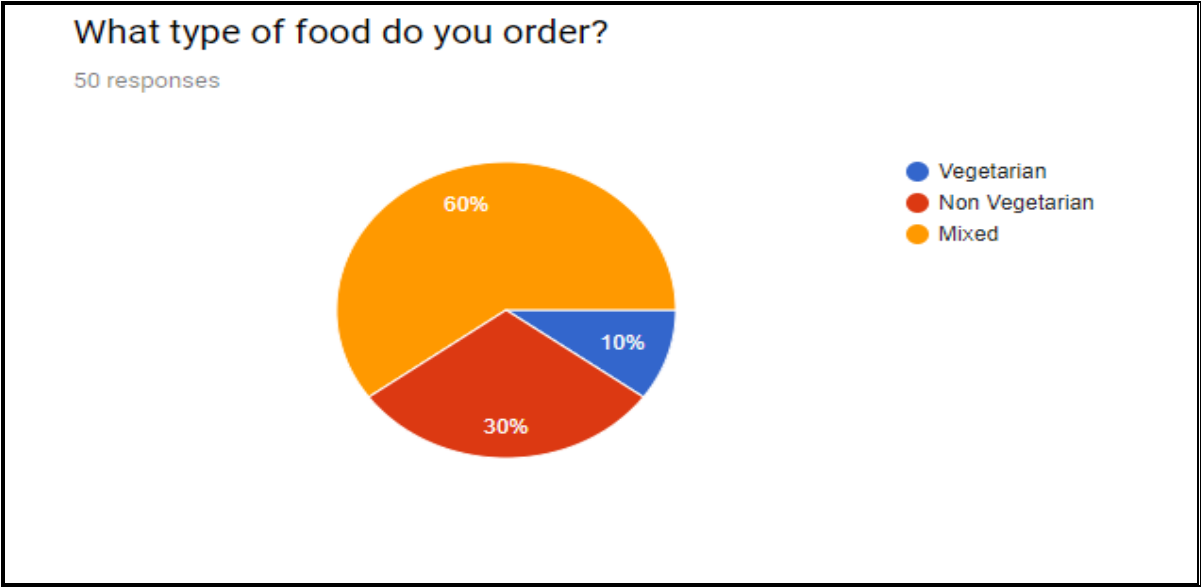
(Source: Primary Data)

From the above figure 3.1(d) out of a selected sample of 50 customers it can be understood that 36% of the customers are Employees; 52% of the customers are Students; 10% of the customers are under the category of others and 2% of the customers are under the category of housewives.



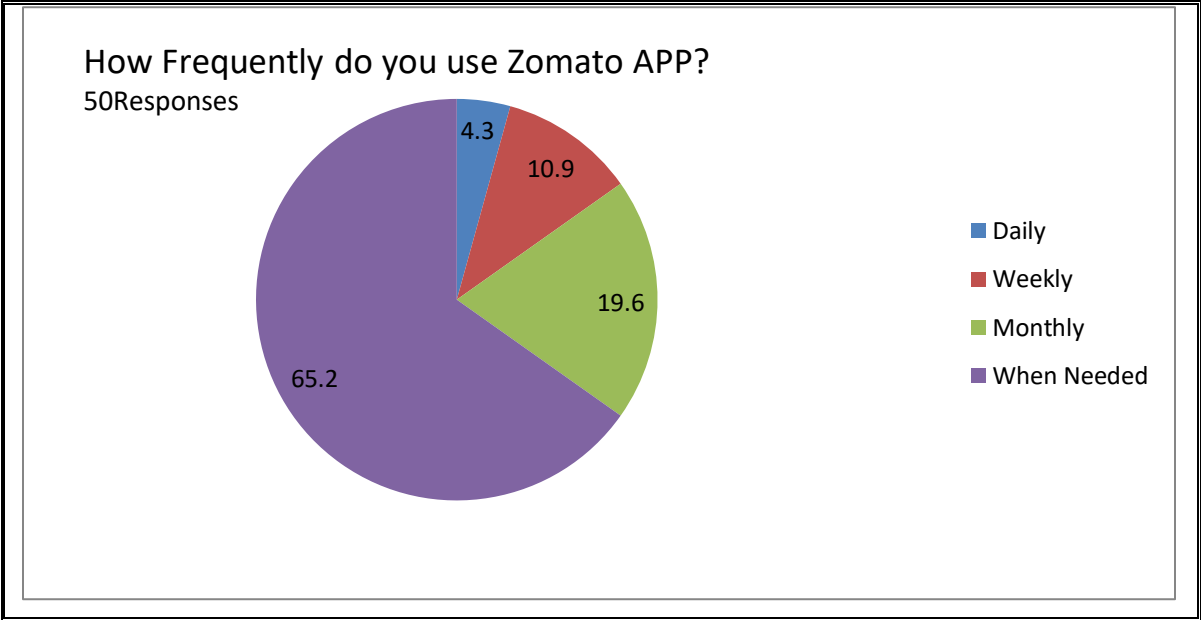
(Source: Primary Data)

From the above figure 3.1(e) it can be understood that 75.5% of the customers are under the category of local residents; 24.5% of the customers are under new to city category.



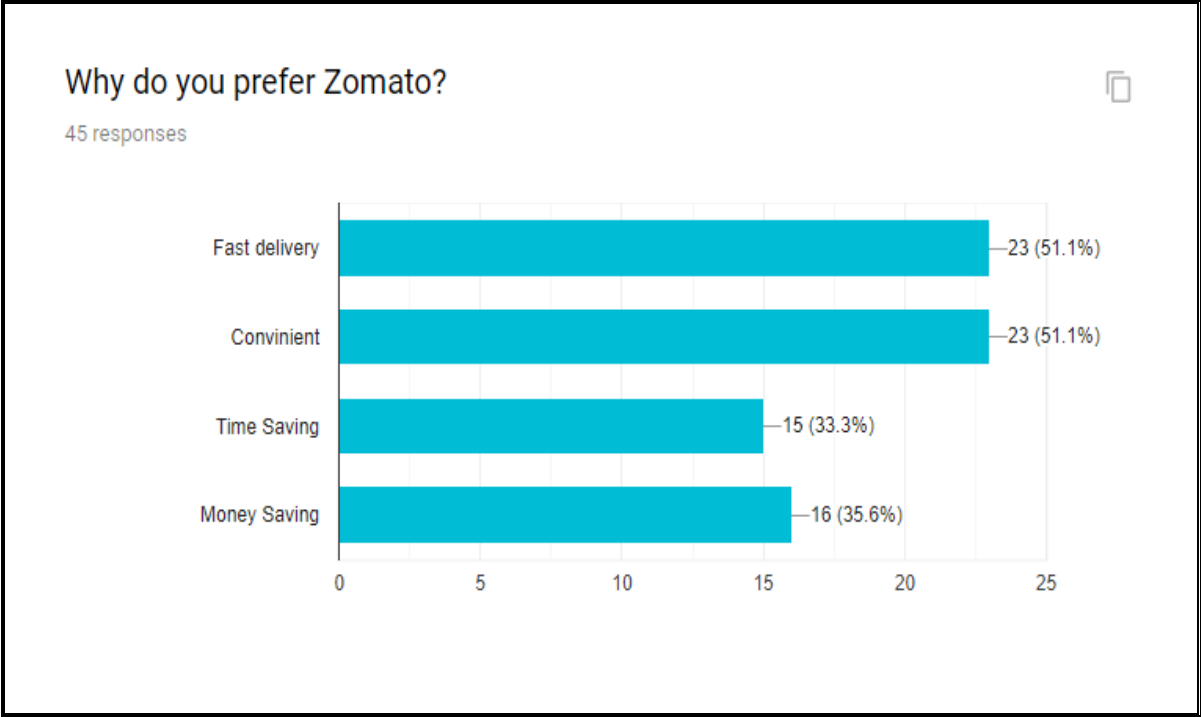
(Source: Primary Data)

From the above figure 3.1(f) it can be seen that 60% of the customer’s order the food online which are mixed i.e., both vegetarian and non vegetarian; 30% of the customer’s order Non vegetarian food and 10% people order Vegetarian food.



(Source: Primary Data)

From the above figure 3.1(g) it can be understood that 65.2% of the customers use this Zomato app when they are needed; 19.6% of the customers use this Zomato app monthly; 10.9% of the customers use this app weekly; 4.3% of the customers use the app daily.



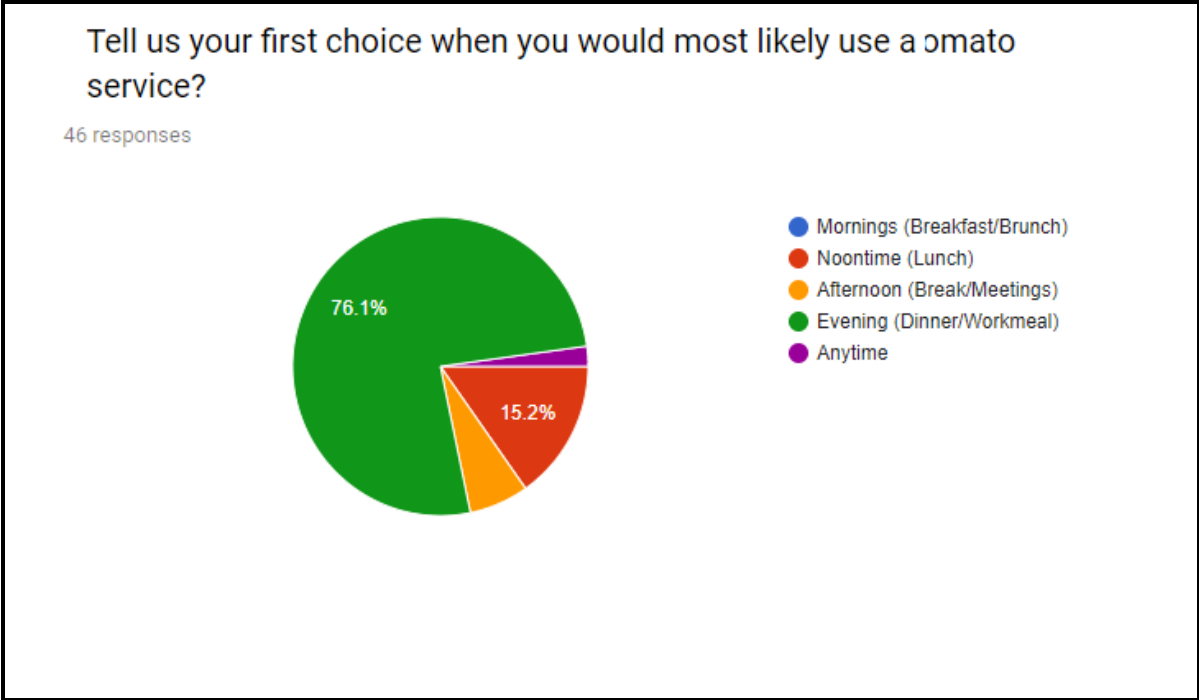
(Source: Primary Data)

From the above figure 3.1(h) out of the selected sample of 50 and received responses of 45 it is clearly understood that 51.1% of the customers prefer Zomato for its fast delivery services; 51.1% of the customers prefer Zomato for their convenience; 33.3% of the customers prefer Zomato as it is time saving; 35.6% of the customers prefer Zomato as it saves money.



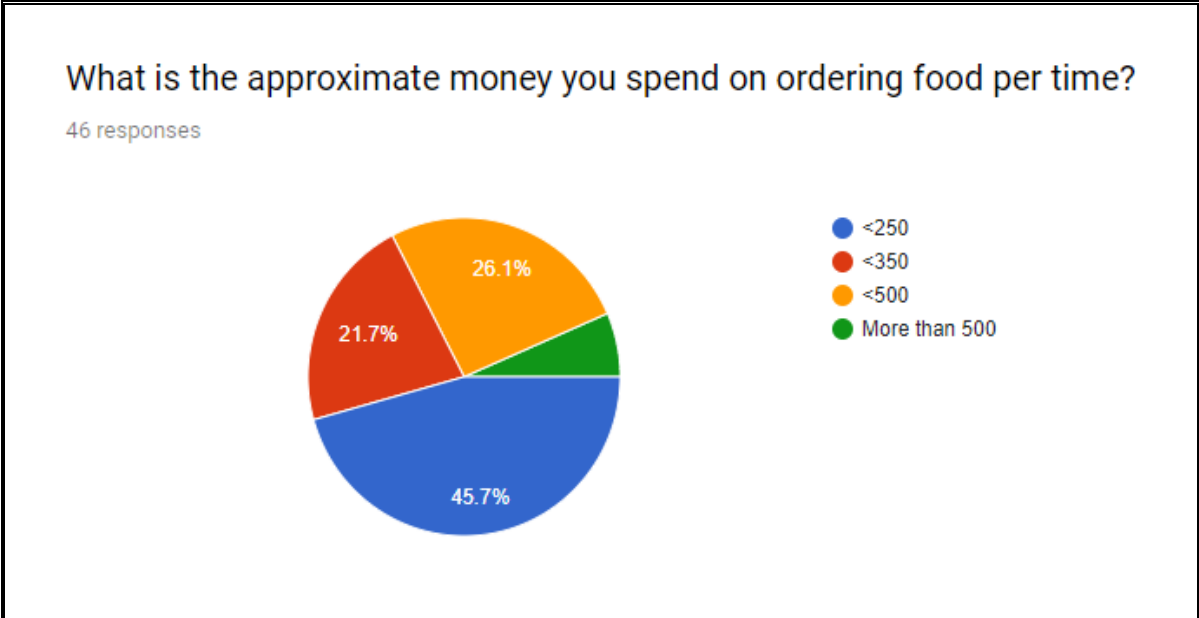
(Source: Primary Data)

From the above figure 3.1 (i) out of the selected sample of 50 and received responses of 46 it is understood that 39.1% of the customers give importance for food delivery for the speed in the delivery; 10.9% of the customers give importance for convenience; 73.9% of the customers give importance for the quality of food delivered and 30.4% of customers give importance for ordering from multiple restaurants and pay.



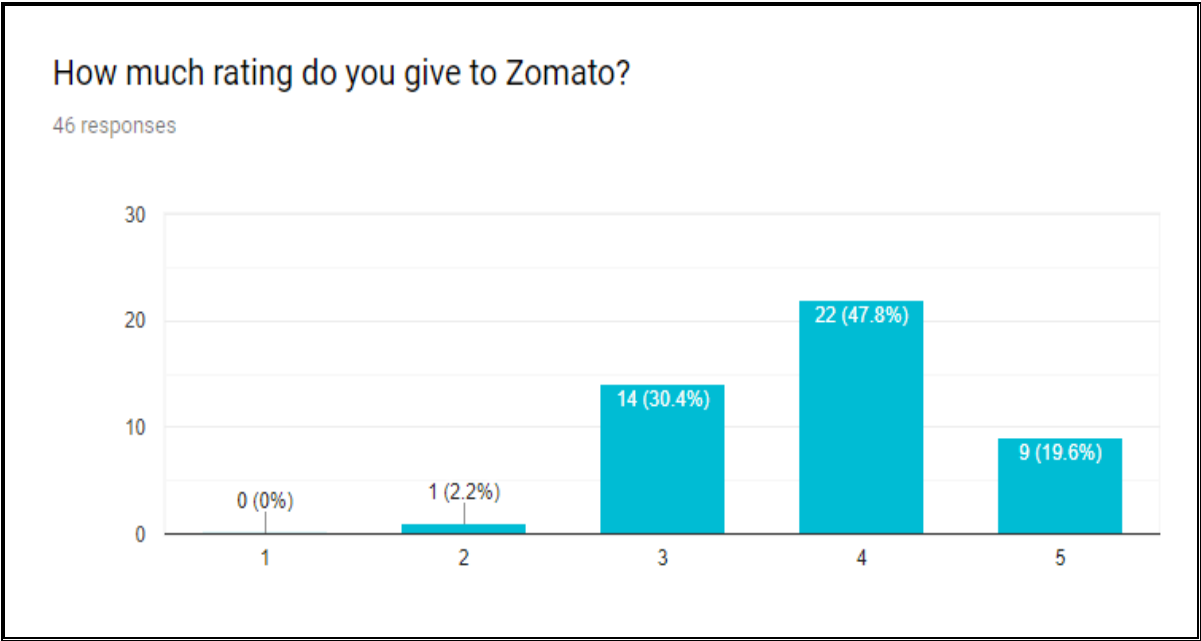
(Source: Primary Data)

From the figure 3.1(j) it is understood that 76.1% of the customers use this app in the evening i.e., for dinner/work meal; 15.2% of the customers use during noon time i.e., for lunch and 3.5% of the customers use this during afternoon i.e., break/meetings.



(Source: Primary Data)

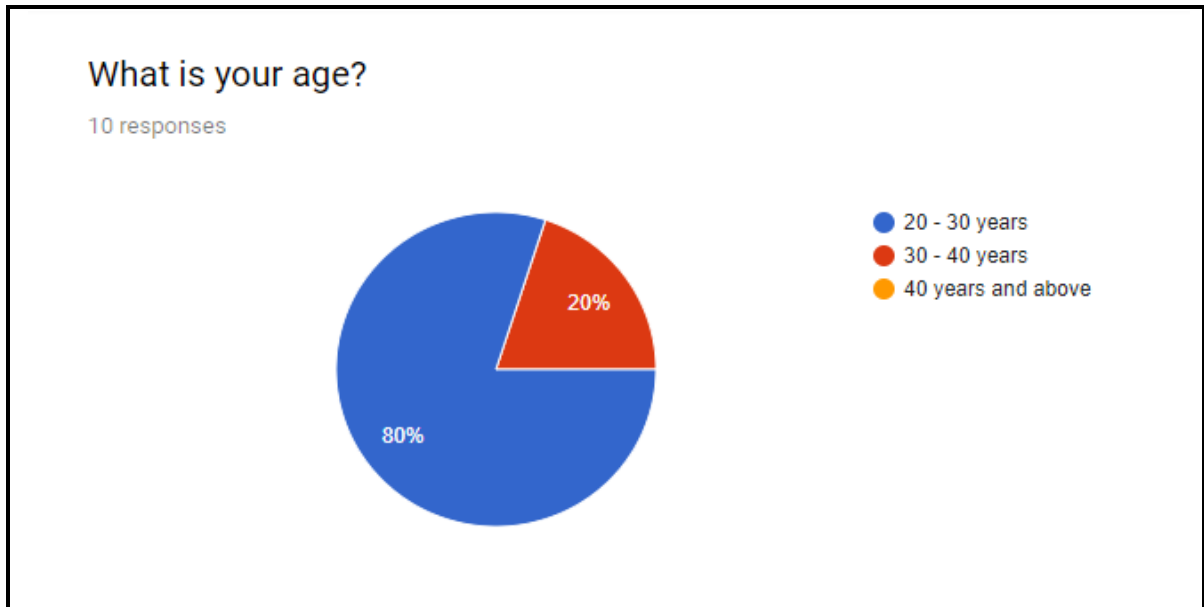
From the figure 3.1(k) it is shown that 45.7% of the customers spend less than 250Rs per time; 21.7% of the customers spend less than 350Rs; 26.1% customers spend less than 500Rs and 6.5% of the customers spend more than 500Rs per time.



(Source: Primary Data)

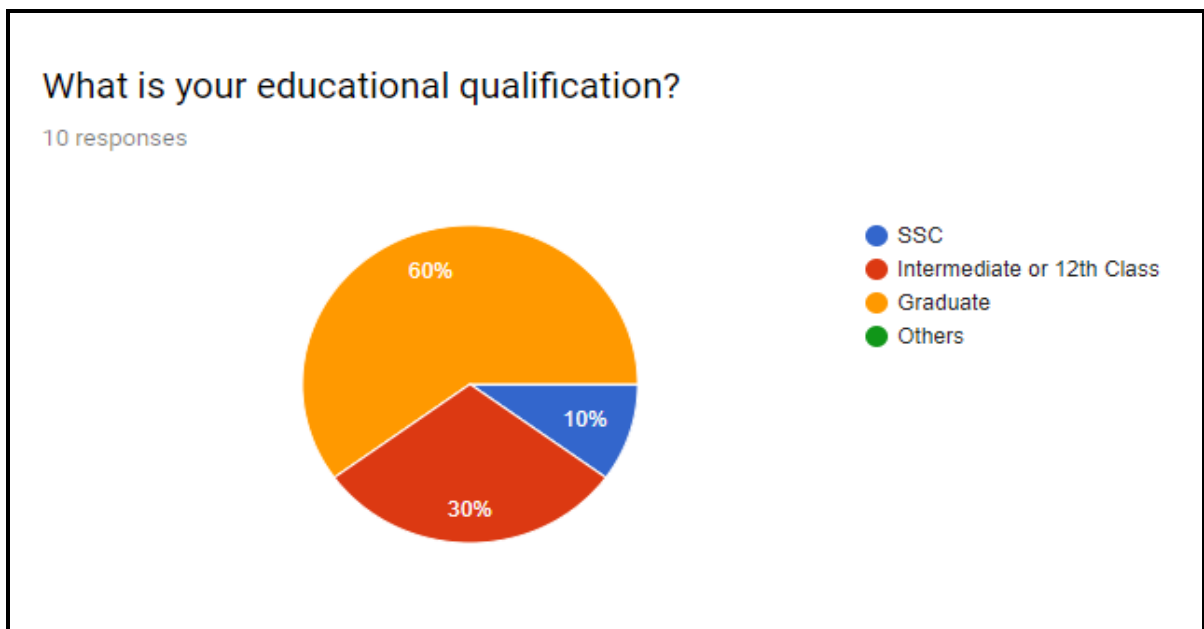
From the figure 3.1(l) 19.6% of the customers give 5 rating to Zomato; 47.8% of the customers give 4 rating; 30.4% of the customers give 3 rating and 2.2% of the customers give 2 rating.

3.2 Delivery Boy Perspective



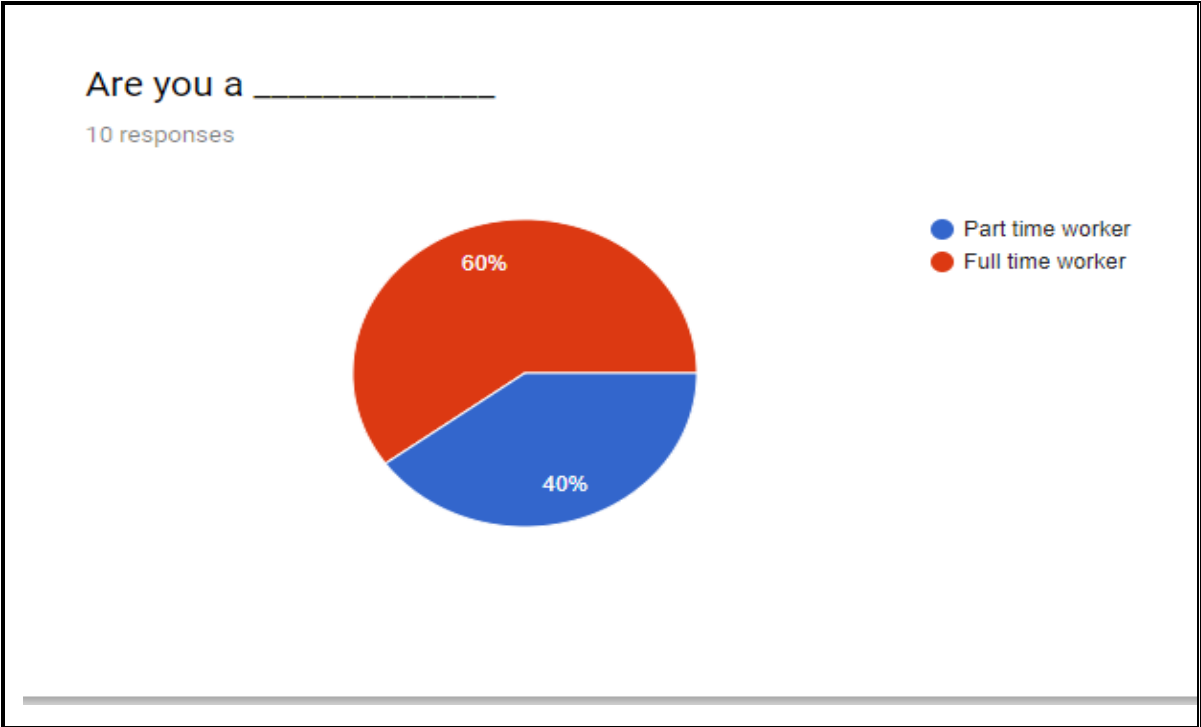
(Source: Primary Data)

From the figure 3.2(a) it is observed that about 80% delivery boy's age lies between 20-30 years while 20% delivery boy's age lies between 30 to 40 years.



(Source: Primary Data)

From the figure 3.2(b) it is observed that about 60% delivery boys are graduates while 30% of delivery boys are under graduates and 10% delivery boys are SSC passed.



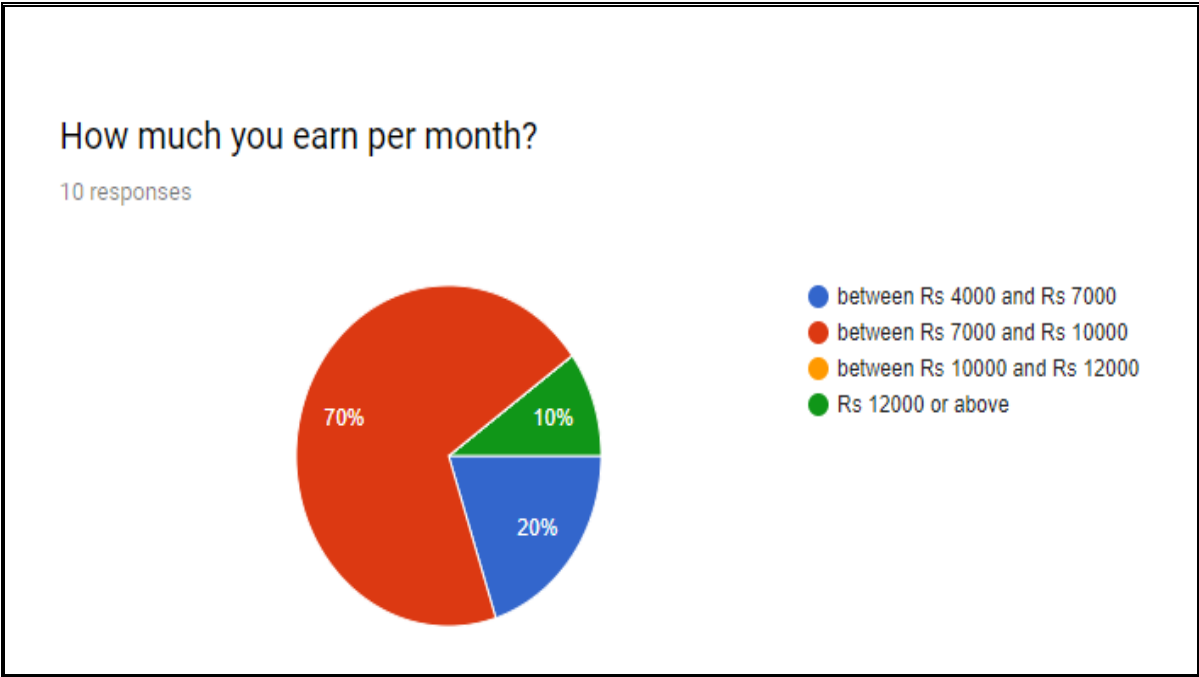
(Source: Primary Data)

From the figure 3.2(c) it is observed that about 60% delivery boys are fulltime workers while 40% delivery boys are part time workers.



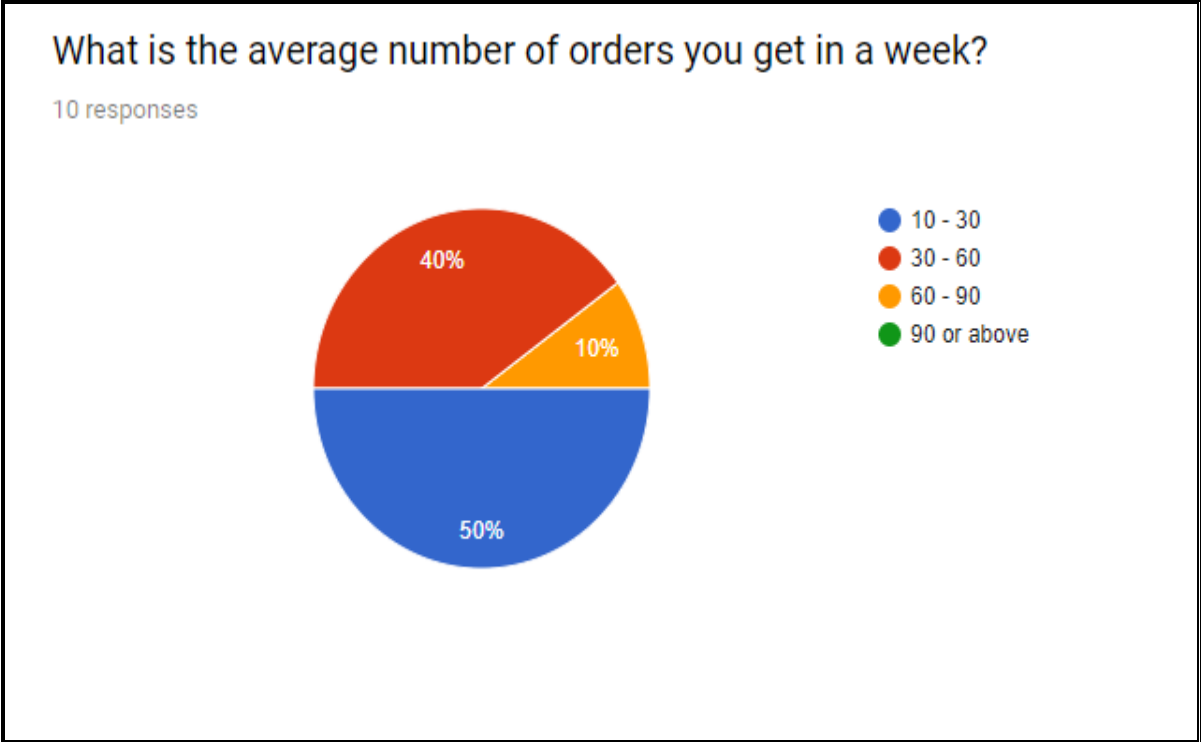
(Source: Primary Data)

From the figure 3.2(d) it is observed that about 80% delivery boys deliver orders in 30 minutes or less while 20% delivery boys deliver orders in 30-45 minutes.



(Source: Primary Data)

From the figure 3.2(e) it is observed that about 70% delivery boys earn Rs 7000 – Rs 12000 per month, 20% delivery boys earn Rs 4000 – Rs 7000 per and 10% delivery boys earn Rs 12000 & above per month.



(Source: Primary Data)

From the figure 3.2(f) it is observed that about 50% delivery boys gets 10-30 orders per week, about 40% delivery boys gets 30-60 orders per week and about 10% delivery boys gets 60-90 orders per week.



(Source: Primary Data)

From the figure 3.2(g) it is observed that about 60% delivery boys gets from customers during evenings i.e., for dinner/work meal, 20% delivery boys gets from customers during afternoon (Break/ Meetings), 10% delivery boys gets from customers during noontime i.e., for Lunch and about 10% delivery boys gets from customers during mornings (Breakfast/Brunch).



(Source: Primary Data)

From the figure 3.2(h) it is observed that about 50% delivery boys earn tips from customers every day, 30% delivery boys earn tips from customers twice a week and 20% delivery boys earn tips once in a week.

CHAPTER 4:

4.1 FINDINGS

In this section of the study the insights of the analysis are presented in terms of findings and based on the findings, suggestions are offered and finally the summary of the study is given in terms of conclusions.

In present situation customers are able to get online food ordering service in a very short span of time. Customers can order food from their favorite restaurants using web and mobile application which is connected over internet.

Customers prefer online food ordering than traditional methods like getting parcels from take away as he has to spend time on it. If a customer prefers traditional method of food ordering he/she has to wait at the restaurant till the food is handed over to him/her; whereas if a customer prefers online food ordering system, he can perform other tasks till the food is delivered to him at his destination. Irrespective of gender, age and occupation customers who have the basic knowledge about the internet and mobile app can use this service. Irrespective of their age and educational qualification the delivery boy can get an employment opportunity through which they can earn income to satisfy their basic needs.

CUSTOMER PERSPECTIVE:

- 92% of the people or customers are aware about the online food delivery and 8% of the people or customers are not aware about the online food delivery.
- For a sample of 50 customers 88% people lie in between the age group of 20-30 years; 7% people lie in between the age group of 30-40 years; 3% of people lie in between the age group of 40-50 years and 2% of people lie in between the age group of above 50 years.
- 76% of the customers are male and 24% of the customers are female.
- Selected sample of 50 customers it can be understood that 36% of the customers are Employees; 52% of the customers are Students; 10% of the customers are under the category of others and 2% of the customers are under the category of housewives.

- 75.5% of the customers are under the category of local residents; 24.5% of the customers are under new to city category.
- 75.5% of the customers are under the category of local residents; 24.5% of the customers are under new to city category.
- 60% of the Respondents order the food online which are mixed i.e., both vegetarian and non vegetarian; 30% of the Respondents order Non vegetarian food and 10% people order Vegetarian food.
- It is observed that about 50% delivery boys gets 10-30 orders per week, about 40% delivery boys gets 30-60 orders per week and about 10% delivery boys gets 60-90 orders per week.
- It is clearly understood that 51.1% of the customers prefer Zomato for its fast delivery services; 51.1% of the customers prefer Zomato for their convenience; 33.3% of the customers prefer Zomato as it is time saving; 35.6% of the customers prefer Zomato as it saves money.
- Out of the selected sample of 50 and received responses of 46 it is understood that 39.1% of the customers give importance for food delivery for the speed in the delivery; 10.9% of the customers give importance for convenience; 73.9% of the customers give importance for the quality of food delivered and 30.4% of customers give importance for ordering from multiple restaurants and pay.
- 76.1% of the customers use this app in the evening i.e., for dinner/work meal; 15.2% of the customers use during noon time i.e., for lunch and 3.5% of the customers use this during afternoon i.e., break/meetings.
- 45.7% of the customers spend less than 250Rs per time; 21.7% of the customers spend less than 350Rs; 26.1% customers spend less than 500Rs and 6.5% of the customers spend more than 500Rs per time.
- 19.6% of the customers give 5 rating to Zomato; 47.8% of the customers give 4 rating; 30.4% of the customers give 3 rating and 2.2% of the customers give 2 rating.

DELIVERY BOY PERSPECTIVE:

- It is observed that about 80% delivery boy's age lies between 20-30 years while 20% delivery boy's age lies between 30 to 40 years.
- 60% delivery boys are graduates while 30% of delivery boys are under graduates and 10% delivery boys are SSC passed.
- 60% delivery boys are fulltime workers while 40% delivery boys are part time workers.
- It is observed that about 80% delivery boys deliver orders in 30 minutes or less while 20% delivery boys deliver orders in 30-45 minutes.
- 70% delivery boys earn Rs 7000 – Rs 12000 per month, 20% delivery boys earn Rs 4000 – Rs 7000 per and 10% delivery boys earn Rs 12000 & above per month.
- 50% delivery boys gets 10-30 orders per week, about 40% delivery boys gets 30-60 orders per week and about 10% delivery boys gets 60-90 orders per week.
- It is observed that about 60% delivery boys gets from customers during evenings i.e., for dinner/work meal, 20% delivery boys gets from customers during afternoon (Break/ Meetings), 10% delivery boys gets from customers during noontime i.e., for Lunch and about 10% delivery boys gets from customers during mornings (Breakfast/Brunch).
- 50% delivery boys earn tips from customers every day, 30% delivery boys earn tips from customers twice a week and 20% delivery boys earn tips once in a week.

4.2 SUGGESTIONS

The majority of today's applications are in English. It would be preferable if they were available in a variety of languages, making them easily accessible to users from all over the world. These services are confined to large cities, and it would be very beneficial if they were expanded to small towns and villages, since these cities and villages are rapidly increasing, attracting people from all over the world and providing job possibilities and fulfilling their requirements.

4.3 CONCLUSION

All of the consumers and delivery boys in the Nizamabad region have welcomed the project. The food booking apps are simple to use because they offers user-friendly views. The use of these Apps increases sales while lowering effort, resulting in smart business. These apps have undergone extensive testing and implementation.

With the influx of professionals into cities and the urbanization of India's landscape, the food delivery and restaurant industry is booming. An rising number of smart phones and meal delivery applications are adding to this dilemma. Food delivery apps have become extremely popular among India's tech-savvy population. In India, there are several food delivery apps that can be downloaded on smart phones to order food while on the go or from the comfort of one's own home. The analysis also revealed that the facilities provided play a significant role in making a purchase from an app. The most desired tool for marketing by businesses should be social media. Firms must also ensure that the apps are user-friendly and comfortable. The special apps are a convenient way for customers to place orders and for the company to attract more customers, but the ease of use should take precedence.

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5. <https://www.zomato.com>
6. <https://craft.com>

QUESTIONNAIRE FROM CUSTOMER PERSPECTIVE

Dear Sir/Madam,

We are the Students of Girraj Government College (A), Nizamabad and working on a project **“The New Way of Business with Special Reference to Food Booking Apps” (A Comprehensive Study on ZOMATO in Nizamabad)**. As a part this we need a statistics of this app, so we are conducting a small survey on this which will be useful only for academic purpose. We are very indebted to you for sparing your valuable time.
Thank you

1. Gender: Male / Female

2. Do you order food in online? Yes / No

3. What is your age?

10- 20 Years / 20- 30 Years/ 30-40 Years/ 40-50 Years/ Above 50Years

4. I am a - Student / Employee / Bachelor / Others

5. I am a - Local Resident / New to City

6. What type food do you order? Vegetarian / Non-vegetarian / Mixed

7. How frequency does you use Zomato app? Monthly / When Needed/ Daily

8. Why do you Prefer Zomato app?

Fast delivery/ Convenient/ Time saving/ Money Saving

9. what is more importance to you for food delivery?

Speed delivery/ Convenience/ Quality of food delivered/

Order from multiple restaurants and pay from one app to other

10. Tell us first choice when you would most likely use a Zomato service?

Morning (Break fast/Bruch)/ Noontime (Lunch)/

Evening (Break/Snacks)/ Night (Dinner/Work meal)

11. How much rating do you give to Zomato?

Low 1 2 3 4 5 High

QUESTIONNAIRE FROM DELIVERY BOY PERSPECTIVE

Dear Sir/Madam,

We are the Students of Girraj Government College (A), Nizamabad and working on a project **“The New Way of Business with Special Reference to Food Booking Apps” (A Comprehensive Study on ZOMATO in Nizamabad)**. As a part this we need a statistics of this app, so we are conducting a small survey on this which will be useful only for academic purpose. We are very indebted to you for sparing your valuable time.

Thank you

1. What is your age? 20-30 Years/ 30-40Years/ Above 40 Years

2. Educational Qualifications: SSC / Intermediate/ Graduate / Others

3. I am a - Part time worker/ Full time Worker

4. In how much time do you deliver food after receiving order?

30Minutes/ 30-45 Minutes / More than 45 minutes

5. How do you manage Traffic?

By selecting shortcuts/ By driving fast/ Cancelling orders/ Both A and B

6. How much earn per month?

Between Rs. 4000 and Rs 7000 Rs
Between Rs. 7000 and Rs 12000 Rs
Between Rs. 10000 and Rs 7000 Rs
Above 12000 Rs

7. What is the average number of orders you get in a week?

10-30/ 60-90/ Above 90

8. At what time most likely get orders from customers?

Morning (Break fast/Bruch)/

Noontime (Lunch)/

Evening (Break/Snacks)

Night (Dinner/Workmeal)

9. How frequently you get tips from customers?

Once in a week /

Twice a week/

Daily/

None



Collecting Primary data from the Respondents for Analysis

**GIRRAJ GOVERNMENT COLLEGE(A)
NIZAMABAD**



**A PROJECT REPORT
ON
“GTutor”**



Under Guidance Of

P.Vivekanand
Lecturer in Computer Science

Sri.M.Kiran Kumar Goud
Lecturer in Computer Science

DEPARTMENT OF COMPUTER SCIENCE

**GIRRAJ GOVERNMENT COLLEGE
(AUTONOMOUS)
A PROJECT REPORT
ON
“GTutor”**



**Submitted to the Department of computer Science as a part of Study Project
for III Year students.**

Submitted by:

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Under Guidance Of

**P.Vivekanand
Lecturer in Computer Science**

**Sri.M.Kiran Kumar Goud
Lecturer in Computer Science**

**GIRRAJ GOVERNMENT COLLEGE(A)
NIZAMABAD**

CERTIFICATE

This is to certify that the project titled "Gtutor" is the bonafide work carried out by Shashidhar ,Rahul,Saikumar, Maruthi, Nithin, Varalaxmi student of BSC(CS) of GIRRAJ GOVERNAMENT DEGREE COLLEGE(A),NIZAMABAD during the academic year 2019-2022 in partial fulfilment of the requirements for the award of the study project in computer science and that the project has not formed the basis of the award previously of any other project.

Signature of the Guide

Place:Nizamabad

Date:

DECLARATION

I hereby declare that the project entitled "Gtutor" submitted for the BSC (CS) degree is my original work and the project has not formed the basis for the award of any other degree, diploma, fellowship or any other similar titles.

Signature of the Student

Place: Nizamabad

Date:

ACKNOWLEDGEMENT

I would like to express my special thanks of gratitude to my project guide P.Vivekanand and M. KiranKumar Goud as well as our principal Dr. E. Laxmi Narayana who gave me the golden opportunity to do this wonderful project on the topic GTutor, which also helped us in doing a lot of research and we came to know about so many new things we are really thankful to them.

Secondly I would also like to thank my parents and friends who helped me a lot in finalizing this project within the limited time frame.

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Vara Laxmi

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Date :

Place :Nizamabad.

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ABSTRACT

GTutor (The Learning Hub with live lab interaction)

Our project named "G-Tutor (GGC CS E-CONTENT HUB with live lab interaction)". Aim of the project is to maintain smart notes Hub. There exist many online tutors but they don't provide all concept at one site where our smart notes hub provides all concepts related to our Academic wise syllabus of our college and general concept.

In this website we have basically three modules the first module is basic level, second module in intermediate level and third module is advanced level. Also we provide some sections like community, Recommendations and some other sections those helps us to maintain a healthy relation between user and management section of website.

The website encounter the improving the efficiency study of a student and save the time while browsing. One book can only serve the one at once but one site can serve the many at a time it is free of cost so everyone can access this.

INTRODUCTION

What is Mean By Tutor?

Tutor means **Transdisciplinary Understanding and Training On Research**.

In simple words "**Tutor means guiding for beginners, intermediate and advanced students**".

EX:-Tutors : 1. Parents guide their children to study and make proud.

2. Teachers tells something new about society not only society but also about the Study topics.

So as in the way everyone teaches in a new way.

=>Our programs teach how to succeed in computer world.

=>A teacher can teach only one subject but a tutor can teach about all subject.

Our aim is provide smart notes with free of cost. Because, many people don't have capacity to bare cost as well carrying the book is not possible at all time. therefore, we are planning to provide note that can accessed throughout the world where the internet is accessible.

This tutor also provides the note as per academic syllabus. It helps users to clear their academic as well it helps them to crack their competitive with our tutor knowledge.

=>In this tutor we are providing theoretically and also programming form

1.1 Aim and objectives

Our project "GTutor(The Learning hub)". The aim of the project is maintain **smart notes Hub**. In existing online tutors they provide only one concept which are general but our smart notes hub provides all concepts related to our Academic of our college and general concept.

In this website we have basically three modules the first module is basic level, second module in intermediate level and third module is advanced level. Also we provide some sections like wish list, community, Recommendations and some other sections those helps us to maintaining a healthy relation between user and management section of website.

1.2 Scope of project

The website encounter the improving the efficiency study of a student and save the time while browsing. One book can only serve the one at once but one site can serve the many at a time it is free of cost so everyone can access this.

It is flexible, can be accessed from anywhere with a device and internet connecting. Students may have the opportunity to learn advance in technology.

Reading as per the convenience of student. Reduces time on editing and reviewing before tests. Easy study of comparison and relationships. Easy memorization of facts .

1.3 Project Specification

The primary specification is to support students to become more independent learners ,persist in college , and reach their goals .Learning basic tips, creates a more favorable atmosphere for learning (Particularly through the use of one- on –one instruction).It helps make sure and understand message correctly.Tutor provide instruction to students in various settings and help them prepare for examination.

1.4 System Configuration

Software Requirements

- Operating system
Windows 2000/XP (Client/server)
- Software requirements
Web-server: Tomcat server.
Front-end: HTML, CSS, JSX, React JS
Back-end: My SQL, Flask, http.
Communication Architecture: ER Model Diagrams.
Data base Maintenance: MY SQL
Client Browsers: Microsoft EDGE, Chrome, Internet explorer etc.

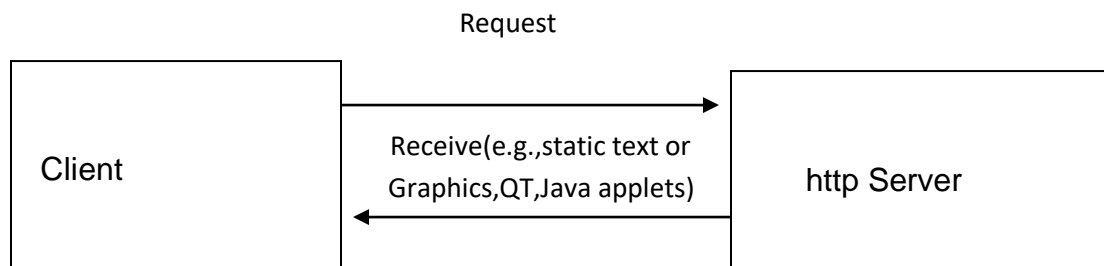
Hardware requirements:

- **Hardware configuration** i3 Processor with 700 MHz clock speed 1GB RAM, 512 SSD, 64 bit PCI Ethernet card

2. LITERATURE SURVEY

2.1 Existing system

There exist many online tutors but they don't provide all concept at one site according to syllabus and also communication the data transfer between the different the organization and users. In organization conduction the works for the company is a cost effective and not a reliable architecture where even the security standards are very low. In the traditional 2-tier architecture there existed only the server and the client. In most cases the server was only a data base server that can only offer data. Therefore majority of the business logics i.e., Validations etc. Had to be placed on the clients system. This makes maintenance expensive. Such clients are called as 'fat clients'. This also means that every client has to be trained as to how to use the application.



2.2 Limitations In Existing System

It is difficult to maintain regular notes. Only someone can access those notes. Reducing the amount of writing, It difficult to focus on real content, time management becomes an issue for students, who reside for away from campus. No regular notes (or) any other form of data is always available for students who missed the class or later reference. It much harder process to learn in normal process.

2.3 Proposed system

The proposed system should have the following features. The web servers interface should be as simple as possible so that the server can be configured easily. The transactions should take place transparently. The validation code should be placed on the server and not on the client. This leads to a thin client, which is more desirable. The server should identify the

types of requests (GET/POST) and perform appropriate action. It should also identify the file requested (HTML/CGI) and run the required process at the server if necessary. When responding to the client, the server should send necessary information such as content-Length, MIME types etc.

To offset the above-mentioned problems, 3-tier architecture is proposed. A middle tier called as the application server is introduced. This is also known as the web server. The following are the advantages in the web server.

2.4 Features

Clear separation of user- interface -control and data presentation from application logic. Through this separation more clients are able to have access to a wide variety of server applications. The two main advantages for client-applications are clear: quicker development through the reuse of pre-built business-logic components and a shorter test phase, because the server-components have already been tested.

2.5 Advantages

Fact Finding Techniques

In this system we are going to develop a facility to a user that he will not face any difficulty at the time of usage like data missing, oneway contacts, one view contacts. As we are developing this system with distributed architecture and security services the system is expected to be very flexible and user friendly in providing the file and directory services. As we are maintaining one technique of checking the user at every activity initiation we are able to achieve the standards of the communication.

2.6 Feasibility Study

A feasibility study is a high-level capsule version of the entire system analysis and Design process. The study begins by classifying the problem definition. Feasibility is to determine if it's worth doing. Once an acceptance problem definition has been generated, the analyst develops a logical model of the system. A search for alternatives is analyzed carefully. There are 3 parts in feasibility study.

Operational Feasibility

Questions that going to be asked are

- Will the system be used if it developed and implemented.
- If there was sufficient support for the project from the management and from the users.
- Have the users been involved in planning and development of the project.
- Will the system produce poorer result in any respect or area?

Technical Feasibility

- Does the necessary technology exist to do what is been suggested
- Does the proposed equipment have the technical capacity for using the new system?
- Are there technical guarantees of accuracy, reliability and data security?
- The project is developed on i3 with 512 MB RAM
- The environment required in the development of system in any windows platform
- The language used in the development is python flask, HTTP, database as MYSQL.

Financial and Economical Feasibility

The system developed and installed will be good benefit to the organization. The system will be developed and operated in the existing hardware and software infrastructure. So there is no need of additional hardware and software for the system.

The GTutor can provides smart notes with free of cost to users, and also by using community channel we receives their queries. Another user can also answer those queries or else our technical team will provide the solution for their queries.

3.SYSTEM ANALYSIS AND DESIGN

3.1 System Methodology

People for long time have tried to sort out the problems faced in the traditional book carrying system. But as these problems exit even now ,a parallel tutor system evolved and come to be known as G tutor .The advantages with our GTutor are:

=>security

=> free of cost

=> less browse time(loading time)

The G tutor is build based on the academic syllabus and guide line of professional mentors .And in this fast growing world , whole world in our hand.So, if we provide notes in that ,then they can access those notes with free of cost where the internet is accessible.

3.2 System Proposed System Description

The System Design include the maintenance of user information, their login details, authorization services, details of the user with respect to the user logged into and their accessibility information in the databases server. The design also include the provision of facility to user to manipulate the concerned information according to his personal use.

The design also need to provide the community channel to send their query through ask-question channel and any authorized user can provide the solution to the query for accessing the community section is also free of cost.

The user is also expected to have the facility to store the information of his/her wish list, for this purpose we provide a section called Whis-list.to full fill their requirements maintain of authentication(complete details of a user).

3.3 Roles of Proposed System Description

The main objective of the project develop a fully functional website which servers the users as smart notes hub. Thus it helps the user to improve the performance in their accordatics and secure their career in programming world. This system design shall be able to provide the following facilities to users.

The tutor Website is designed to support the following facilities to the users.

- Login
- Blogs
- Video classes
- Ask-question (Posting their query into the community section)
- Community
- Write-a-recommendation
- Recommendation
- Logout

3.4 System design and implementation

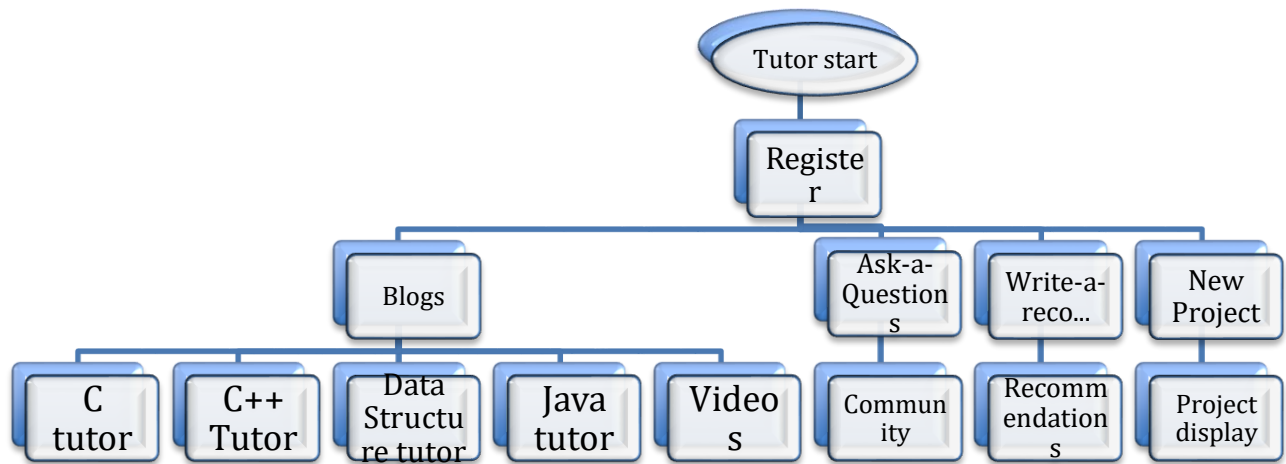
GTutor website is basically designed under the following modules. They are

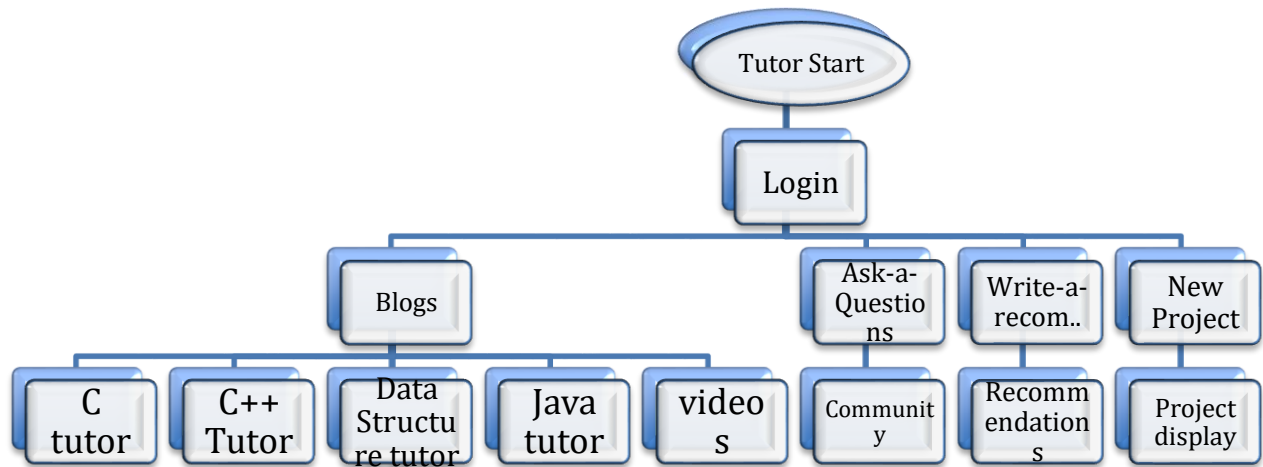
- Authentication Services
 - Login
 - Logout
- Website interface
 - Blogs
 - Community
 - Ask-Questions
- Data transaction
 - Write-a-recommendations
 - Recommendations

3.5 Authentication Service Module

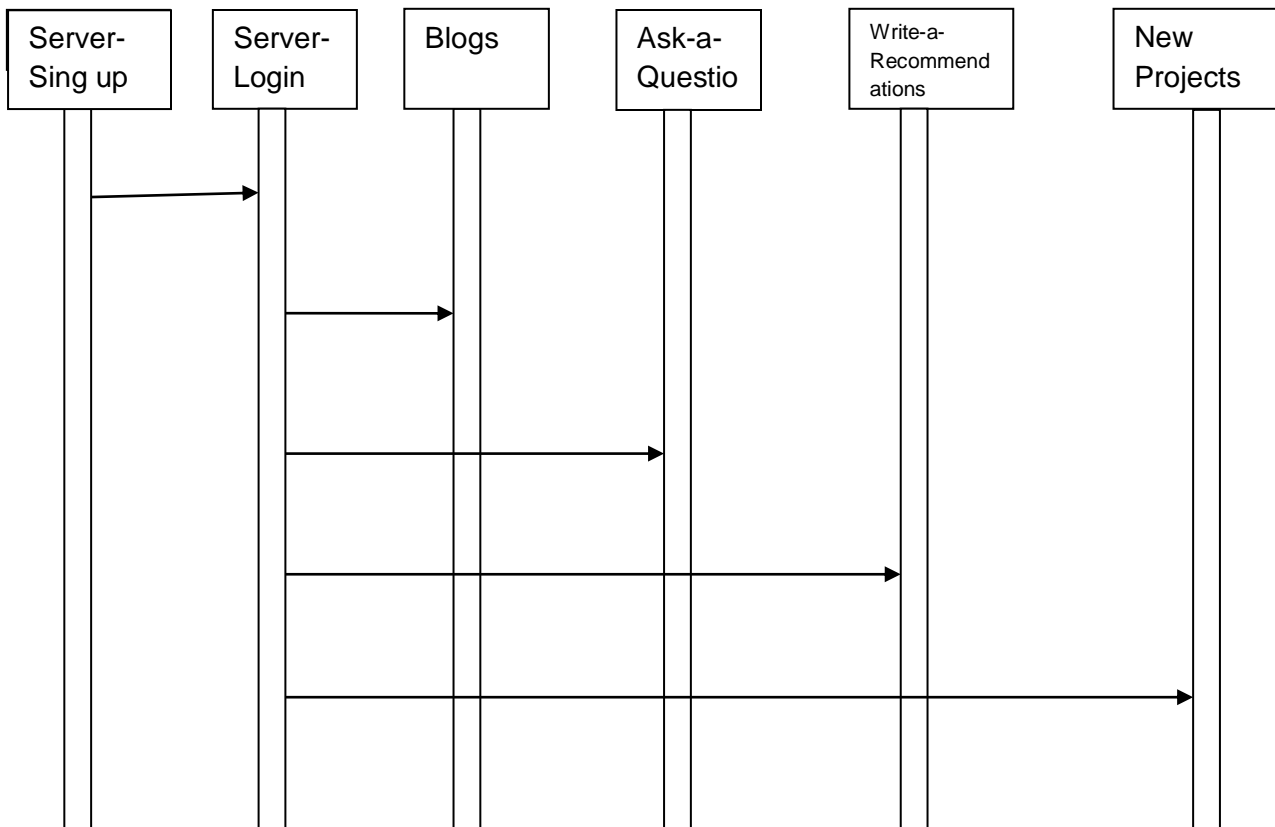
This Module deals with basic architecture of handling the user details while they register into the web site and checks for the authorization when they enter into the tutor module or the other transaction module while the purpose of maintaining the rapo with the community.

3.6 Activity Diagram:- For New Users:-



For Old Users:-

3.7 Sequence diagrams



About JSX

JSX stands for Java Script XML. It is simply a syntax extension of Java Script. It allows us to directly write HTML in React (within Java Script Code). It is easy to create a template using JSX in React, but it is not a simple template language instead it comes with the full power of java script it is faster than normal java script as it performs optimizations while translating to regular java script instead of separating the markup and logic separated files react usage components for this purpose.

Examples of Browsers used to web page include:

- Chrome
- Microsoft Edge
- Netscape etc...

All About Software Requirement:-

The first thing need to do is check that you are set up properly. This involves the following steps.

1. Install MYSQL on your machine

To install MYSQL from a binary distribution, installing MYSQL on Unix/Linux/Windows using generic binaries. Alternatively, use the secure Deployment Guide, which provides distribution of MYSQL enterprise Edition Server with features for managing the security of your MYSQL install.

2. Install of Flask:-

To install flask first we need install python in our machine. After that in command mentioned below.

```
pip -install flask
```

Also install the dependencies which is require for our project

➤ Installation and setup of React JS

Install NodeJS and NPM are the pre-requisites to create the ReactJS with following command.

```
npxcreate-react-app -app
```

4. Testing:-

Testing is the process of detecting errors .Testing performs a very critical role for quality assurance and for ensuring the reliability of software .The result of testing are used later on during maintenance also.

4.1 Psychology of Testing

The aim of testing is often to demonstrate that a program works by showing that it has no errors .The basic purpose of testing phase is to detect the errors that may be present in the program .Hence one should not start testing with the internet of showing that a program works, but the internet should be to show that a program doesn't work. Testing is the process of executing a program with the internet of finding errors.

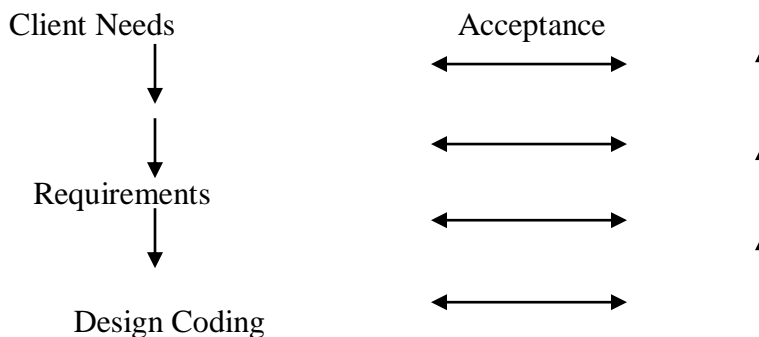
4.2 Testing Objectives

The main objectives of testing is to uncover a host of error,systematically and with minimum efforts and time.Stating formally, we can say.

- Testing is a process of executing a program with the internet of finding an error.
- A successful test is one that uncovers an as yet undiscovered error.
- A good test case is one that has a high probability of finding error, if it exists.
- The tests are inadequate to detect possibly present errors.
- The software more or less confirms to the quality and reliable standards

4.3 Levels of Testing

In order to uncover the errors present in different phases we have the concepts of levels of testing .the basic level of testing are as shown below



4.4 System Testing

The philosophy behind testing is to find errors. Test cases are devised with this in mind. A strategy employed for system testing is code testing.

Code Testing

This strategy examines the logic of the program. To follow this method we developed some test data that resulted in executing every instruction in the program and module i.e., Every path is tested. System are not designed as entire nor are they tested as single systems. To ensure that the coding is perfect two types of testing is performed or for that matter is performed or matter is performed or for that matter is performed on all systems.

4.5 Types of Testing

- Unit Testing
- Link Testing
- Integration Testing

Unit testing, focuses verification effort on the smallest unit of software i.e. the module. Using the detailed design and the process specifications testing is done to uncover errors within the boundary of the module. All modules must be successful in the unit test before the start of the integration testing begins.

Link Testing

Link testing does not test software but rather the integration of each module in system. The primary concern is the compatibility of each module. The programmer tests where modules are designed with different parameters, length, type etc

Integration Testing

After the unit testing we have to perform integration testing. The goal here is to see if modules can be integrated properly. The emphasis being on testing interfaces between modules. This testing activity can be considered as testing the design and hence the emphasis on testing module interactions

5. Conclusion

The efficiency of any system designed to suit the requirement depends cooperation during the implementation stage and also flexible of the system adopt itself to the client and system requirements. GTutor(Learning hub)_has been developed to overcome the problem with traditional system of carrying the hard copy of content. One can access smart notes throughout the world where their internet accessible. This allows the user to view our content from different parts of the world.

It's also provide community to solving their doubts in short period of time. By another authorised user of our website or our technical team.

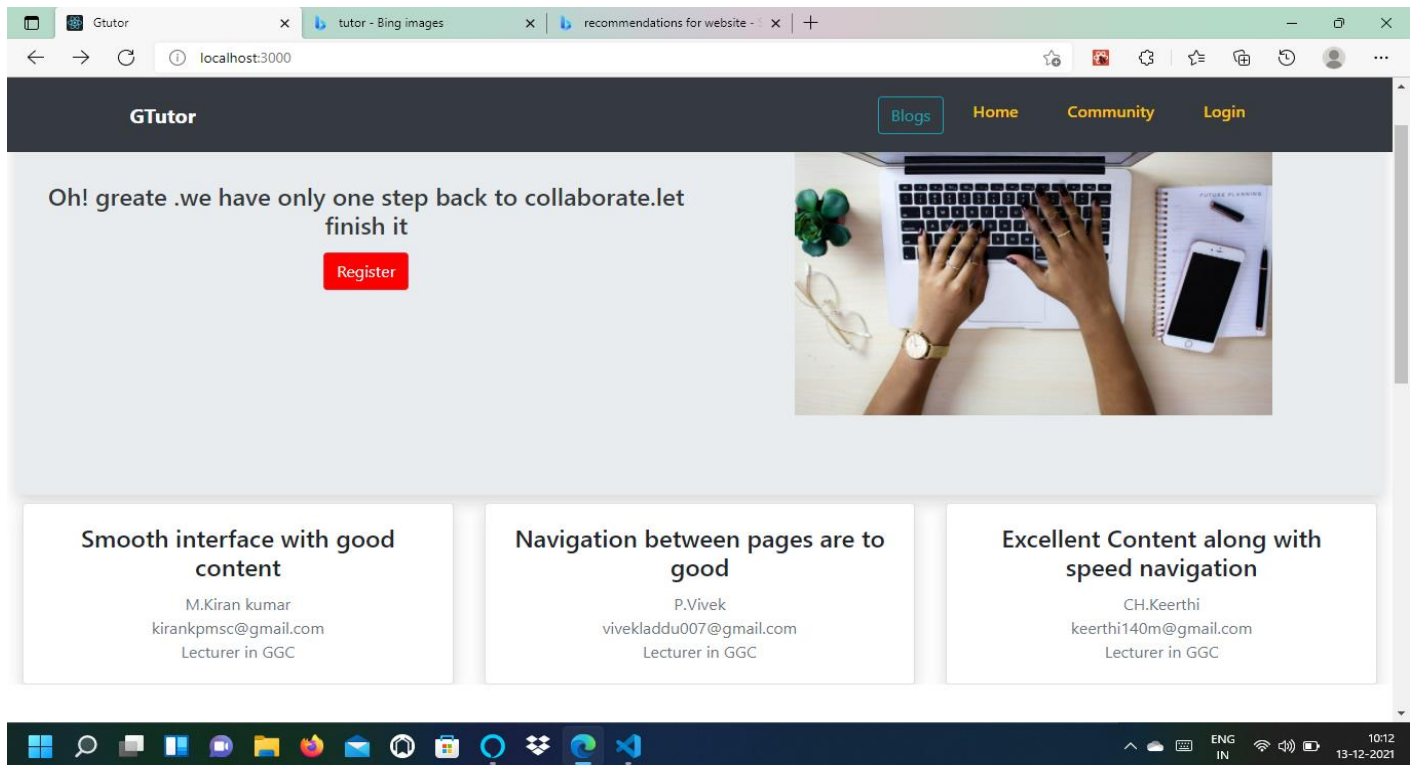
5.1 Future Improvement

This project focus on developing on G- tutor along with web application. We have prepared new system after identifying issue in existing traditional book carrying system.

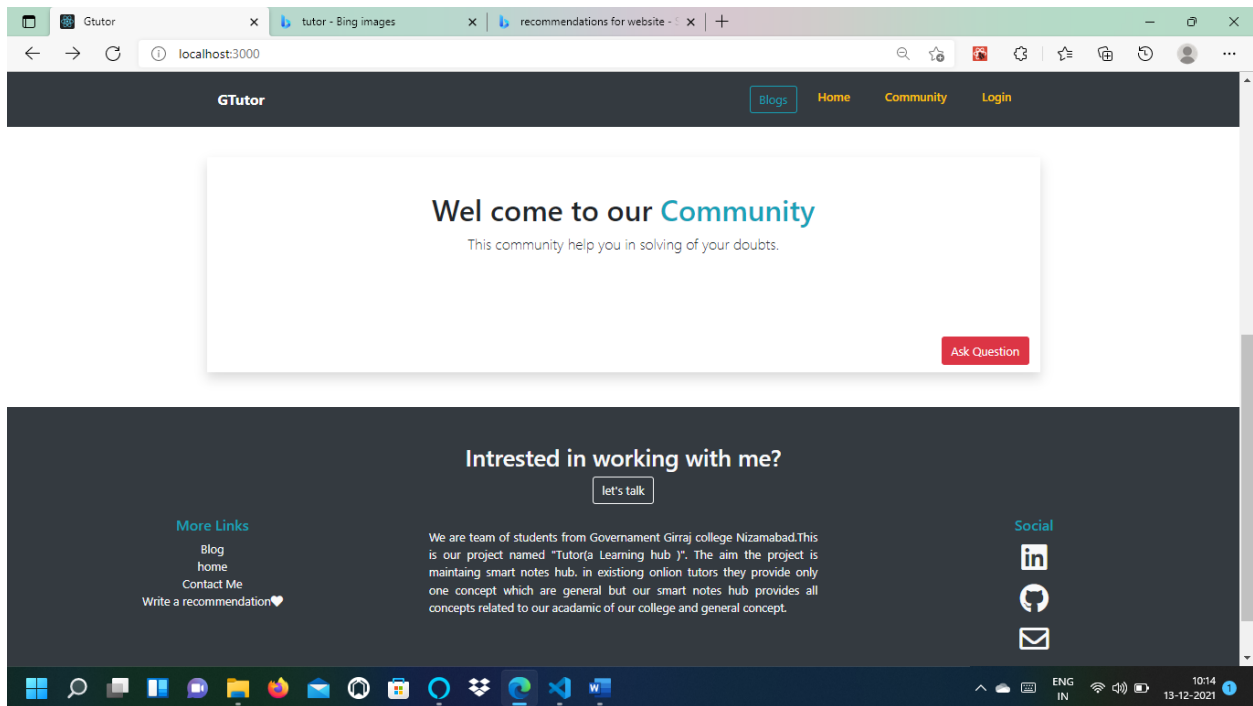
- Include graphical and media file as friendly interface.
- Use of JSX, JQuery for more smooth interface

For a service of this nature, the need to be available is all important. After all, when the only means of access is via online, it is of almost importance to have and maintain an accessible web presence.

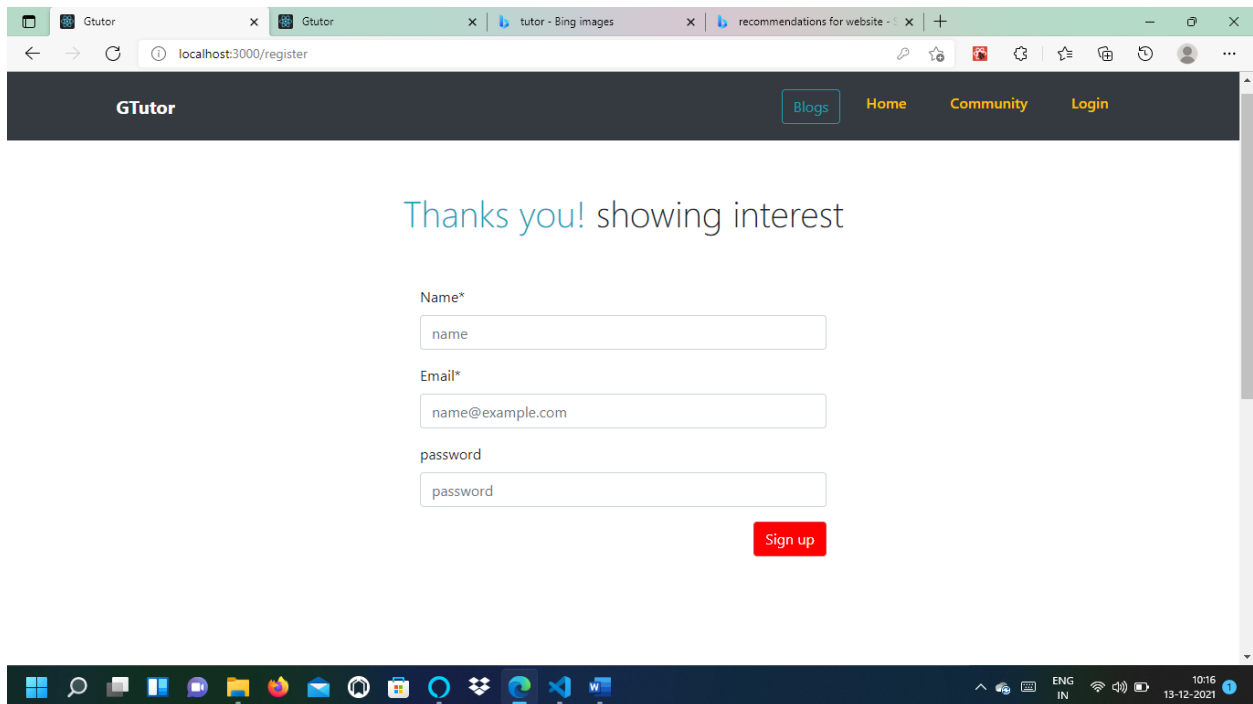
➤ Home Screen-1



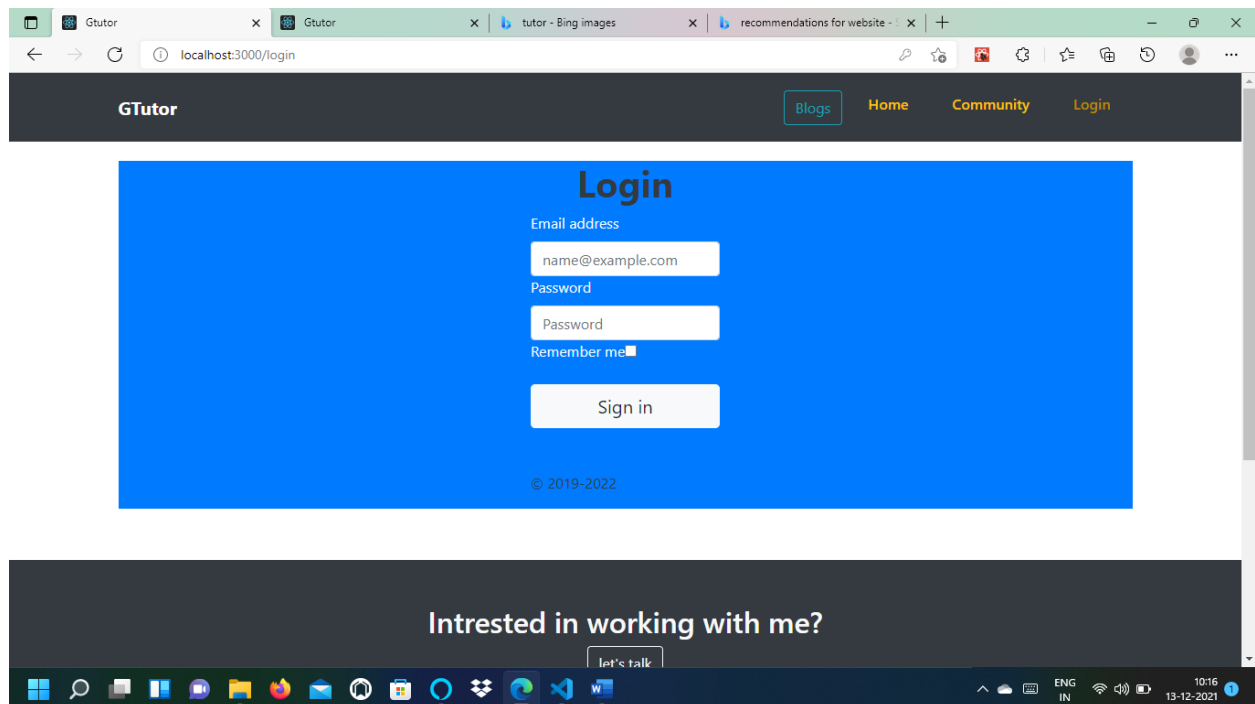
➤ Home Screen-2



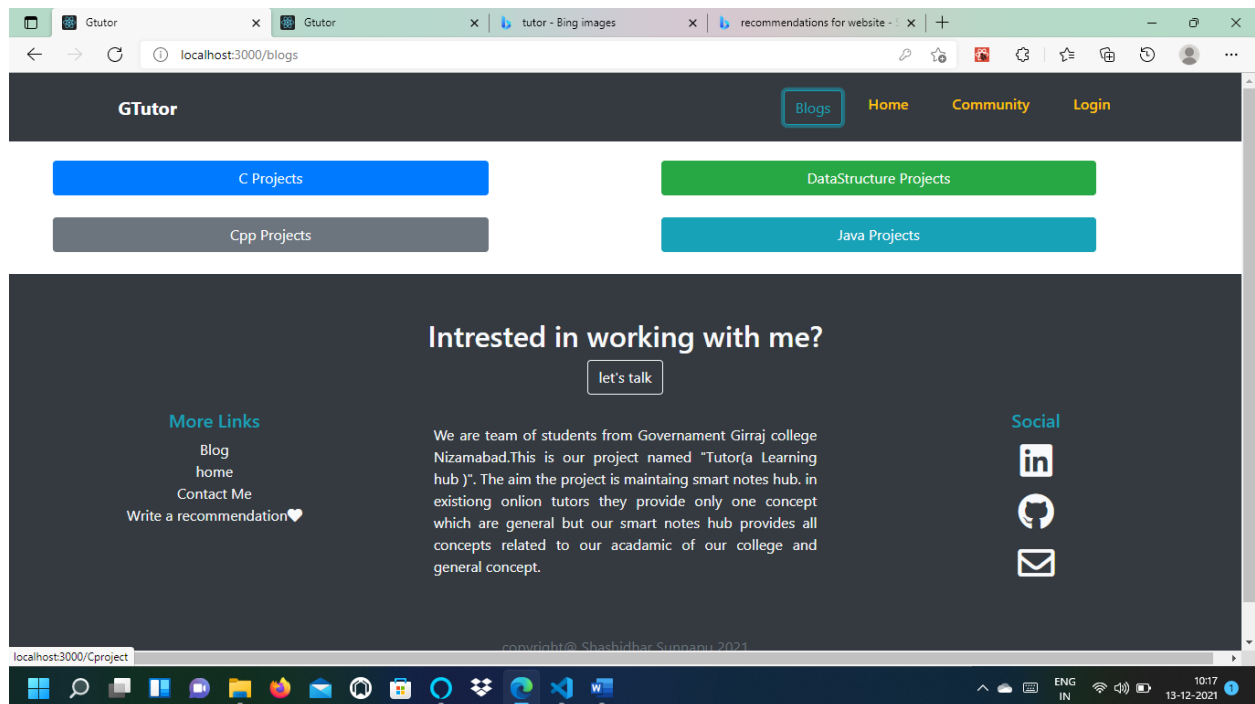
➤ Registraction



➤ Login



➤ Blogs



➤ Data Structure

The screenshot shows the Gtutor website interface. The browser address bar displays `localhost:3000/Datastructure`. The navigation menu includes **Blogs**, **Home**, **Community**, and **Login**. A grid of topic buttons is displayed:

- Data Structure and it's type
- Multi-dim Array
- Algorithm
- Stack
- Single Dim Array
- Notations for Arthamtic Expression
- Two dim Array
- Converting Infix Expression to Postfix

Below the grid, there is a section titled "Intrested in working with me?" with a "let's talk" button. To the left, under "More Links", are links for "Blog", "home", "Contact Me", and "Write a recommendation". To the right, under "Social", are icons for LinkedIn and GitHub. A paragraph of text describes the project as a smart notes hub for students from Government Girraj college, Nizamabad.

➤ Recommendations

The screenshot shows the Gtutor website interface with a recommendation form. The browser address bar displays `localhost:3000/write-a-recomandation`. The navigation menu includes **Blogs**, **Home**, **Community**, and **Login**. The form contains the following fields:

- Name*
- Email*
- Company/institution
- Designation
- Recommendation

A red button labeled "Let's of Love!" is located at the bottom right of the form.

➤ Ask-question

The screenshot shows a web browser window with the URL `localhost:3000/ask-a-question`. The page header includes the Gtutor logo and navigation links for Blogs, Home, Community, and Login. The main heading is "Post Your question". Below this, there is a form with the following fields: "Name*", "Email*", "question*", and a rich text editor with a toolbar containing icons for bold, italic, underline, link, unlink, list, and image. A "Post" button is located at the bottom of the form. The Windows taskbar at the bottom shows the time as 08:59 on 14-12-2021.

➤ Write-a-recommendations

The screenshot shows a web browser window with the URL `localhost:3000/write-a-recomandation`. The page header includes the Gtutor logo and navigation links for Blogs, Home, Community, and Login. The main heading is "Thanks you! showing interest". Below this, there is a form with the following fields: "Name*", "Email*", "Company/institution", "Designation", and "Recommendation". A red "Let's of Love!" button is positioned at the bottom right of the form. The Windows taskbar at the bottom shows the time as 09:02 on 14-12-2021.

GIRRAJ GOVERNMENT COLLEGE

NIZAMABAD



JIGNASA 2021-2022

STUDENT STUDY PROJECT

DEPARTMENT OF ENGLISH

TOPIC:

**MISMATCH BETWEEN SPELLING AND PRONUNCIATION: A
CASE STUDY OF RURAL HIGH SCHOOL STUDENTS**

Submitted by:

- | | | |
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| 1. 1905-5005-467-050 | - G. Vardhini | - BSc(MSCs)- III |
| 2. 1905-5005-467-049 | - G.Vineetha | - BSc(MSCs)- III |
| 3. 1905-5005-467-108 | - T.Bhavya | -BSc(MSCs)- III |
| 4. 1905-5005-467-097 | - S.Uday Kiran | -BSc(MSCs)- III |
| 5. 1905-5005-467-079 | - N.Bhanu Teja | -BSc(MSCs)- III |

SUPERVISORS:

- 1. Dr. S. John Sukumar**
- 2. Mrs.B.Prathibha**

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DECLARATION

We hereby declare that the project work incorporated in this study entitled *“Mismatch between Spelling and Pronunciation: A Case Study Of Rural High School Students”* is a work carried out by us under the supervision of *Dr.S.John Sukumar & Mrs .B. Prathibha , Department of English, Girraj Government, College, Nizamabad.*

We also declare that any omissions and commissions are entirely inadvertent.

- | | | |
|-----------------------------|-----------------------|-------------------------|
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Dr. S. John Sukumar
Mrs.B.Prathibha
Girraj Government College
Nizamabad

Certificate

This is to certify that the study project entitled “*Mismatch between Spelling and Pronunciation: A Case Study Of Rural High School Students*” is an independent work carried out by G.Vardhini, Bsc III, G.Vineetha, Bsc III, T.BhavyaB,Sc III, S.Uday Kiran B.Sc III and N.Bhanu Teja B.Sc III, Girraj Government College, Nizamabad under our supervision. We consider it worthy of being submitted.

Date: 10.04.2022

S.JOHN SUKUMAR

Mrs. B.PRATHIBHA

MISMATCH BETWEEN SPELLING AND PRONUNCIATION: A CASE STUDY OF RURAL HIGH SCHOOL STUDENTS

INTRODUCTION:

Centuries of colonial legacy has made English language spread to many countries across the world. Certainly, India was not an exception to this historical inevitability. Several centuries of the British rule in India established English as not only an official language but also a smart street language. During the times of social and political transition from Mughals to the European colonialism, English replaced Persian. There after the use of English language underwent several changes in terms of bureaucratic, social and literary uses. But, never in the history of India, was English introduced with a view to bring positive change among the populace of India. It was forced upon us only with a view to oppress Indians economically. Hence, the subsequent policies of British Education proved to be futile attempts to bring about any change in the lives of natives in India. However, Indians need to be thankful to the efforts put by the British for introducing English in to India.

It was much against to the expectations of the British; the Indians learnt English to use it to fight the British colonial powers and their supremacy. During the late 18th century and the beginning of 19th century, English began to evolve as smart street language. There was considerable and substantial increase in the use of language in fields like education, bureaucracy, business, and different social contexts and settings. This is how English language became a substitute communication system to the mother tongues of Indians. In fact, it attained the position of second language to Indians catering their communicative needs outside of their homes.

However, learning of English language is not a cakewalk to Indians. Being English only the second to their mother tongue, Indians perceive it with a bit of difficulty in many ways. Its European origin, out of all flexibilities, made it difficult at certain levels. It is a normally held view that some Indians hailing from rural regions perceive it all new and do not own up. In addition, most of the languages spoken by Indians fall under Indo-Dravidian languages which are aloof from the total qualities of Indo-European languages like English, French and other languages. This cultural alienation makes natives of India to be scared of English language. The inconvenience of learning English has resulted in faltering use of English in many social and official contexts.

Despite the apprehension over English language, the impact of globalization and privatization has been imminent with respect to learning English language in India. The globalization has brought the electronic gadgets T.Vs, Cell phones, computers, mass media and cinema within the reach of a common man. This change in the phenomenon has been able to lessen the fear of English language among the people. People have been exposed to the communication system particularly in English language in its varieties. People from the middle, higher strata of Indian society are comfortable with their exposure to English language in the present day context of globalization. This amusing digital scope of English language has improved its prospects on gigantic scale and there by leading to the economic prosperity increase manifold, depending on one's willingness to put in more efforts.

The success of global economy depends on the good knowledge of English and fortunately Indians have natural and historical advantage with English. Linguists opine that Indians find it easier to learn English than Chinese because some Indian languages are of Indo-European family and share a number of features. This quality gives Indians learners natural ease with English and also a competitive advantage. There are many learning opportunities, which have come to be

available, thanks to the interactive English teaching either on the internet or through CD ROM. Many call centres and English teaching institutions in private sector are employing these very tools for teaching English

The English language has a remarkable ability to absorb new words and win new words. The quite recent edition of the Concise Oxford Dictionary of English includes hundreds of Indian words like 'Hindutva', 'Dada' (i.e. one's older brother), 'Panchayat', 'Chai', 'Pani', and 'Puri, 'Lose'. Indian words form twenty percent of the borrowed words, as the longest component after American and Australian English segments. Lord Macaulay introduced English in India about a hundred and ninety years ago to create 'Babus' for the British Bureaucracy and about seventy million Indians use the language, a number higher than in the U.K. Strangely illiterate people use about hundred borrowed words from English as part of their mother tongue words like 'bulb', 'switch', 'count', 'bus', 'fan' etc. It shows rapid growth recorded in English communication in this era of internet.

This study project is undertaken to understand the problems faced by rural high school students in Nizamabad mandal due to the mismatch between spelling and pronunciation patterns of English language and suggest remedial measures to improve their language competencies.

Statement of the Problem:

The spelling system reflects closely with the pronunciation in many Indian languages, but is not so with English. As a result, English language learners face problems with the inconsistencies between spelling and pronunciation. Students with Telugu as a medium of instruction often tend to confuse in spelling when the same letter does not represent the same sound

or the same sound is not represented by the same letter or when some letters are not pronounced at all (silent letters) or in cases where sounds are pronounced with no letter representing them. Hence, high school students need proper guidance, knowledge and understanding about why such inconsistencies exist and what can be done to avoid mistakes in writing.

Irrespective of historical lineage of English language exposure, Indian learners tend to commit certain errors in the use of several skills of English language. The prominent among them stem from the pronunciation part of language. The pronunciation of English words at sentence level or word level is particularly notable and remarkable. Several previous studies have explored the causes of faulty habits of pronunciation were attributed to the cultural variation. And it was also attributed to influence of mother tongue that of an individual speaker. Then, the second mistake Indian learners tend to commit in grammar which shows lack of exposure to English. For the past several decades and until 1950's English has been taught through literature in India. But the trend changed at the advent of Communicative Language Teaching inculcating 'communicative competence' among the learners where all the skills are taught accordingly and eclectically. Likewise, the mistakes occur in terms of skills while learning English language.

Though there are many areas of language, the Indian students of English language commit serious mistakes in building spelling of English words. It has far reaching implications resulting in writing skills which affects larger academic and career interests of the student community. The commission of grave and frequent errors in English words leads to unintelligibility of text. It does not only lead to unintelligibility but also misunderstanding and misinterpretation of the text. For instance, similar pronunciation of the words 'son' and 'sun' is always confused for new learners of English until its context is deciphered properly. In a similar vein, the pronunciation of long vowel /i:/ in the word 'receive' is frequently spelled wrongly as 'recieve' because in many words

of English ‘-ieve’ stands for long vowel sound /i:/ as in ‘believe’. There are numerous words in English with confused morphological construction mismatching with pronunciation patterns of English.

Certain morphological aspects of English language lead to the misspelling of words. It is known that many words in English can easily be split in to smaller chunks known as ‘morphemes’. For example, the words like ‘reader’, ‘printer’, ‘formatter’ which are nouns related to verbs ‘read’, ‘print’, and ‘format’. It is here, Indian learners of English make serious errors in the process of turning them into nouns. The students feel an acute confusion whether to end them with ‘er’ or ‘or’. It is an aspect of mistake morphemically connected to linguistics where students commit errors with poor knowledge of morphology. Therefore, this study insists on the importance of study of linguistics even for students of General English at graduation level.

There are other notable aspects of committing spelling errors. One such error is associating singular-plural forms of words. Generally, a student does not get confused to make a singular word into plural one. But rarely in case of some words like ‘ox’(singular)- ‘oxen’ (plural), a student with poor knowledge English vocabulary writes ‘oxes’ as its plural form which does not exist in English lexis. Evidently, there are many such words we come across in English like ‘criterion’ (Singular) - ‘criteria’ (Plural), ‘Medium’ (Singular) - ‘media’ (Plural), ‘formula’ (Singular)- ‘formulae’ (Plural) where students tend to mistake. Similarly, addition of inflectional morphemes to a root word in building English spelling is often confused by students. It so happens because it is connected with the confusion in pronunciation /ʃðn/ with similar pronunciation of inflections in words like ‘profession’ versus ‘relation’. A large number of students from vernacular media of instruction make such phenomenal errors due to mother tongue intervention in learning target language i.e. English.

A close observation of high school students in Nizamabad mandal has disclosed that students confuse the pronunciation of some set of English words that have sounds, which do not exist in Telugu. It was also observed that students do not differentiate between some vowel sounds which have more than one way of pronunciation e.g. the vowel in “mat” and “mate”.

The team has also noticed that the students have problems in the pronunciation of some English sounds for instance they confuse the contrast sounds e.g. here are some words and how the students pronounce them next to each word (service/serviis/,document /dɒcument/, ‘women’ /wumen/, ‘obstacle’ /ɔbsteikl/, ‘performance’ /pə:fɔ:mans/ so in the first word they used the long form instead of short form, in the second word they used /u/ instead of/ju/, in the word women they used /u/ instead of /i/ in the word ‘performance’ they pronounced it with long vowel /ə:/ instead of short one /ə/. So we find that they confuse different pronunciations of each vowel as if there is only one pronunciation for each sound according to their knowledge. Another area is that they have some errors with some consonants that do not exist in Telugu, so they replace them with other nearer consonant sounds.

It is difficult for a second language learner to speak with native-like pronunciation. Therefore, this research attempts to identify the problematic areas of pronunciation and to identify the exact reasons behind them and to try to find suitable techniques that help the High school students of Nizamabad Mandal to speak English with better pronunciation.

Review of Literature:

Many linguists and researchers on Second language learners concluded that the English

pronunciation problems among speakers of other languages are the same but it is according to each language back ground. Telugu language is among them, so here we are going to see some of the factors that influence on learning second language (L2) in general and English pronunciation in particular and also try to identify the exact reasons behind such errors and finally try to find the suitable techniques and strategies that help the students improve their English pronunciation.

Factors that influence learning English in general:

Many studies in the field of second language acquisition discussed the factors that hinder achieving native-like pronunciation among foreign languages learners in general (O'Connor, 2003; Yule, 2003). Researchers and linguists have pointed some linguistic factors such as the differences of the sound system between the (L1) and the (L2), the inconsistency of some sounds in English language, the mother tongue interference and the influence of spelling on pronunciation.

1. Mother-Tongue Interference

Several works have been conducted on the influence of L2 in learning English language ,(Moosa,1972) and (Swan; Smith, 2001) reported that /p/ and /b/ sounds are two different phonemes and each one is distinguished by a native speaker.

2. Sound System Differences between L1 and L2

As it has been mentioned by many linguists and researchers, there is a conflict between the sound systems of L1 and L2 (Moosa,1972) noted that the learners of English form habits of their mother tongue, so they strongly build the phonological features of their mother tongue; this makes them encounter many difficulties in distinguishing sound systems between a native language and the second language.

3. Inconsistency of English Vowels

One of the important problems faced by the students of English in general and the Telugu medium students of English in particular, is that each English vowel sound has more than just one pronunciation. This causes many difficulties to the learners and leads them to a mispronunciation (Cruttenden, 1994) noted that the main difficulty for all those whose own languages have a less complex vowel system, lies in the establishment of the qualitative oppositions. Instead of using the exact quality and quantity of a special sound, the learner erroneously changes either the quality or the quantity of the sound; so in a certain word the learner tends to use the variant sounds e.g. in words like son /sʌn/, come /kʌm/, among /əməŋ/, monkey /mʌŋki/, blood /blʌd/, flood /flʌd/; in all these words /o/ and /oo/ stand for the same sound of /ʌ/, but most of the learners, unless they have a mastery of the pronunciation of such vowels, they pronounce /ɔ/ or /u:/ in the place of /ʌ/. This is because of their first background about each sound, so they picture this thought in their minds as if each vowel has only one type of pronunciation and if that is true the learner can easily know and expect how to pronounce each word even if he is seeing it for the first time. That is if each letter represents only one phoneme, but in fact the situation is not like this, and that is one of the basic problems of English. (O'Connor, 2003) reported that it is not simple to know the exact sounds the letters stand for or represent in a certain word for instance in the words city /siti/, busy /bizi/, women /wimin/, pretty /priti/, village /vilidʒ/, English /iŋɡliʃ/ the letters y, u, o, a, e, all of them stand for the same vowel sound /i/.

A **language** is a system of conventional vocal signs by means of which human beings communicate. This definition has several important terms, each of which is examined in some detail in the following sections. A language is not just a collection of words, such as we find in a

dictionary. It is also the rules or patterns that relate words to one another. Every language has two levels to its system- a characteristic that is called duality of patterning. One of these levels consists of the meaningless components of a language are its sound system, or phonology. The other is meaningful units are its lexis(terminology), or vocabulary, and its grammatical system (syntax, morphology).

Areas of Sound and Spelling Inconsistencies:

The problems in sound and spelling of English can be grouped under the following headings:

- A. The same letter does not always represent the same sound.
- B. The same sound is not always represented by the same letter.
- C. Some letters are not pronounced at all
- D. We pronounce sounds in some places where there is no letter

Same Letter Different Sounds:

The same letter does not always represent the same sound in English. Some letters can stand for as many as four different sounds. For instance,

The letter *c* has no sound equivalent as *c*. It is realized as

- 1. /k/ as in cup, cat, cotton, bacon, etc.
- 2. /s/as in cellar, receive, accent, access.

The letter *g* is pronounced

- 1. /g/ as in guess, guy, got, guide, gross, etc.
- 2. //as in age, agenda, large, huge, etc.

The letter *s* is realized as

- 1. /s/ as in sat, sing, socks, etc.
- 2. /z/ as in bosom, busy, cousin, easy, feasible, hesitate etc.
- 3. /ʃ/ as in mission, sure, sugar
- 4. /y/as in vision, measure, leisure, usual

The letter *u* is realized as

- 1. /u/as in put, bull, sugar
- 2. /aI/ as in buy, guy

3. /ɪ/ as in succeed, succumb, suspect
4. /ʌ/ as in bud, gull, luck, such, study, etc
5. /u/ as in jury, rural, etc.

The letter A is pronounced

1. /æ/ as in sat, hand, match
2. /ɑ: / as in ask, balm, part, laugh, clerk
3. /ɒ/ as in was, want, wash, because
4. // as in tall, all, walk
5. /e/ as in any, many
6. /ɪ/ as in village, private, baggage

Same Sound Different Letters

Another area of discrepancy between spelling and sound in English is a situation where the same sound is not always represented by the same letter. Such examples are:

The velar plosive /k/ has different spelling forms ask, keen, speaker, peak, keg

c cut, cap, act, cattle

cc occasion, according, occur, occupy,

ch chemist, stomach

ck pack, back, black

The velar Plosive /g/ is spelt

g gate, give, bag, go, etc

gg juggle, begged

gh ghost, aghast

The Palato-Alveolar Affricate // is represented by the following letters:

j jump, ajar, injury, rejoice

g germ, engine, village

dg budget, bridge, porridge

de grandeur

di soldier

dj adjoin, adjacent

The alveolar nasal /n/ has the following spelling realizations:

n not, ant, run

nn funny, running

gn gnat, sign

kn know, knowledge, knife

The Labio- dental fricative /f/ is also spelt

f fit, leaf, soft, after

ff offer, affair, stiff

gh laughter

ough cough, rough

ph Photo, trophy, graph

This is not peculiar to consonant sounds. A vowel can be represented by varying sounds as in:

The sound /e/ is realized in the following spellings:

ai said, again

e end, send, let, get

ea dead, spread, health

eo leopard, Leonard, Geoffrey

ie friend

ue guess, guest

The sound /u:/ occurs in these spellings:

ew crew, blew, chew

o do, who, womb, prove

oe shoe, canoe

oo moon, room, food

ou group, route, you

u blue, rude, June

ui juice, fruit

wo two

The diphthongs also have the same chaotic spelling .e.g. /aI/ is spelt:

ai aisle

ei height, neither

eye eye

i lime, site, silence, tidy, ice

ie die, cried, lie

uy buy, guy

y try, my, shy

ye bye, dye

ry rhyme

Silent Letters:

A lot of English words have silent letters which though written are not meant to be pronounced. Writing such words as one heard them uttered may produce erroneous spellings.

Silent B as in: limb, thumb, comb, numb, womb, debt, subtle, doubt

Silent C as in: muscle, scene, science, abscess

Silent D as in: width, handsome, handkerchief, Wednesday, sandpaper

Silent G as in: gnash, gnaw, gnat, gnome, sign, hang, tongue, reign, thing, feign, diaphragm

Silent H as in: hour, honest, honour, heir, exhaust, exhibit, vehicle, shepherd, ghost, rheumatism

Silent K as in: know, knit, knock, knight, knee, knife,

Silent L as in: could, would, should, calf, chalk. Palm, walk, yolk, half, behalf, psalm, talk

Silent M as in: mnemonics

Silent N as in: Hymn, solemn, condemn, column, autumn,

Silent P as in: psalm, psychology, pneumonia, psychic, pseudo, corps, cupboard

Silent T as in: listen, often, butcher, wrestle, deport, rapport, Wretch, ballet, Christmas

Inserting Sound where there is no Sound:

Another sound/spelling problem in English is the intrusion of sound where there is no spelling to indicate that sound. The words could be spelt but the pronunciation is a problem to learners of English. Examples are:

/j/ is pronounced before *u* in the following words

Cute /kju:t/

Beauty /bju:ti/

Eulogy /ju:l[ɪ/

Cube /kju:b/

Europe /ju[rɪp/

/k/ is an extra sound inserted before *s* in:

Accept /[ksept/ Access / ækses/ Accident /æksident/

Axle /æksl/ Axis /æksis/ Axe /æks/

Variants of the Plural and Past Tense Morpheme: The next area of variant that is a problem to non-native speakers of English is variation in the pronunciation of the plural and past tense morpheme.

/s/	/z/	/ɪz/
Cats/kæts/	dogs/dɒgz/	houses/haʊzɪz/
Books/buks/	cows/kauz/	rushes/rʌʃɪz
laughs/la:fs/	girls/glz/	Dishes/dɪʃɪz/
maps/mæps/	leaves/II:vz/	Benches/bentʃɪz/

The first column has their plural realized as /s/; the second /z/ and the third /Iz/. The same problem is with the formation of the past. Words with the following sounds are realized, though formed by the addition of the same letters.

–ed:

Stoned/stɔɪnd/	washed/wɒʃt/	started /sta:tId/
Played/pleId/	faced/feɪst/	handed /hædId/
Begged/begd/	looked/lukt/	painted /peɪntId/
Bribed/braɪbd/	laughed/la:ft/	divided/dɪvaɪdId/
Dared/deɪd/	rushed/rʌʃt/	bolted/bɔɪltId/

While the first column is realized as /d/, the second and third are realized as /t/ and /Id/ respectively.

Methodology:

- Two rural high schools in Nizamabad Mandal were identified for the research study- ZPHS Gopanpally and ZPHS Manikbandar.
- The study consisted of three parts: Observation, Dictation Test and a Questionnaire
- The Dictation test and the questionnaire were designed and administered to the students.
- The procedure consisted of a dictation test followed by a questionnaire on basic concepts related to spelling and pronunciation.
- The Sample consisted of 50 students including boys and girls of both ZPHS Goopanpally and ZPHS Manikbandar.

Findings and Discussion:

The Survey conducted yielded that many students are unaware of the Pronunciation & Spelling patterns of English. Pronunciation plays a crucial role in speech. Spelling is sequence of letters in a word. Meanwhile, pronunciation is the manner of speaking. Spelling & Pronunciation share an ambiguous relation. For instance, the word “bazaar” is a Persian word. English has taken thousands of words from other languages. These borrowings are divided into loan words & translations. Many respondents got confused between suffixes like “tion” & “sion”. Survey also pointed out that students feel pronunciation & spelling do not match many a time.

The dictation test conducted showed that students don’t follow The Three Letter Rule and have no idea about content and functional words. Most students were unclear with “ei” or “ie” words. Students had minimal knowledge about rules of Capitalization. On basis of the two surveys, we noticed that only few students were able to pronounce the words adequately. They were unaware of some commonly confused words like affect and effect, expect and except which could mislead the total meaning of the sentence if they are not pronounced correctly, most of the students failed to recognize the basic silent letters. They were not familiar with the incipient concepts like stress and syllables.

DICTATION WORDS:

1. TSUNAMI
2. OFTEN
3. KNOWLEDGE
4. ISLAND
5. PSYCHOLOGY
6. DOUBT
7. KNOT
8. COLUMN
9. WHOLE

10. GRAMMAR

11. BYTE

12. CALM

13. SCIENCE

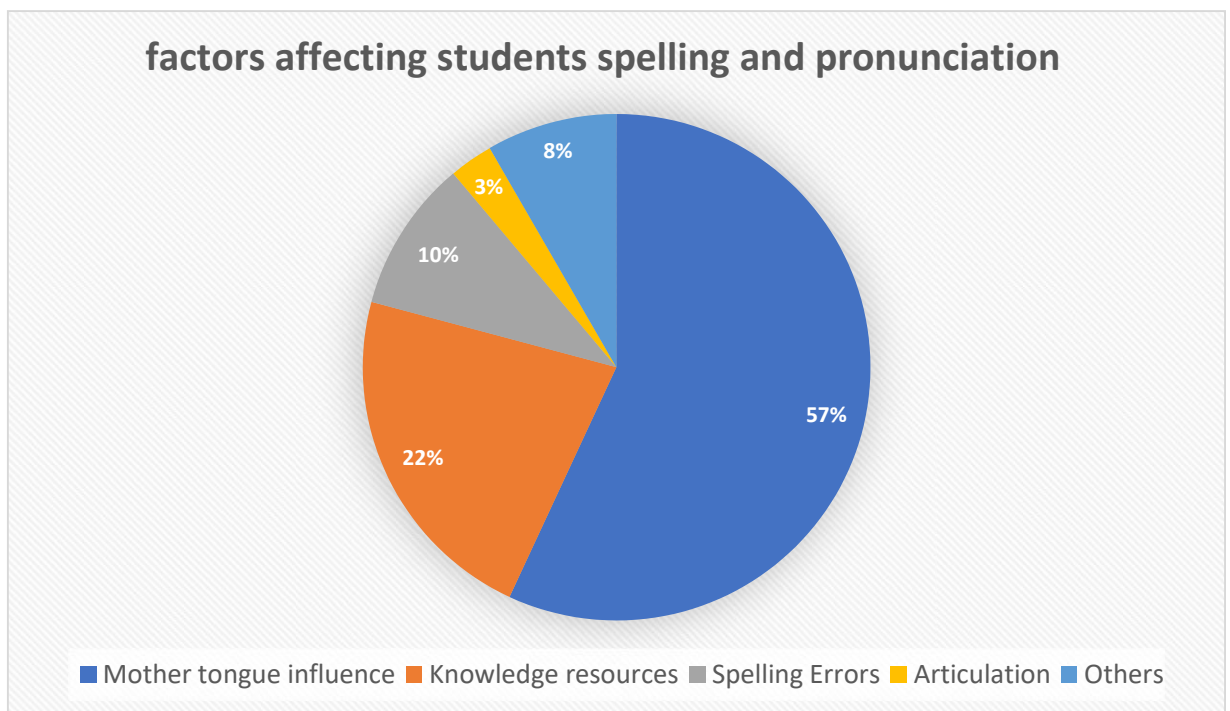
14. BELIEVE

15. EIGHT

16. HEIGHT

These are the dictated words for the students. The above words are of different categories.

They are: -



Language in general is an ability inherent in us. Specific languages such as English are systems that result from that ability. We can know the underlying ability only through studying languages is to find out about ourselves, about what makes us persons. And the best place to start such study is with our own language, the one that has nurtured our minds and formed our view of the world. A good approach to studying languages is the historical one. To understand how things are, it is often helpful and sometimes essential to know how they got to be that way. If we are psychologists who want to understand a person's behaviour, we must know something about that person's origins and development. The same is true of a language. Another reason for studying the history of English is that many of the irregularities in today's language are the **leftovers** of earlier. Knowing about the history of the language can help us to answer many questions. Knowledge of the history of English is no solution or recipe for curing all our linguistic ills but it can at least lighten some of the symptoms. Yet another reason for studying the history of English is that it can help us to understand the literature of earlier times.

SILENT LETTERS	HOMOPHONES	EXCEPTIONS	COMMONLY CONFUSED WORDS
TSUNAMI	BYTE / BITE	HEIGHT	GRAMMAR
OFTEN	KNOT / NOT	SCIENCE	BYTE
CALM	WHOLE / HOLE	BELIEVE	KNOT
DOUBT		EIGHT	WHOLE
ISLAND			PSYCHOLOGY
KNOWLEDGE			
COLUMN			

The Vowel Letters: There are five letters that are considered to be true vowels: **A, E, I, O,** and **U**. The letter **Y** is often considered to be a “semi-vowel” because it sometimes functions as a vowel sound (as in *myth, tryst, any,* or *fly*) and sometimes as a soft consonant sound (as in *yard, yet,* or *yonder*). Finally, it’s worth mentioning that the letter, **W**, which is typically considered a consonant, can also behave as a vowel, but this only occurs when it combines with other vowels (known as vowel digraphs).

Vowel Letters vs. Vowel Sounds

In looking at two words, *apple* and *ate*, we will focus on the vowel letter **A**, which creates two different sounds depending on the spelling of the word—that is, **A** is the vowel in both words, but it behaves differently in each to create two distinct vowel sounds. Linguistics, on the other hand, treats the **A** in *apple* (/’æpəl/) as a different vowel altogether from the **A** in *ate* (/eɪt/), regardless of the fact that they are both formed by the same vowel letter. What we will refer to as a **vowel** is the letter that produces a variety of different sounds, whereas the unique pronunciation according to the letter’s place and purpose in different spellings will be referred to as its **vowel sound**.

Consonants

In addition to **vowels**, the English alphabet is also made up of **consonants**. While vowels represent open-mouthed speech sounds, consonants represent sounds that are made when part or all of the vocal tract is closed. Because they require a specific position of the lips, cheeks, tongue, etc., there is generally little to no difference in how consonants are pronounced between different speakers of English. (The pronunciation of vowels, on the other hand, can differ drastically

depending on dialect). There are 21 consonants: **B, C, D, F, G, H, J, K, L, M, N, P, Q, R, S, T, V, W, X, Y, and Z.**

THE ORGANS OF SPEECH

The principal organs of speech. You can use this diagram together with the following discussion of sounds to locate the places where the sounds are made.

- | | |
|-------------------|--------------------|
| 1. Nasal cavity | 9. Front of tongue |
| 2. Lips | 10. Back of tongue |
| 3. Teeth | 11. Oral cavity |
| 4. Alveolar ridge | 12. Pharynx |
| 5. Hard palate | 13. Epiglottis |
| 6. Velum | 14. Larynx |
| 7. Uvula | 15. Vocal cords |
| 8. Tip of tongue | 16. Trachea |
| 17. Esophagus | |

Sounds of Current English

Consonants are classified according to their place of articulation as **stops, fricatives, affricates, nasals, liquids** or **semivowels**.

Stops: The sounds [p], [t], and [k] are voiceless stops (also called **plosives**). They are so called because in making them the flow of the breath is actually stopped for a second and then released by an explosion.

Fricatives: For the sounds called fricatives (or aspirants) a narrow opening is made somewhere in the mouth, so that the air must “rub” (Latin fricare) its way through instead of exploding through a complete obstruction, as the stops do. The fricatives of present –day English are four pairs of voiceless and voiced sounds, plus one that’s unpaired voiceless.

Affricates: The voiceless and voiced affricates are the initial and final sounds of church and judge, respectively. They begin very much like the stops [t] and [d] respectively, but end like the fricatives [ʃ] and [ʒ].

Nasals: Consonants produced by blocking the mouth and letting the air flow instead through the nose are called nasals.

Pronunciation

Pronunciation always plays the key role in the recognition of a word in speech. Learning correct pronunciation of English words is the most important factor in learning and teaching a foreign and second language. In other words, this is a big problem for English language learners, because the English language does not have fixed phonetic rules. It’s important to know that the English language has borrowed words and expressions extensively from many languages throughout its history. That in fact, is the main reason for the pronunciation of those words which naturally sound different from the spelling, since they were borrowed from other languages into the English language.

KINDS OF WORDS

The words of our speech in English language may be divided into several kinds: the first kind, the words which carry the meaning of the statement uttered and the second kind, the words

which help that utterance to become grammatically correct. We give some examples below in order to understand this subject. Observe, for example, ‘Ali gone university today’. Obviously, the intended sense is conveyed, but the statement is grammatically incorrect. A correct example in writing is: ‘Ali has gone to university today’. Therefore, the two kinds of words are here mentioned as follows: “Ali, gone, university, today”- these words carry the idea of the statement. Thus, they are called **content words**. The words – has, to help the above words in making the statement grammatically acceptable. These are called **structure words**. We’ll discuss about this in depth in further concepts.

Spelling

Spelling contains the rules which govern the way letters are used to write the words of speech; a particular sequence of letters in a word. The history of English spelling begins with the origins of English in the British Isles 1500 years ago. This long history has led to many oddities of English spelling. They are aspects that have caused the complexity between sounds and spelling in English language: first factor is that the pronunciation of English language has changed over the last 500 years and second one is that thousands of words English has taken from other languages. Spelling is a linguistic unit of language which refers to writing skill directly. Hence, definition of writing as one of language skills is necessary for discussion in this project. Writing is defined as art of a writer. The learning of writing is one of the most important skills that second language learners need to develop their ability to communicate ideas and information effectively in target language.

English spelling and Pronunciation

The English language has words which are sometimes spelt quite differently from the way they are pronounced. In other words, English spelling and English pronunciation are hostile and strangers to each other; hostile, because neither accepts without a quarrel the usage of the other; strangers, because very often one does not recognize the other. Note that the learning of English spelling and English pronunciation are as important as learning English grammar and vocabulary to language learners. It is important to remember that the phonological system of every language changes, but writing systems do so very slowly. Just as English has borrowed words, morphemes, and phonological features, so it has also borrowed spellings from other languages. For example, in the middle English period, many literate people knew French as well as English. Many French words were borrowed into English during this period, so in fact, that the language gradually became quite different from Old English spoken in earlier days and it is not surprising that some characteristics of French writing were extended to English. English takes many of its words from different languages around the world. These words are broadly known as borrowings, and they are subdivided into two categories: **loan words** and **loan translations**. A loan word is a term taken from another language and used without translation.

Loan words

Loanwords are words adopted by the speakers of one language from a different language (the source language). A loanword can also be called a borrowing. The abstract noun borrowing refers to the process of speakers adopting words from a source language into their native language. “Loan” and “borrowing” are of course metaphors, because there is no literal lending process. There is no transfer from one language to another, and no “returning” words to the source language. They simply come to be used by a speech community that speaks a different language from the one they originated in.

Borrowing is a consequence of cultural contact between two languages communities. The actual process of borrowing is complex and involves many usage events (i.e., instances of use of the new word). Generally, some speakers of the borrowing language know the source language too, or at least enough of it to utilize the relevant words. They adopt them when speaking the borrowing language. For example, English speakers adopted the word **garage** from **French**, at first with a pronunciation nearer to the French pronunciation than is now usually found. Apparently the very first speakers who used the word in English knew at least some French and heard the word used by French speakers.

However, in time more speakers can become familiar with a new foreign word. The community of users can grow to the point where even people who know little or nothing of the source language understand, and even use the novel word themselves. The new word becomes conventionalized. At this point we call it a narrowing or loan word. (Not all foreign words do become loanwords; if they fall out of use before they become wide spread, they do not reach the loan word stage.)

The following list is a small sampling of the loanwords that came into English from different languages.

Greek

1. Phone

Meaning: A phone is a device that's used to communicate with people from a distance.

Origin: The English word phone is actually short for telephone, which comes from the Greek words for sound (phon) and far away (tele).

2. Hyper

Meaning: Someone who is hyper is very energetic and lively.

Origin: Hyper actually a shortening of the word hyperactive, which combines the Greek word meaning “over, beyond” and the Latin word for something that’s done(act).

Latin

Finish

Meaning: To finish something means to be done with it. In a few seconds you’ll be

Finished reading this sentence.

Origin: Finish comes from the Latin word finis which means “end.” In many words, this is shortened to fin.

Letter

Meaning: A letter is a symbol that represents a sound in a language, like a, b, c, or the rest of the alphabet. A letter is also a message you write and send to someone. Emails are *digital letters!*

Origin: In Latin, a letter was called a **littera**, and the lit and liter parts of this word appear in many English words that are related to letters.

French

5.Question

Meaning: Asking a question means trying to get information about something. Questions end in question marks(?).

Origin: Originally from Latin, English borrowed the Old French word question. The word means “to ask” or “to seek,” and it shows up in a number of ways in other words, from quire to quest. This one can be tough to spot since it switches between using the French and Latin versions of the word.

Liberty

Meaning: Liberty is the state of being free. The Statue of Liberty in NewYork is a symbol of freedom.

Origin: Another originally Latin word, liberty found its way into English through the Old French liberate, usually shortened to lib.

Spelling Conventions

Because modern English has been formed from and influenced by a variety of different languages—**Latin, Greek, French, German**, etc.—in addition to its evolution from Old and Middle English, the ways in which words are spelled and created can often seem inconsistent, illogical, and even contradictory. Adding to the problem is that there is no single unified consensus governing English, so there are many discrepancies and differences in how words are spelled, pronounced, and even used grammatically in different parts of the world. While there may be no single set of “rules” for English spelling, there are many different conventions and patterns we can use to help to make it easier to grasp.

Affixes

An **Affix** is an element that is added to a base word or root word to create a new or inflected form. The most common affixes are **prefixes**, which attach to the beginning of a base or root word, and **suffixes**, which attach to the end.

Prefixes

Prefixes are **morphemes** (specific groups of letters with particular semantic meaning) that are added on to the beginning of **root** or **base words** to change their meaning. Prefixes are one of the two predominant kinds of affixes; Other one is Suffixes. Prefixes can only be **derivational**; adding a prefix always changes the basic meaning of the word.

Suffixes

Suffixes are **morphemes** that are added onto the **end** of root words to change their meaning. Suffixes are one of the two predominant kinds of affixes. Suffixes can be either **inflectional**

(changing only the grammatical function of a word without changing its basic meaning) or **derivational** (creating a word with an entirely new meaning).

Commonly Confused Suffixes

Because many suffixes overlap in their meaning, it can sometimes be confusing to determine which one is appropriate to use with a particular base word or root. To make things even more complicated, many suffixes also have alternate forms that are used in particular contexts or have evolved as the more accepted version. Take example as:

“-tion”vs.“-sion”

The suffixes “-tion” and “-sion” are both used to create nouns from verbs (and, less commonly, adjectives and other nouns) to describe a state, condition, action, process, practice, or the result thereof. They are actually just permutations of the same suffix, “-ion,”but there are specific conditions that will dictate which one we use, so it is worthwhile to consider them individually. For example, verbs ending in “-ize” will take the“-tion” ending when becoming nouns (e.g.,generalize becomes generalization);verbs ending in “-mit,” on the other hand, will take the “-sion” ending (e.g., permit becomes permission).

“-able”vs.“-ible”

The suffixes “-able” and “-ible” are both used to form adjectives meaning “possible, capable of, suitable for, or causing.” Of the two, “-able” is much more common: it is what’s known as a “living” or “productive” suffix, meaning that it is still being used to create new words. For example, acceptable, honourable, palatable, etc. The variant “-ible,” on the other hand, is only used in older words that have survived into modern English.

Spelling Rules

The Three-Letter Rule

The “three-letter rule” is a spelling convention stating that “**content words**”—words that communicate meaningful information, such as nouns, (most) verbs, adjectives, and adverbs—will almost always be spelled with at least three letters. Words that are spelled with only one or two letters, on the other hand, will almost always be “**function words**”—words that perform grammatical functions to help construct a sentence. Let’s look a bit more closely at the difference between content words and function words.

Content words

A content word (also known as a lexical word) is a word that expresses the specific content of what we’re talking about at a given time. Nouns (e.g., dog, happiness), most*verbs (e.g., run, talk, decide) all have meaning that is considered lexically important. In addition, content words are considered an open class of words, meaning that new words can be added to their various parts of speech without difficulty. For example, the word **email** is now an accepted and common place term, with a distinct lexical meaning as both a noun and a verb, but it wouldn’t have made sense to anybody 100 years ago.

Function words

A function word (also known as a **structure word**) is a word that primarily serves to complete the syntax and grammatical tone of a sentence. These include pronouns, prepositions, conjunctions, articles and interjections. Another distinct aspect of function words is that they are

considered a closed class of words, which, unlike content words, means that we don't add new words to these groups.

Determining spelling using the three-letter rule : the three-letter rule is a useful convention to follow when we're trying to determine the spelling of short, single-syllable words. Many one- and two letter function words are homophones of short content words: they have different spellings, but their pronunciations are the same. By remembering that content words will almost always be three or more letters long, we can choose the correct spelling for the word we mean. For example:

Exceptions:

While the three-letter rule is fairly reliable for determining the spelling of common words, there are a few content words that have fewer than three letters. The most common content words that go against the three-letter rule have two letters—the only one-letter words in English are a, I and O. Here is a list of examples ad, be, do,go.

I Before E, Except After C

Perhaps the best-known spelling convention in English is “I Before E, Except After C,” meaning that I comes before E in most words, except when both letters immediately follow C. Due to the simplicity of the rule and its easily remembered rhyming mnemonic, it is often one of the first rules taught to those learning English spelling. However, even though the basic element of the rule is straightforward, it is actually quite a bit more complicated. In fact, the full rhyme typically goes like this: “I before E, except after C, Or when sounding like A As in neighbour or weigh.”

When the letters sound like E (/i/) The “I before E” rule is most useful if we focus on instances when E and I are put together as vowel digraphs—that is, two vowels working together to form a single speech sound. With this in mind, the basic rule is fairly reliable when IE or EI function as digraphs that produce the sound /i/. For Example:-

I before E

Except after C

Achieve(/ə'ʃi:v/) Believe (/bi'liv/) ceiling (/ 'silɪŋ/) conceit(/kən'sit/)

E before I when sounding like A(/ei/)

The second half of the rhyme- “Or when sounding like A”—alludes to the fact that E often comes before I without C when EI is pronounced /ei/: freight(/freit/), eight(/eit/). Less commonly, the digraph EI produces the sound /ai / .There are only a few common root words in which this is the case: height(/haɪt/), heist(/haɪst/)

Exceptions to the /i/ rule (and tips for remembering them): There are still quite a few common exceptions in which E comes before I but not after C. We’ll look at one of the examples,

weird: - A very common word that goes against the “I before E when it sounds like /i/”rule is the word weird. A good way to remember that E should come first is the mnemonic “**w**e are **w**eird.”

I before E after C when making the “sh” sound(/ʃ/)

E will usually come before I after C when it makes the /s/ sound, as in ceiling or receive. However, when C makes the /ʃ/ (“sh”) sound, it is often followed by IE (and usually N).For example: Ancient(/'eɪnʃənt/), Deficient(/dɪ'fɪʃənt/)

When forming two syllables: - When E and I are split across two syllables, the sound of the first syllable will usually let us know which letter goes first. A syllable break will be indicated by an inter punct[·] in each word, and by a dot[.]

Capitalization

The capitalization of a word (meaning its first letter is in the upper case) often depends upon its context and placement within a sentence. Determining when to capitalize words in the titles of creative or published works (such as novels, films, essays, plays, paintings, news headlines, etc.) can be very difficult because there is no single, generally accepted rule to follow. However, there are some standard conventions, which we'll discuss a little further on.

- **Capitalizing the first word of a sentence** The first word of a sentence is always capitalized. This helps the reader clearly recognize that the sentence has begun.
- **Trademarks beginning with a lowercase letter** a trademark or brand name will begin with a lowercase letter immediately followed by an uppercase letter, as in iPhone, eBay, eHarmony, etc
- **Proper Nouns** A proper noun names someone or something that is one of a kind; this is signified by capitalizing the first letter of the word, no matter where it appears in a sentence. "I've been offered a teaching position at the University of **T**elangana."
- **Appellations** These are additional words added to a person's name. These may be used to indicate respect (known as honorifics) or (known as titles). E.g. "Please see if **M**r. Parker and **M**rs. Wright will be joining us this evening."; "Alexander the **G**reat"
- **Acronyms and Initialisms.** Acronyms and initialisms are abbreviations of multiple words using just their initial letters. Because acronyms are said as distinct words, they are usually

(but not always) written without periods. E.g. “I need those documents finished **A.S.A.P.**”(acronym or initialism of “As Soon As Possible”; also, often written as ASAP, asap, and a.s.a.p.)

- **Abbreviations in conversational English** : In conversational writing, especially with the advent of text messages and online messaging, many phrases have become shortened into informal abbreviations, here are just a few of the most common: **LOL (short for “Laugh Out Loud)**; **OMG**(short for “Oh My God”);**TTYL**(short for “Talk To You Later”)

Pronunciation Conventions

Like spelling, English pronunciation is especially tricky due its seeming lack of consistency and intuitive structure. we’ll look at some of the more difficult aspects of pronunciation, specifically focusing on tricky vowel sounds and tricky consonant sounds that are hard to guess simply by looking at the letters of a word, also look at the various silent letters, paying particular attention to the various roles of Silent E, syllables, we’ll conclude by looking at the stress we place on syllables.

Tricky Vowel Sounds: Vowel sounds are an especially tricky part of English pronunciation because of how flexible and malleable they can be. While consonant sounds are fairly uniform throughout various dialects, vowel sounds can have slight variations in pronunciation from one region to another. In this section, we’ll look at the three ranges of vowel sounds: monophthongs (single vowel sounds within a syllable), diphthongs (two vowels sounds combined within a syllable), and triphthongs(three vowels sounds combined within a syllable)

Monophthongs

The most basic vowel sound is known as a monophthong, which is a single vowel sound within a single syllable. “*Mono-*” suggests, a monophthong is a single sound (to which the root “*-phthong*” refers) within a single syllable. Most of these are short vowels, though there are some long vowel monophthongs as well. Some examples:

VowelLetter	IPASymbol	ExampleWords
Aa	/æ/	apple ('æpəl/) map(/mæp/)
I i	/ɪ/	tip(/tɪp/)stri p(/str ɪp/)

Diphthongs

A diphthong (pronounced /'dɪfθɒŋ/) is a single-syllable vowel sound in which the beginning of the sound glides to another, slightly different vowel sound. For this reason, diphthongs are often referred to as gliding vowels. There are eight diphthongs in American English, four of which are “traditional” long vowels (vowel sounds that are pronounced the same way as the names of the letters), and four of which are produced by certain vowel digraphs or in combination with the letter R. For example:

Traditional Long Vowel Diphthongs	Other Long Vowel Diphthongs
tape(/teɪp/)nice(/naɪs/)	boy(/bɔɪ/)pout(/paʊt/)

Triphthongs

Very rarely, a single syllable may contain three vowel sounds that quickly glide together; these sounds are known as triphthongs. There are three triphthongs that are generally agreed upon in American English: /aʊə/ (“ah-oo-uh”), /aɪə/ (“ah-ih-uh”), and /jʊə/ (“ee-oo-uh”). The first occurs when the digraph OU is followed by an R, the second occurs with the letter combination IRE, and the third occurs when UR is followed by a Y, I, or silent E. For example:

sour(/saʊər/)

fire(/faɪər/)

Tricky Consonant Sounds

Unlike vowels, many consonant letters will generally make the same consonant sound no matter where they appear in a word. However, some consonant sounds can be made by several different letters when they appear in certain parts of a word or in combination with other consonants. Many of these are covered in the section on consonant digraphs, but there are a few sounds that can be made by several different single letters as well. We’ll very briefly look at these sounds here,

Forming the /k/ Sound The consonant sound /k/ can be produced by the consonants C,K, and X, as well as the consonant digraphs CC and CK and the combination QU.

Letter(s)	Example
C	cover(/'kʌvər/)
K	risky(/'rɪski/)

X	toxic(/'tɒksɪk/)
CC	occasion(/ə'keɪʒən/)
CK	rock(/rɒk/)
QU	technique(/tek'nik/)

Pronouncing the Letter S

The letter S can sometimes be problematic for pronunciation due to the wide range of speech sounds it can represent. Its most common sound is the unvoiced sibilant /s/, but it also makes the /z/ sound (formed the same way, but with the vocal cords engaged), the /ʃ/ sound (the sound associated with the digraph SH), and the /ʒ/ sound (made like the /ʃ/ sound, but with the vocal cords engaged). We'll go over some examples of how S reliably forms each of these sounds,

When S is only pronounced /s/

- **At the beginning** of a word S is almost always pronounced /s/ if it appears at the beginning of a word, as in: sat(/sæt/), social(/'soʊʃəl/), syllable(/'sɪləbəl/). The only exceptions to this rule are the words sugar and sure, pronounced /'ʃʊgər/ and /ʃʊər/, respectively
- **As a suffix** S is also always pronounced /s/ when it functions as a suffix for example: books (/bʊks/) laughs (/læfs/)

When S is only pronounced /z/ As a suffix If the suffix “-s” comes after a voiced consonant sound (/b/, /d/, /g/, /l/, /m/, /n/, /ŋ/, /r/, /ð/, /v/) or a vowel sound, the S will be pronounced as /z/. When adding “-s” to a word that ends in a voiced or unvoiced sibilant speech sound (/s/, /z/, /ʃ/, /ʒ/, /ʒ/, /dʒ/), the suffix becomes “-es” and is pronounced /ɪz/ examples: -dreads (/dredz/), eggs (/ɛgz/)

Silent Letters

Because English has evolved from several different sources (Latin, Greek, French, German, Old English, etc.), it has had to assimilate the various spelling and pronunciation quirks of its predecessors. This has resulted in many instances in which particular letters become silent. While it may seem like silent letters serve no purpose in a word, they can actually help distinguish two words that are otherwise homophonous, help indicate the meaning or origin of a word, or even help us determine the overall pronunciation of a word.

Silent Vowels: While silent consonants tend to give people the most difficulty due to how unpredictable and illogical they seem, there are also a few truly silent vowels (as opposed to vowel digraphs, which work together to form specific sounds). By far the most common of these is the silent E,

Silent E: Silent E has a wide range of functions in determining the pronunciation of a word. We'll have a brief look at some of the most common of these conventions, dictating a word's pronunciation and meaning. One of the most common purposes of silent E is to help the reader determine the pronunciation of a vowel sound that comes before the previous consonant. In many cases, silent E also helps indicate a difference in meaning between a similarly spelled word that doesn't have an E at the end. Here are some examples:

Word without Silent E	Meaning	Word with Silent E	Meaning
them(/ðɛm/)	(pron.) The objective case of the personal pronoun	theme(/θim/)	(noun) A topic, subject, or idea.

	they.		
hop(/hɑp/)	(verb)Tojumporleapashortdi stance.	hope(/hoʊp/)	(verb)Towishforor desire(something).

Silent Consonants Because consonants generally make distinct speech sounds (unlike vowels, which can be malleable and inconsistent, depending on the word) .

Syllables

A syllable is a sequence of speech sounds (formed from vowels and consonants)organized into a single unit that acts as a building block of a spoken word. Syllables can be structured several ways, but they always contain a nucleus (the core of the syllable),which is almost always formed from a vowel sound.Syllables may also contain consonant sounds that form a non set(a sound before the nucleus), a coda(a sound after the nucleus),or both, but they do not have to contain either. Structured the same way. There are **six** types of syllables that are identified in English based on a word's spelling and the type of sound the syllable's nucleus creates. The two most basic categories are **open** and **closed** syllables

Open syllables an open syllable (also known as a free syllable) is one that has a single vowel letter for its nucleus and does not have a consonant sound after the vowel. An open syllable can be a vowel sound on its own, or else have one or more consonant sounds that precede the nucleus.

Closed syllables A closed syllable is one in which a single vowel is followed by a coda, which consists of one or more consonant sounds at the end of the syllable (not including the consonant R, which is a separate category). Closed syllables often have an onset as well, but this is not always the case.

Stress

Stress (sometimes known as accent) refers to the emphasis placed on syllables and words in speech. Stress on individual syllables is called word stress, while stress on words within a sentence is known as sentence stress. **Word Stress** When we talk about word stress, we are describing the primary emphasis put on one specific syllable within a word—a word cannot have more than one syllable with primary emphasis. Because nearly all syllables must contain at least a vowel sound, we only apply stress to vowels, not consonant sounds.

Sentence Stress :Sentence stress (also called prosodic stress) differs from the internal word stress placed on individual syllables with varying emphasis placed on certain words within a sentence.

Common Mistakes and Commonly Confused Words

English has a large number of homophones—words that have the same pronunciation but different meanings. In addition, there are many pairs of words that sound very similar but are slightly different when pronounced carefully, as well as those that are similar enough in spelling or meaning, we'll look at various sets of words that are commonly confused in writing

accept vs. except :When properly and carefully pronounced, accept and except have slightly different pronunciations of their initial vowels: accept is pronounced /æk 'sept/, while except is pronounced /ɪk'sept/. Because of this blending of pronunciations, the two words can sometimes be confused in writing. Accept is a verb broadly meaning “to receive or take,” “to give an affirmative or approving answer,” or “to understand or regard as true, proper, correct, or normal.” For example: “We're pleased to accept your invitation to dinner.”

Except can also function as a verb, but it is much more common as a preposition or a conjunction (meaning “other than; excluding; apart from”). For example: “Everyone except Janet came to the movie.” (preposition)

affect vs. effect: Affect is usually a verb meaning “to act upon or produce a change or effect in,” as in: “I’ve never seen a film that affected me so deeply before.”

Effect, on the other hand, is a noun meaning “a result produced by some cause or the action of an agent.” For example: “Your writing really has a profound effect on me!”

✓ “The bright lights affected my vision.” (The lights acted upon the speaker’s vision, with the specific outcome being implied, so affect is correct.)

✗ “The bright lights effected my vision.” (My vision is not an outcome or result, so effect is incorrect.)

principal vs. principle

Principal is both a noun and an adjective. As a noun, it most generally means “a person who holds a position of primary importance in or leads some event, action, or organization,”

“The **principal** made an announcement to the school about the recent policy changes.”

Principle can only function as a noun, generally meaning “an established, accepted, or fundamental rule, law, axiom, or doctrine,”

“It’s not about the money; it’s about the **principle** of sticking by your friends, no matter what!”

Languages change throughout their existence – new words get introduced, old words dropout of use, meanings shift and pronunciation alter. English language is no exception. Every

word in English has a history. In English language, sometimes one sound is represented by one single letter, sometimes one sound is represented by more than one letter and sometimes more than one sound represents only one letter. Ultimately, mastering the particulars of English spelling and pronunciation require exposure and repetition—reading as much as possible and listening to how people speak, until recognizing the way words should look and sound becomes second nature.

Recommendations

According to the results of our study, we recommend the following:

- Teaching should focus on both recognition and production of sounds. i.e., teachers should recognize the pronunciation errors of the students, correct them and also teach the students how to pronounce these sounds correctly.
- The study suggests that there should be pronunciation lessons in the same pattern as lessons in other skills e.g., Grammar, and vocabulary and sentence structure to draw the attention of the students to the importance of pronunciation in learning English.
- In case of problem vowel sounds for the Telugu medium students, it is suggested to have listening sessions at regular intervals using audio aids like CDs, videos etc. for practice, correction and developing the proper sounds. These tools can be very useful for practicing pronunciation.
- It is also worth looking at the dictionary for checking the correct pronunciation of words.
- Watching English movies.
- Talking to self in the mirror.
- Reading books related to English language.

Conclusion

English language is no exception. Every word in English has history. The written form of the English language represents its spoken form. English spelling and pronunciation require exposure and repetition. Rural High school students need to be given an exposure to the rules, exceptions and commonly confused words in English. During the study, we understood that pronunciation and spelling can be a hurdle for rural high school students and it needs to be addressed at an early stage to improve the language competencies of the students.

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తెలుగు జిజ్ఞాస ప్రాజెక్టు

“ఇందూరు చిందు యక్షగానం - సాంస్కృతిక వారసత్వం”

2021-22

క్రమ సంఖ్య	విద్యార్థి పేరు	తరగతి	రోల్ నంబరు
1.	టి. ఆర్తి	బి.ఎ - మొదటి సంవత్సరం	210550051561025
2.	పి. సవిత	బి.ఎ - మొదటి సంవత్సరం	210550053961005
3.	ఎం. గాయత్రి	బి.ఎ - మొదటి సంవత్సరం	210550051291063
4.	కె. పావని	బి.ఎ - మొదటి సంవత్సరం	210550051291049
5.	జె. అవంతి	బి.ఎ - మొదటి సంవత్సరం	210550051291043

పర్య వేక్షకులు :

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ఇందూరు చిందు యక్షగానం - సాంస్కృతిక వారసత్వం

1. ఉపోద్ఘాతం
2. లక్ష్యాలు
3. చరిత్ర : ఇందూరు - నిజామాబాదు
4. జన పదం - జాన పద కళలు
5. ఇందూరు జానపద కళారూపాలు
6. చిందు యక్షగానం
7. చిందుల ఎల్లమ్మ జీవన ప్రస్థానం
8. పరిశోధన - సమాచార సేకరణ
9. కళాకారులతో ముఖముఖి
10. చిందు కళా పరిరక్షణ - భవిష్యత్ ప్రణాళిక

1. ఉపోద్ఘాతం :

ఇందూరు చిందు యక్షగానం సాంస్కృతిక వారసత్వం ఈ అంశానికి సంబంధించిన సమగ్ర విషయాలను సంపూర్ణంగా అందించడమే ఈ పరిశోధన ముఖ్య ఉద్దేశ్యం. అంతరించిపోతున్న అపురూప జానపద కళారూపాల ప్రాముఖ్యతను చాటడం, వాటి పరిరక్షణ అందరి బాధ్యత గా గుర్తు చేయడం.

భవిష్యత్తరాలకు వాటి గొప్పతనాన్ని అందించడం మా అదృష్టం గా భావిస్తున్నాం .

2. లక్ష్యాలు:-

మన సంస్కృతిని సంప్రదాయాలను పండగలు , కళారూపాలు కాపాడుతున్నాయి.అందులో ముఖ్యంగా చిందు యక్షగానం ప్రముఖమైనది.

- ఇలాంటి అరుదైన కళారూపాన్ని , దీనిపై ఆధారపడిన కళాకారుల గొప్పతనాన్ని ప్రపంచానికి చాటడం వారి జీవన స్థితిగతులను తెలియజేయడం.



3. చరిత్ర : ఇందూరు - నిజామాబాదు



ఇందూరు

తెలంగాణలోనే అరుదైన సంస్కృతికి నిలయంగా పేరు తెచ్చుకున్న నిజామాబాదు కు పూర్వ నామమే ఇందూరు. ఇందూరు పూర్వనామం (ఇంద్రపురి). ఈ నగరం రాష్ట్రకూట రాజు నిత్యవర్షేంద్రుడు క్రీ॥శ॥ 915 ప్రాంతంలో బోధన నగరంలో ఇంద్రనారాయణ దేవాలయాన్ని నిర్మించి తన పేర 'ఇంద్రపురం' నగరాన్ని నిర్మించాడని కొందరు చారిత్రకుల అభిప్రాయం. క్రీ॥శ॥ 1876లో మొదటి సాలార్ ప్రధాన మంత్రిగా ఉన్నప్పుడు 'ఇందూరు' నగరాన్ని జిల్లా కేంద్రంగా మార్చాడు. క్రీ॥ శ॥ 1905లో జిల్లాల పునర్విభజనలో భాగంగా ఆరవ నిజాం పేరు మీదుగా ఇందూరును నిజామాబాదు జిల్లాగా నామకరణం చేయడమైనది.

ఈ ప్రాంతాన్ని మినీ భారత్ గా పిలుస్తారు. ఎందుకంటే ఉత్తర భారతీయులైన పంజాబీలు, మార్వాడీలు , రాజ్ పుత్ లు, మహారాష్ట్రీయులు తదితర విభిన్న సంస్కృతుల మేలు కలయికగా, ఐక్యతను పుణికి పుచ్చుకున్న విశిష్ట సంప్రదాయాల కలబోతకు ప్రతిబింబంగా నిలుస్తుంది దక్షిణ భారత ధరణి ఈ ఇంద్రపురి - ఇందూరు - నిజామాబాదు .

4. జన పదం - జానపద కళలు

జనులు నివసించేది జనపదం. పూర్వ కాలంలోని జనులు అక్కడక్కడా గుంపు గుంపు లుగా నివసించేవారు. ఆ నివసించే ప్రాంతాన్ని “జనపదం” అన్నారు. ఆ జనపదాల్లో నివసించేవారు జానపదులయ్యారు. జానపదులకు సంబంధించిన కళలను “జానపదకళలు” అంటారు. జానపద సాహిత్యం, జానపద నృత్యం, జానపద కళలు మొదలైన పదాలన్నీ ఇలాంటివే.

మనిషి అందాన్ని ఆరాధించడం, ఆనందంలో జీవించడం కోరుకొంటాడు. ప్రకృతి లోని అందాలను, కిలకిలారావాలను మేలికలయికగా చేసుకొని కళలను అభ్యసించాడు. తన విద్యతో తాను సంతృప్తి పడడమేకాక తోటివారిని ఆనందంగా ఉంచడానికి చేసే ప్రయత్నమే కళ అనుకొన్నాడు. కళలను ప్రోత్సహించడానికి కళాకారుల భుక్తి గడవడానికి రాజులు, దొరలు,

జాగీర్దార్లు తమకు తోచిన రీతిలో సహాయం అందించే వారు. కొన్ని కులసంఘాలు ప్రత్యేకంగా ఒక్కో కళను ప్రోత్సహించేవి. ఇప్పటికీ కులసంఘాల పోషణలతో కొన్ని కళలు రూపుమాయకుండా ఉన్నాయి.

5. ఇందూరు జానపద కళారూపాలు



ఇందూరు ప్రాంతంలో ఎన్నో జానపద కళలు ఆవిర్భవించాయి. ఇక్కడ వెలువరింపబడ్డ జానపద సాహిత్యం అమూల్యమైనది. ఎందరో కవులు జానపద సాహిత్యాన్ని పోషించారు. యక్ష గానాలు, కీర్తనలు, భజన పాటలు, కోలాటపాటలు, రచించారు. ఇవేగాక శ్రామికులు, కర్షకులు తమ శ్రమను మరచిపోవడం కోసం పాడుకొనే పాట లాన్నో వెలువడ్డాయి. మోట కొట్టేటప్పుడు, ఎడ్ల బండి నడిపేటప్పుడు, కలుపు తీసేటప్పుడు, తూర్పార బట్టేటప్పుడు పాడే వ్యవసాయదారుల పాటల్లో ఎన్నో రహస్యాలు దాగి ఉంటాయి. అంతేగాక గాయకుల హృద యాల్లో నుండి పొంగిపొరలే భావం ప్రస్ఫుటమౌతోంది. ఈ సాహిత్యమంతా మౌఖికమే. ఒకరి నుండి మరొకరు నేర్చుకొన్నదే.

లలిత కళల్లో సాహిత్యం - ఒక భాగమైనప్పటికీ దానిని ప్రత్యేకంగానే గుర్తిస్తారు. తక్కిన నృత్యం, సంగీతం, చిత్రలేఖనం, శిల్పం లాంటి వాటిని వేరుగా పేర్కొంటారు. ప్రస్తుతం ఇందూరు జానపద కళల్లో నృత్యసంగీతాలను గూర్చి తెలుసు కొందాము.

ఇందూరు సీమప్రాంతంలోని జానపద కళా రూపాలు :

- వీధి భాగోతం
- చిరుతల రామాయణం
- కోలాటం
- జడ కొప్పు
- ఒగ్గు కథ
- గొల్లసుద్దులు
- చిందు యక్షగానం
- బుర్ర కథ
- చిందు యక్షగానం (చిందు భాగోతం/ చిందు భాగవతం)

6. చిందు యక్షగానం

పరిచయం

భాగోతం అన్నా, యక్షగానం అన్నా రెండూ ఒకటే. చిందోళ్ల ఆట అంటే పెద్దోళ్లు (పై కులస్థులు) రారని చిందు యక్షగానం అంటారు.

జానపద కళారూపకాలలో చిందు భాగవతం రమ్యమైనది. వివిధ ప్రాంతాలలో చిందు భాగవతం నేటికీ సజీవంగా ఉన్న జానపద అభినయకళ. ప్రజల్లో పుట్టి శతాబ్దాలుగా ప్రజలలో జీవిస్తున్న భారత, భాగవత, రామాయణాలను పామర జనరంజకంగా ప్రచారం చేస్తున్న జానపద కళయే "చిందు భాగవతం".

ఆనందం, బాధ కలిగినపుడు మానవుడు చిందులేస్తాడు. అదే విధంగా చిందు తొక్కుతూ భాగవతంలోని కథలను రక్తికట్టి విధంగా ప్రదర్శించడం వల్ల దానిని చిందుభాగవతం అని అంటున్నారు. చిందు భాగవతం ప్రత్యేకంగా తెలంగాణ ప్రాంతానికి చెందిన కళయని పరిశోధనల వల్ల తెలుస్తున్నది.

ఇందూరు సీమలో చిందు బాగోతం ఒక విలక్షణమైన జానపదకళ. ఈ కళలను కొందరు మాత్రమే ప్రదర్శిస్తున్నారు. జాంబమహర్షికి తిలోత్తమకి పుట్టిన సంతానమే చిందు కళాకారులని, వాళ్లు మాదిగలని, అడుక్కొని కళా ప్రదర్శనలిస్తారనీ మాదిగ కులపురాణం 'జాంబపురాణం' చెబుతుంది. బాగోతం ఆడే వారు ప్రత్యేక కులంగా గుర్తింపబడ్డారు. అంటరాని ఉపజాతిగా పల్లెకు దూరంగా భారంగా బ్రతుకు బండి నీడ్యే వీరు చిందోట్లుగా పిలువబడుతారు.

శబ్దం - పుట్టుక , అర్థం :

చిందు శబ్దం సింధు శబ్ద భవమని కొందరు, సింధూనదీ పరీవాహక ప్రాంతకళగా భావించారు. కాని ఇది అచ్చతెనుగు పదం 'చిందు'. ఆంధ్రశబ్దరత్నాకరం 'చిందు' పదానికి ఒక విధమైన నాట్యము అని తెలిపింది. వావిళ్లవారి నిఘంటువు 'చిందు' పదం దేశ్యమని తెల్పి ఈ క్రింది ప్రాచీన ఉదాహరణాలనిచ్చింది.

- “మాతంగ నాట్యనామంబగు జిందు' - వావిళ్లవారి నిఘంటువు”
- “గీతంబుదురువు జిక్కీణి, చిందు మొదలు గా నొక్కొక్క వర్ణంబునగ్గడించి” - ఆంధ్రభాషార్ణవము
- “చిందాడు- గంతులు వేయుట : విష్ణుపురాణము”

ఇంతేగాక 'చిందు' శబ్దంతోనున్న కొన్ని క్రియాపదాలను చూద్దాం. చిందుగొను, చిందుద్రొక్కు, చిందాట, చిందులు వారు - ఇవన్ని దేశ్యపదాలే.

మొత్తం మీద చిందు పదము తెలుగు పదమే . చిందాట - చిందు కళ తెలుగువారిదే. ఈ చిందాటను హరిజనులలోని ఒక ప్రత్యేక తెగ చిందు మాదిగలు ఆడుతారు. వీరుతమ మూలం జాంబవ మహర్షి అంటారు. మొత్తము మీద ఈ చిందుకళ తెలంగాణలో మిగిలిందని చెప్పవచ్చు.

విశిష్టాంశాలు : వివరణ

సాధారణంగా ఒక కుటుంబంలోనివారో సన్నిహితులో కలిసి ఒక జట్టుగా ఏర్పడుతారు. తమ ప్రాంతంలోని పల్లెలు ఒక్కో జట్టుకు పోషకులుగా ఉంటాయి. ఒక్కోక్క మేళంలో 15 నుంచి 30 మంది కళాకారులు వుంటారు. కొన్ని మేళాలు కలసి, వూళ్ళు పంచుకుంటారు. పంచుకున్న గ్రామాలలో వేరొక మేళం వెళ్ళి ప్రదర్శన ఇవ్వరాదని కట్టుదిట్టం చేసుకుంటారు. ఒక మేళం పంచుకున్న గ్రామాల్లో ప్రదర్శనలు ఇస్తూ, ఐదేళ్ళకొకసారి మాత్రమే ఒక గ్రామానికి వెళతారు. భాగవతుల బృందాన్ని "భాగవతుల మేళం" అని కూడా పిలుస్తారు. ఒక చిందు కుటుంబం సభ్యులతో ఒక భాగవత మేళమేర్పడుతుంది. ఇలాంటి మేళాలు నిజామాబాద్ జిల్లాలో 30కి పైగా వున్నాయి. కాబట్టి వీరు వాడలలోనే బస చేసి వారిచ్చే సీదా సాహిత్యం (వంట సామగ్రి, బియ్యం వగైరా)తో వంట చేసుకుంటారు.

వీరు ప్రదర్శనలు ప్రారంభించడానికి ముందుగా "త్యాగం తెంపటం" పేరున తమని ఆదరిస్తున్న హరిజనుల కోసం మూడు ఆటల్ని ఉచితంగా ప్రదర్శిస్తారు. ఇందులో 'ఎల్లమ్మ కథ'ను విధిగా ప్రదర్శిస్తారు. 'రేణుకా దేవి' కథని (అదే ఎల్లమ్మ కథ) చెబితే సకాలంలో వర్షాలు పడి గ్రామాలు పాడి పంటలతో అష్ట ఐశ్వర్యాలతో సుభిక్షంగా ఉంటాయని వీరి నమ్మకం. ఎన్ని యక్షగానాలు వేసినా, చివరిగా ఎల్లమ్మ కథను తప్పని సరిగా ప్రదర్శిస్తారు. ఇది ప్రదర్శించే రోజున నియమ నిష్ఠలతో కఠినమైన దీక్షతో ఎల్లమ్మ పాత్ర ధారులు రేణుకాదేవికి తెల్లటి కొత్త చీర, ధూపదీపనైవేద్యాలు సమర్పించి ఆట మొదలెడతారు. ఈ ఖర్చు మాత్రం భాగవతం ఆడించే వారే భరిస్తారు. అంతే కాకుండా బోధన్ మండలంలోని 'ఆష్టాపూర్' గ్రామానికి చెందిన చిందుల ఎల్లమ్మ ఈ వేషం వేయడంలో గత యాభై ఏళ్ళుగా తనకు తానే సాటి! ఈమె ఒక్క స్త్రీ పాత్రలే కాదు పురుష పాత్రలు కూడా ధరిస్తుంది. వీరు ప్రదర్శించే ఒక్కో ఆటకు సుమారు 150 నుంచి 300 రూపాయల వరకు తీసుకుంటారు. పోషకులు లభించనప్పుడు తామే ఆటను ప్రదర్శించి ప్రేక్షకులు ముందుకు వచ్చి డబ్బులు యాచిస్తారు. ఒక్కోసారి కడుపు నింపుకోవడం కోసం ఇంటింటికి వెళ్ళి భిక్షం తెచ్చుకుంటారు.

వీరు ఎక్కువగా పగటి పూటనే ప్రదర్శనలు ఇస్తారు కాబట్టి వీరిని 'పగటి వేషగాళ్ళు' అని కూడా పిలుస్తారు. వీరు తబలా, మద్దెల, హార్మోనియం, గజ్వెల తాళాలు ఉపయోగిస్తారు. తాళాలు వాయిచడానికి స్త్రీలు మాత్రమే ఉంటారు. రూపకతాళం, జల్వ, ఆదితాళం, త్రిపుట తాళాలలో ఎక్కువగా పాడుతారు. అసావేరి, మోహన, కాంభోజ రాగాలతో కూర్చిన పాటలు, పద్యాలు యెక్కువగా పాడతారు. వీరి ప్రదర్శనలకు ఉపయోగపడే వేదిక, ఆభరణాలు, మేకప్ సామాను రంగులు, వీరే స్వయంగా తయారు చేసుకుంటారు. అప్పటి కప్పుడు, ఆరు పొడవాటి కర్రలు పైన పెద్ద చాందిని వేసి రెండు పరదాలతో నిరాడంబర మైన తాత్కాలిక రంగస్థలాన్ని తయారు చేస్తారు.

ప్రదర్శిస్తున్నప్పుడు వారి ఆభరణాలను చూస్తే నిజంగా అవి బంగారు ఆభరణాలేమోననిపిస్తుంది. వీరు ధరించే ఆభరణాలు 'పొణికి' కర్రలతో తయారుచేస్తారు. పొణికి చెట్టుకు ఒక మంచి రోజు పూజచేసి కావలసినంత కర్రను నరుకుకొని తెస్తారు. ఆ కర్రతో కిరీటాలు, భుజకీర్తులూ, జడలచిలుకలు, మల్లెదండలు, నెక్లెస్టు తయారు చేసి బంగారు రంసపూత పూస్తారు. ఈ కర్రతో చేసిన ఆభరణాలు చాలా కాలం చెడకుండా ఉంటాయి. ఇవి తయారు చేయడానికి సుమారు ఆరునెలల సమయం పడుతుంది. ముఖానికి పూసుకొనే పసుపును " సేవిడి " అంటారు. దీన్ని జింక్ ఆక్సైడ్ మిశ్రమంతో తయారు చేసుకొంటారు. కళ్ళకు పెట్టుకునే కాటుకను ఆముదం దీపపు మసినీ వేపాకులను రంగరించి తయారుచేస్తారు.

చిందు బాగోతం ఆటకు నేపథ్యగానం ఉండదు పురాణాల ప్రధాన ఘట్టాలను, కథలను, ఆకళింపు చేసుకొని సన్నివేశాలకనుకూలంగా భావోద్దేశాలను ప్రదర్శిస్తుంటారు. వీరు ఎవరికి వారే తమ (మేకప్) ఆహార్యం తామే చేసుకొంటారు.

ఈ ప్రదర్శన బాలకృష్ణుని రాకతో మొదలౌతుంది. తర్వాత రంభ, ఆతరువాత ప్రధాన నాయికా నాయకులు వస్తారు. సంభాషణలతో, పాటలతో, చిందులతో కథ సాగుతుంది. ముఖ్యంగా ఆటచివరి ఎల్లమ్మ వేషం వేస్తారు. ఈ వేషాన్నికన్యలు మాత్రమే వేస్తారు.

వీరు సతీసావిత్రి, బభ్రువాహన, భక్త ప్రహ్లాద, సత్యహరిశ్చంద్ర, చెంచులక్ష్మీ రుక్మాంగద, మాయలమరాఠి, మార్కండేయ బాలనాగమ్మ మొదలైన అనేక కథలను వీరు ప్రదర్శిస్తారు. వీరి పాటలకు వాయిద్యాలగా, మద్దెల, తాళాలు, గజ్జెలు, హార్మోనియం వాడు కొంటారు. స్త్రీలు తాళాలు వాయిస్తూ దరువులు పాడుతూ సహకరిస్తారు. రూపకతాళం. ఆదితాళం, జల్పతాళం, త్రిపుటతాళం, కాంభోజిరాగం, అసావేరి, మోహన రాగాల్లో వీరి పాటలుంటాయి.

నిజాంబాదు జిల్లాలో చిందు భాగోతం కళలో ప్రకస్తికెక్కిన వారెందరో ఉన్నారు. అందులో ముఖ్యంగా చిందుల ఎల్లమ్మ చెప్పుకోదగినది. ఎల్లమ్మ వేషధారణతో మంచి పేరు సంపాదించారు. చిందుల ఎల్లమ్మను అప్పటి రాష్ట్ర ప్రభుత్వం గుర్తించి రాష్ట్ర నృత్య అకాడమి ద్వారా సన్మానించింది. ఆమెకు 'ఫెలోషిప్' ఇచ్చి నెలకు 100 రూ॥ గౌరవ వేతనాన్ని, సాహిత్య అకాడమి విశిష్ట సభ్యత్వాన్ని ఇచ్చి గౌరవించింది.

7. చిందుల ఎల్లమ్మ – జీవన ప్రస్థానం :



1932లో జన్మించిన ఆమెకు తల్లిదండ్రులు సరస్వతిగా నామకరణం చేశారు. కాని తండ్రికి కలిగిన ఆపద పోవడానికి ఇంటి ఇలవేల్పు ఎల్లమ్మకు మొక్కు కోవడం,



తండ్రి బాగుపడడంతో ఆమె పేరు ఎల్లమ్మ గా మారింది. చిందు బాగోతానికి ఎల్లమ్మ ఆట ప్రధానమైంది. ఆటలో ఎల్లమ్మవేషం అతిముఖ్య మైనది. సరస్వతి ఎల్లమ్మగా అవతారం ఎత్తింది.

ఈమె బోధన్ మండలం అవ్వాపూర్ లో నివసించారు. వారి కులవృత్తి చిందు బాగోతం ఆడడం. చిందు బాగోత ప్రదర్శనలీస్తూ ఊరూరా తిరగడం వారి ఆచారం. కుటుంబంతో పాటు ఎల్లమ్మ సంచార జీవితం గడిపింది. ఆమెకు రాగాలు, తాళాలు, పాటలు, పదాలు సహజ సిద్ధంగానే అభ్యినాయి.

మహిళా నటీమణులు పురుషవేషాలతో మెప్పించిన వారున్నారు. కాని ఒకే వేదిక పై స్త్రీపురుష పాత్రలను ధరించి రక్తికట్టించడం అసాధారణమైన విషయం. అంతటి అసాధారణ

ప్రజ్ఞగలిగిన ఎల్లమ్మ ఒకే వేదికపై కొద్ది నిమిషాల తేడాలో నాయికా నాయక పాత్రలను పోషించి మెప్పించడం ఆమెకే సాధ్యం.



ఈ కళాకారులకి ప్రదర్శనపరంగా అనూచానంగా కొన్ని నియమాలున్నాయి. ఎల్లమ్మ దేవతా పాత్రను కన్యలే వేయాలనడం వాటిలో ఒకటి. ఆ కారణంగా పదకొండేళ్లకే యక్షగాన ప్రదర్శనలివ్వడం మొదలు పెట్టిన ఎల్లమ్మ పెళ్లయినా వైవాహిక జీవితానికి దూరంగా వుంది. 'పెనిమిటి (సైదయ్య)కి కష్టం కలగకూడదని ఆయన ఆలనా పాలనా చూసుకునేందుకు చెల్లెలు రామవ్వనిచ్చి ఆయనకి మళ్లీ పెండ్లి చేసి తన జీవితాన్ని కళకి అంకితం చేసింది.

ఎల్లమ్మ (అసలు పేరు : సరస్వతి) పుట్టి పెరిగిన అమ్మా పూర్ (నిజామాబాద్ జిల్లా, బోధన్ మండలం)లో దాదాపు ముప్పయి ఆరు చిందు కుటుంబాలున్నాయి. 'చిన్నగపుట్టి చిన్నగా పెరిగి - పెంపయినను' అని ఎల్లమ్మ చెప్పే మాటల్లో ఆమె జీవన ప్రయాణానికి సంబంధించిన తాత్వికత యిమిడి వుంది. డెబ్బై ఏళ్ల పాటు తెలుగునేల నాలుగు చెరగులా ప్రదర్శనలిచ్చిన ఎల్లమ్మ అంతర్జాతీయ ఖ్యాతిని గడించడం వెనుక దుర్బరమైన మైన జీవితం

వుంది. అంటరానితనం, కులం పేర అవమానాలు, పేదరికం - వీటన్నింటి నుంచి రాష్ట్ర సాంస్కృతిక మండలి యిచ్చే అత్యున్నత పురస్కారం 'హంస' అవార్డును పొందిన కళాకారిణిగా ఎదగడం (1998)లో తాను నమ్ముకున్న కళ పట్ల అనితరసాధ్యమైన అంకితభావం వుంది. పొట్టకూటి కోసం మొదలైన ఆమె విద్య , పండితుల ప్రశంసలు పసిడి కాంతులు పండించింది.

ప్రహ్లాద, మైరావణ, మాంధాత చరిత్ర, రామాంజనేయ, సతీ అనసూయ. సతీతులసీ, బభ్రువాహన, బాలనాగమ్మ, హరిశ్చంద్ర, చెంచులక్ష్మి , సుగ్రీవ విజయం, సతీసావిత్రి, సుందరకాండ వంటి పౌరాణికాంశాలతో పాటు చెంచులక్ష్మి, అల్లిరాణి, మైరావణ, గాంధారీ గర్వభంగం, మోహినీ రుక్మాంగద, జాంబపురాణం వంటి సమాంతర పౌరాణిక కథలతో దాదాపు యాభై ఆరు రకాల కథల్ని యక్షగానాలుగా ఎల్లమ్మ స చివరిశ్వాస వరకూ ప్రదర్శించారు , ఆ వీధి భాగవతాల్ని ప్రదర్శించే బృందానికి నాయకత్వం వహించారు. వీటిల్లో మేటి వేషాలు ధరిస్తుంది. అవసరమయితే మగ యేషాలు గడుతుంది. మరి ఆయా వేష ప్రభ దానిమీదకి తెప్పిస్తుంది.



కొత్త తరానికి చిందు నేర్పిస్తూ ...

ఈ కళాకారుల వేషధారణలు, దుస్తులు, హావభావాలు, హంగులు సినీ నాటకజగత్తునేలిన నటరత్న, నటసార్యభౌమ, నటసామ్రాట్లకు ఆదర్శప్రాయమయ్యాయి. దేశాధినేతల ప్రశంసలకు పాత్రమయ్యాయి.

సంప్రదాయ జానపద యక్షగాన ప్రదర్శనల్లో స్త్రీ పాత్రల్ని కూడా పురుషులే ధరించడం ఆనవాయితీ. చిందు భాగోతంలో స్త్రీలు కూడా పాల్గొంటారు. అయితే పురుషపాత్రల్ని స్త్రీలు ధరించడం అనేది మాత్రం అసాధారణం.





నరసింహవతారం లో చిందుల ఎల్లమ్మ

అందునా ఏకకాలంలో నిమిష వ్యవధిలో స్త్రీ పురుష వేషాలు మార్చే అపూర్వ కళాప్రతిభ ఎల్లమ్మ సొంతం. పురుష పాత్రలకవసరమైన గాంభీర్యం, స్త్రీ పాత్రల కవసరమైన లాలిత్యం ఆమె గొంతులో అద్భుతంగా పలికేవి. శృంగార వీర రౌద్ర నా ఎల్లమ్మ రసాలు కంటిచూపుల్లో అలవోకగా ఒదిగేవి. చెంచులక్ష్మి వెనుక నరసింహస్వామి, అల్లిరాణి (ప్రమీల) అర్జునుడు పాత్రల్లో ఆమె చూపే అభినయ వైవిధ్యం చూపరులని అబ్బురపరిచేది.

ఎల్లమ్మ వేషం కట్టినప్పుడు ఆమె సాక్షాత్తూ మూర్తీభవించిన దేవతలా వుండేది. అందుకే ఆమె నాయకత్వం వహించిన బృందానికి ఆరాధ్యదైవం అయింది. జానపద రంగస్థలిలో ప్రజల నీరాజనాలందుకొంది. చివరి దశలో ఉబ్బసం వ్యాధితో మాట్లాడటానికి ఆయాసపడినా తన జ్ఞాపకాలను తవ్వి తీసే సందర్భాల్లో ఒక ఆవేశంతో గొంతెత్తి పాడటం మానలేదు.

కీళ్లనొప్పులతో నడవలేని పరిస్థితుల్లో సైతం తన బృందంలో కళాకారులకి శిక్షణనిస్తూ ఊరూరూ తిరుగుతూనే వచ్చారు.



2004లో రాష్ట్ర ముఖ్యమంత్రి నుంచి రాజీవ్ ప్రతిభా పురస్కారం

ఎల్లమ్మ బృందం గాక తెలంగాణలో దాదాపు 20 చిందు బృందాలున్నాయి. వీళ్ళంతా ఆ కళనే నమ్ముకుంటూ బతుకుతున్నారు. ఎల్లమ్మ సమాంతర పౌరాణిక గాథల ద్వారా దళిత సాందర్య శాస్త్రాన్ని, రంగస్థల విశిష్టరీతుల్నే కాక , దళిత జీవన వాస్తవికతని తరతరాలుగా కాపాడుకుంటూ వస్తున్న చిందుకళనీ, కళాకారుల్ని ఆదుకోవడం మన అందరి బాధ్యత. ప్రపంచీకరణ పేరుతో మంచినీటి చెరువులో గుర్రపు డెక్కలా విస్తరిస్తున్న సాంస్కృతిక సామ్రాజ్యవాదం మన కలల్ని కళల్ని ధ్వంసం చేస్తున్న నేపథ్యంలో దళిత కళాకారులు వారసత్వంగా నిలుపుకుంటూ వస్తున్న చిందుభాగోతాన్ని రక్షించుకోవడమే ఎల్లమ్మకు మనమిచ్చే నిజమైన నివాళి. తన చిందుగానంతో, నటనతో, తెలంగాణతోపాటు అనేక ప్రాంతాల వారిని మెప్పించిన ని చిందు ఎల్లమ్మ, 2005 సంవత్సరంలో నవంబరు 9వ తేదీన నిజామాబాదు జిల్లాలో అవ్ధాపూర్లో మరణించింది.

8. పరిశోధన - సమాచార సేకరణ:

మేము ఎన్నుకున్న ఇందూరు చిందు యక్షగానం సాంస్కృతిక వారసత్వం అంశంపై సమగ్ర అధ్యయనం కోసం విస్తృతంగా పర్యటించాము .

కళాశాల గ్రంథాలయం



జిల్లా కేంద్ర గ్రంథాలయం



ప్రభుత్వ ప్రాంతీయ గ్రంథాలయం

డా. కె.ముత్యం సంపాదకత్వం లో వచ్చిన " నేను చిందుల ఎల్లమ్మను " మరియు "చిందుల ఎల్లమ్మ యాది " పుస్తకాలలోని అంశాలను పరిగణనలోకి తీసుకున్నాము.



ప్రముఖ రచయిత శాస్త్రుల రఘు రామ శర్మ గారి "ఇందూరు సీమ విజ్ఞాన సర్వస్వం" ద్వారా జిల్లా చరిత్ర సంస్కృతి - స్థానిక కళారూపాల గురించి మంచి అవగాహన కలిగింది. ఇవన్నీ మా అంశానికి సంబంధించిన విషయ సేకరణకుబాగా ఉపయోగపడ్డాయి.

వీటివల్ల "నిజామాబాద్ జిల్లా చిందు భాగవతులకు కీలక కేంద్రంమని, ఈ జిల్లాలోని బోధన్, ఆర్కూర్, మోర్లాడ్, నందిపేట్, నవీపేట్, వర్పి, భీంగల్, జక్రాన్పల్లి మండలాలలో దాదాపు రెండు వేల మంది కళాకారులు జీవిస్తున్నారని తెలిసింది.

9. కళాకారులతో ముఖాముఖి :



"ప్రముఖ చిందు కళాకారిణి దివంగత ఎల్లమ్మ కుటుంబీకుడు "బాబయ్య"



ప్రముఖ జానపద కళాకారుడు " సాయి లవోల"

మొదలగు వ్యక్తులను కలిశాము. చిందు భాగవతంకు సంబంధించిన వివరాలు , ప్రదర్శన, పాటలు , సంగీతము గురించి తెలుసుకున్నాము.

1986 లో ఢిల్లీలో కేంద్ర మంత్రుల సమక్షంలో జరిగిన అప్పా ఉత్సవ్ లో ఎల్లమ్మ పాల్గొంది. ఆంధ్ర ప్రదేశ్ ప్రభుత్వం ప్రతిష్టాత్మకమైన 'హంస' అవార్డును చిందులు ఎల్లమ్మకు ఇచ్చి సత్కరించిందన్న విశేషాలు తెలుసుకున్నాం. తన ప్రజ్ఞతో, కళాభినయంతో జాతి సాంస్కృతిక వారధిగా నిలిచిన చిందుల ఎల్లమ్మ చిందుబాగోతానికే కాదు జానపదకళా సర్వస్వానికి మణిదీపమని అర్థమైంది.



అప్పా ఉత్సవ్ (1986)లో సోనియా - రాజీవ్ గాంధీలతో ...

"చిందుబాగోతంలో ఎల్లమ్మకత (ఎల్లమ్మ ఆట) అతిముఖ్యమైనది. రెండు మూడు ప్రదర్శనల తర్వాత తప్పక ఎల్లమ్మకత ప్రదర్శింప బడుతుంది. ఈ ప్రదర్శన వల్ల గ్రామం సస్యశ్యామలంగా ఉంటుందని, ఏరోగాలు రావని, వానలు బాగా పడుతాయని గ్రామీణుల నమ్మకం. ఈ ఆటలో ఎల్లమ్మ పాత్రలో చిందుఎల్లమ్మ జీవిస్తుంది. ఎల్లమ్మ వేషాన్ని

ఆమె తప్పమరొకరు వేస్తే చూడలేమనే వారెందరో? ఆ వేషాన్ని ఆమెనే వేయాలని కోరుకొనే వారెందరో ? అనే విషయాలు ఎన్నో అర్థమైనవి.

10. చిందు కళా పరిరక్షణ - భవిష్యత్ ప్రణాళిక :

- ★ కళాశాల లో, ప్రతి సంవత్సరం వార్షికోత్సవం చేస్తాం. ఆ సమయం లో ఒక జానపద కళారూపం పై ఒక ప్రదర్శన ఇవ్వడం
- ★ జానపద కళా రూపాలపై షార్ట్ ఫిలిమ్స్ రూపొందించడం
- ★ ఇందూరు చిందు పై, యూట్యూబ్ ఛానల్ ప్రారంభించి, విస్తృతమైన పరిశోధనలకు ఆహ్వానం పలకడం
- ★ ప్రతి కాలేజ్ F.M లో జానపద కళారూపాల చర్చాగోష్ఠిని నిర్వహించడం.

ఉప సంహారం

రాష్ట్రంలోని 16 జిల్లాలోను, తమిళనాడు, కర్ణాటక దేశ రాజధాని ఢిల్లీ లోనూ ప్రదర్శించి పలువురి ప్రశంసలను పొందారు. చిందు కళాకారుల అభివృద్ధి కోసం శ్రీ మాడవేటి నారాయణ 'చిందు కళాకారుల సంఘం' స్థాపించి 1983లో చిందును ముమ్మరంగా ప్రదర్శించారు. తెలంగాణా స్థాయిలో ఆర్కూర్, నిజామాబాద్ లో జరిగిన ప్రదర్శనలకి శ్రీ నటరాజ రామకృష్ణ, హాజరైనారు. అప్పటి జిల్లా కలెక్టర్ శ్రీమతి షీలా బేడి వీరి సంక్షేమానికి ఎంతో కృషి చేశారు.

చిందు కళకి జీవితాన్ని అంకితం చేసిన చిందుల ఎల్లమ్మను రాష్ట్ర ప్రభుత్వ అకాడమీ సన్మానించారు. ఫెలోషిప్ ఇచ్చి నెలకు వంద రూపాయల గౌరవ వేతనాన్ని మంజూరు చేసింది. 1982లో సాహిత్య ఎకాడమి విశిష్ట సభ్యత్వం పొందిన గౌరవం కూడా ఈమెకు దక్కింది. 1986లో ఢిల్లీలో జరిగిన "అప్పా ఉత్సవ్" వేడుకల్లో చిందు కళాకారులు అలంకరణలోను, నృత్య నటనలోను తమ ప్రత్యేకతను నిలుపుకొని లక్షలాది ప్రేక్షకుల ప్రశంసలను పొందారు. ప్రధాని శ్రీ రాజీవ్ గాంధీ, సోవియట్ అధినేత శ్రీ మిఖాయిల్ గోర్బచెవ్ కోసం ప్రత్యేక ప్రదర్శనను ఏర్పాటు చేయించారు।

మహోజ్వలంగా విలసిల్లి, మరుగున పడి పోతున్న 'చిందు భాగవతం' కళాకారులకు ప్రోత్సాహం లేక వారిలో నైరాశ్యం చోటు చేసుకుంది. చిందు కళాకారుల జీవితం నానాటికి దుర్భరమై పోతోంది. కళారాధనే జీవిత ఆదర్శంగా పెట్టుకుని జీవిస్తున్న వీరికి ప్రతిఫలం పస్తులు మాత్రమే! ఇంతటి గొప్పకళాకారులు ప్రదర్శనలు యేర్పాటు చేసే వారు లేక, తినడానికి తిండి కరవై వ్యవసాయ కూలీలుగా మారి జీవనం సాగిస్తున్నారు.

తమిళనాడులోని తెరుకుత్తు, కేరళలోని కథాకళికి, వచ్చినంతటి ప్రపంచ ఖ్యాతి, తెలుగు యూనివర్సిటీ వారు శ్రద్ధ వహిస్తే, చిందుభాగవతానికి కూడా ఆర్జించవచ్చు

--ధన్యవాదములు--

Global Dynamic mapping of progression of Covid-19



Jignasa Study Project

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Global Dynamic mapping of progression of COVID-19

Introduction:

COVID-19 is an infectious disease caused by the SARS-CoV-2 Virus. It is an RNA virus, belonging to the

Family - Coronaviridae

Class - Pisoni Ricota

Phylum - pisu ricota

Kingdom – Orthornavivae

It was 1st discovered in Wuhan, China, on 31st December 2019 (1). World Health Organization (WHO), was informed of cases of pneumonia of unknown cause in Wuhan and identified on 7th January, COVID-19 variant has already made it across the globe. Cases of the new variant have appeared in more than 50 countries as on December 9th 2019(1). The 1st case in the United States was confirmed on December 1st 2019 and in India the 1st case was reported on 12th December 2019. According to WHO, COVID-19, has high transmissibility and spreads faster than any previous strain and it is probably present in most countries of the World(1,2).

Covid-19 disease is transmitted by the respiratory track where people inhale the droplets, that infected people exhale as they breathe, talk, cough, sneeze etc. The virus is more likely transmitted through physical close. Here, lungs are more infected. COVID-19 will survive longer when at room temperature or lower temperature. Most common symptoms are fever, cough, tiredness and loss of taste or smell(3).

COVID-19 had infected over 500 million people and killed more than 6.19 million people world wide. Due to this, it got impact on economy and it became the second largest global recession in recent history. As of 16th April 2022 more than 6.19 million deaths and had been attributed to COVID-19(4).

As compared to the previous SARS-CoV (2002-03) and the MERS-CoV (Middle East Respiratory Syndrome-related coronavirus - 2012–2014), the COVID-19 Coronavirus spreads very fast. While MERS took around 2.5 years and SARS 4 months to infect 1000 individuals, the novel COVID-19 reached that figure in just 48 days(4,5,6). When disease can

travel so quickly, conventional mapping, geographic information systems based tools are not challenging for tracking and combating the Contagion. Hence. We have developed a tool which can map the progression of COVID_19 and it's variants

Objective:

To develop a tool to graphically visualise the real time progression of COVID-19 cases globally.

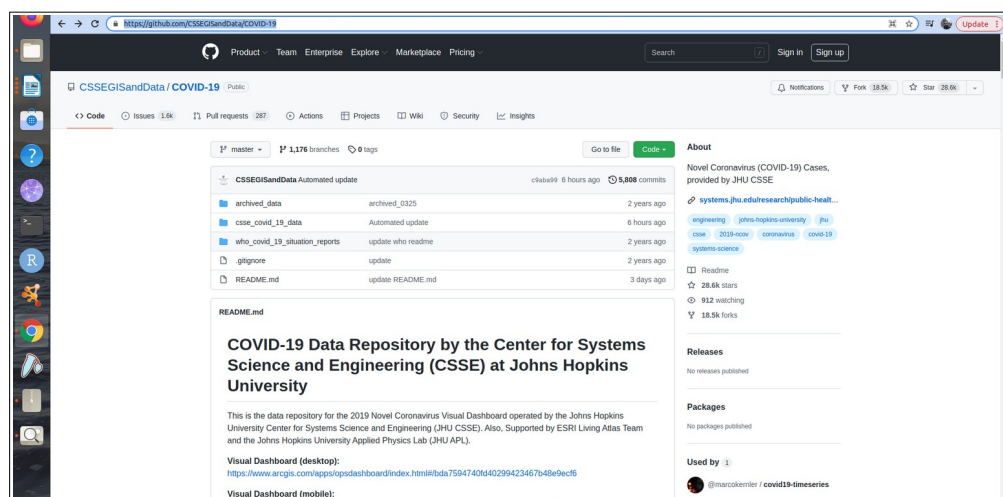
Requirements:

- Computer with 4GB RAM and 500GB hard disc
- Processor i3 or later
- Python IDE
- Python libraries
 - A) Pandas
 - B) GeoPandas
 - C) PIL
 - D) io

Methodology:

1. Collection of COVID-19 cases data

Collection of data regarding number of reported COVID-19 cases across the world dataset provided by John Hopkins University github repository <https://github.com/CSSEGISandData/COVID-19> , which shows the daily confirmed cases of Corona Virus across the globe. The data consists the name of countries against the number of daily confirmed cases till date i.e 17/04/2022.



Index	4/11/20	4/12/20	4/13/20	4/14/20	4/15/20
Burkina Faso	484	497	497	528	542
Burma	38	41	62	63	74
Burundi	5	5	5	5	5
Cabo Verde	8	8	10	11	56
Cambodia	120	122	122	122	122
Cameroon	820	820	820	848	848
Canada	23316	24298	25679	27034	28208
Central African Republic	8	8	11	11	12
Chad	11	18	23	23	23
Chile	6927	7213	7525	7917	8273
China	83014	83134	83213	83306	83356
Colombia	2709	2776	2852	2979	3105
Congo (Brazzaville)	60	60	60	60	117
Congo (Kinshasa)	223	234	235	241	254

2. Cleansing and processing the data obtained from above public database

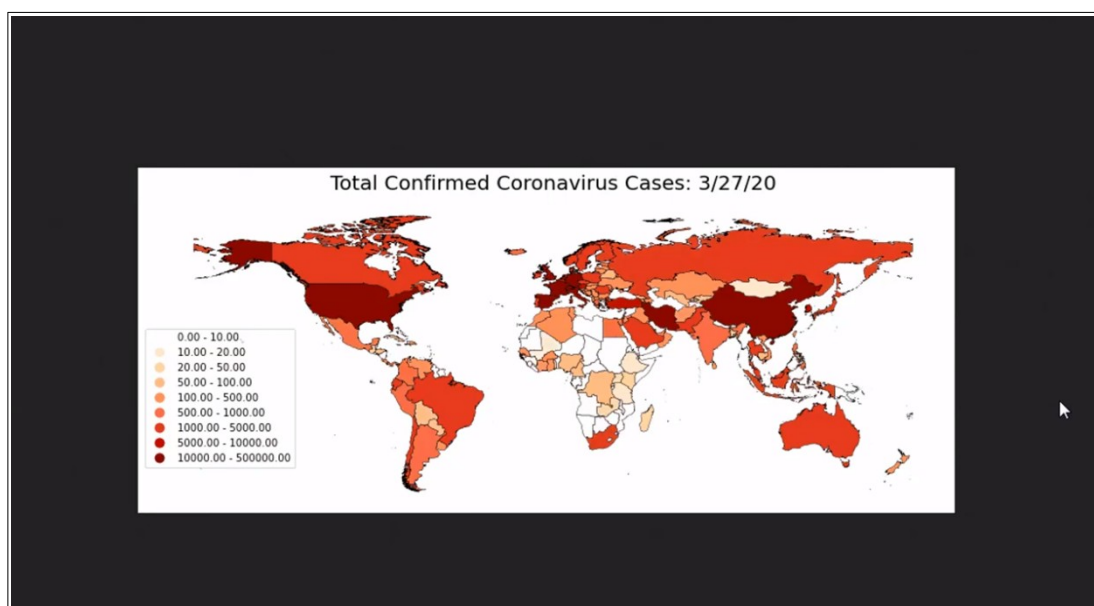
The collected data was cleaned for any discrepancies in names, repetition, spelling mistakes, any other deformalities in data.

3. Mapping of number of COVID-19 cases across the globe

The number of cases were mapped on the globe over the time.

Results:

- We have developed a tool which can map the epidemiological progression of COVID_19 cases across the world.



Applications of the Tool

- Graphs detail virus progress over time.
- Viewers can see the day and time of the most recent data update and data sources.
- Helpful for designing disease control strategy.

Future Plan:

To deploy this tool for public use on a free platform.

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संचार माध्यमों में हिन्दी का
अस्थित्व

DECLARATION

I hereby declare that the Thesis entitled “SANCHAR MADHYAMON ME HINDI KA ASTHITW” is an authentic record of the project work carried out by our students under the supervision of Dr.D.Hemalatha , Asst professor of Hindi. part of this project work has not been presented for any other degree or diploma earlier.

Mrs. Dr.D. Hemalatha,

Asst professor of Hindi

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C E R T I F I C A T E

This is to certify that the thesis entitled “**SANCHAR MADHYAMON ME HINDI KA ASTHITW**” Submitted by **Final year Hindi students.**, in partial fulfillment of the requirements for the project work in Hindi is a bonafied work carried out by our students U.VAISHNAV(1905-5005-441-069),SK.SAMEER(1905-5005-468-189), NEHA(1905-5005-468-185),AKSHAY (1905-5005-468-081) and KAILASH (1905-5005-468-170) are bonafied work carried out by the students of B.Sc. 3rd Year under the supervision of Dr.D.HEMALATHA, have successfully completed the Jignasa students study project -2021. The entire project work done by him/her is found: **Excellent/Good/Satisfactory**

Dr.D.HEMALATHA

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हिन्दी का महत्व

- हिन्दी आम आदमी की भाषा के रूप में देश की एकता का सूत्र है। हिन्दी विश्व की संभवतः सबसे वैज्ञानिक भाषा है जिसे दुनिया भर में समझने, बोलने और चाहने वाले लोग बहुत बड़ी संख्या में मौजूद हैं। यह विश्व में तीसरी सबसे ज्यादा बोली जाने वाली भाषा है
- हिन्दी भारत संघ की राजभाषा होने के साथ ही ग्यारह राज्यों और तीन संघ शासित क्षेत्रों की भी प्रमुख राजभाषा है।
- आज पूरी दुनिया में 175 से अधिक विश्वविद्यालयों में हिन्दी भाषा पढ़ाई जा रही है। ज्ञान-विज्ञान की पुस्तकें बड़े पैमाने पर हिंदी में लिखी जा रही है। सोशल मीडिया और संचार माध्यमों में हिन्दी का प्रयोग निरंतर बढ़ रहा है।
- संख्या बल के आधार पर हिन्दी विश्व-भाषा बन रही है।
- हिंदी के इसी महत्व को देखते हुए तकनीकी कंपनियां इस भाषा को बढ़ावा देने की कोशिश कर रही हैं। यह खुशी की बात है कि सूचना प्रौद्योगिकी (information technology) में हिन्दी का इस तेमाल बढ़ रहा है। आज वैश्वीकरण (globalisation) के दौर में हिन्दी विश्व स्तर पर एक प्रभावशाली भाषा बनकर उभरी है।

संचार माध्यम

- जनसंचार" अंग्रेजी के Mass-Communication शब्द का पर्यायी है। अपने भावों, विचारों, जानकारी को इलेक्ट्रॉनिक उपकरणों द्वारा एक स्थान से दूसरे स्थान तक एक-दूसरे तक पहुँचना ही जनसंचार है।
- संचार माध्यमों को मीडिया के रूप में जाना जाता है, जो दो प्रकार है। एक है प्रिंट मीडिया दूसरा है-इलेक्ट्रॉनिक मीडिया
प्रिंट मीडिया
- जनसंचार के माध्यमों के अन्तर्गत मुख्यतः समाचार पत्र, रेडियो, दूरदर्शन, फिल्म तथा कम्प्यूटर आदि आते हैं
- प्रिंट मीडिया में समाचार पत्र एवं पत्रिकाएं आती हैं।
- प्रिंट मीडिया ने भारत के स्वतंत्रता आंदोलन को हिन्दी के माध्यम से बहुत गति प्रदान की थी। भारत में सबसे अधिक 20,589 समाचार पत्र हिन्दी में प्रकाशित होते हैं, जबकि अंग्रेजी में 7596 समाचार पत्र छपते हैं। सन् 2001 में 2057 दैनिक पत्र हिन्दी में निकलते थे।
- इस समय हिन्दी में भी एक लाख से ज्यादा ब्लॉग सक्रिय हैं। अब सैकड़ों पत्र-पत्रिकाएं इंटरनेट पर उपलब्ध हैं।
- हिन्दी के वैश्विक स्वरूप को अन्य संचार माध्यमों में भी देखा जा सकता है।

इलेक्ट्रॉनिक मीडिया

- डिजिटल दुनिया में हिन्दी की मांग अंग्रेजी की तुलना में पांच गुना ज्यादा तेज है। अंग्रेजी की तुलना में हिन्दी 5 गुना तेजी से बढ़ रही है।
- आज स्मार्टफोन के रूप में हर हाथ में एक तकनीकी डिवाइस मौजूद है और उसमें हिन्दी। सभी आपरेटिंग सिस्टमों में हिन्दी में संदेश भेजना

हिन्दी की सामग्री को पढ़ना, सुनना या देखना लगभग उतना ही आसान है जितना अंग्रेजी की सामग्री को। हालांकि कंप्यूटरों पर भी हिन्दी का व्यापक प्रयोग हो रहा है और इंटरनेट पर भी, लेकिन मोबाइल ने हिन्दी के प्रयोग को अचानक जो गति दे दी है उसकी कल्पना अभी पांच साल पहले तक किसी ने नहीं की थी।

- भारत में 50 करोड़ से ज्यादा लोग हिंदी बोलते हैं। जबकि करीब 21 प्रतिशत भारतीय हिंदी में इंटरनेट का प्रयोग करना चाहते हैं। भारतीय युवाओं के स्मार्टफोन में औसतन 32 एप होते हैं, जिसमें 8-9 हिंदी के होते हैं। भारतीय युवा यूट्यूब पर 93 फीसद हिन्दी वीडियो देखते हैं

संचार माध्यमों में हिन्दी की स्थिति

- किन्तु आज अंग्रेजी पूरे देश पर हावी होती जा रही है। हिन्दी देश की राजभाषा होने के बावजूद आज हर जगह अंग्रेजी का वर्चस्व कायम है। हिन्दी जानते हुए भी लोग हिन्दी में बोलने, पढ़ने या काम करने में हिचकने लगे हैं।
- वैसे तो देश भर में हिन्दी की जो स्थिति है, वही चिंताजनक है क्योंकि सात दशकों के बाद हिन्दी केवल हिन्दी प्रदेशों की ही थाती बनी हुई है। हिन्दी का प्रचार-प्रसार दुनियाभर में तो हो गया, लेकिन भारत में इसकी स्थिति शोचनीय बनी हुई है। अंग्रेजी युक्त हिन्दी, हिन्दी भाषा के लिए खतरा बन गई है।

- जानते हुए भी लोग हिन्दी में बोलने, पढ़ने या काम करने में हिचकने लगे हैं।
- हिन्दी को राजभाषा का दर्जा कागजों में हासिल है, मगर सरकारी फाइलों में फर्रटि से अभी भी अंग्रेजी ही दौड़ रही है।

उपसंहार

- यह ज़माना अब कंप्यूटर, लैपटॉप और स्मार्टफोन का है। हम अब कागज पर लिखने के बजाय कीबोर्ड पर ज्यादा लिखते हैं। इसलिए सरकार को चाहिए कि स्कूलों में बच्चों को कागज पर हिंदी लिखना सिखाने के साथ-साथ उन्हें हिंदी टाइपिंग में भी दक्ष बनाए। ऐसा किए बगैर हिन्दी पढ़ाने-लिखाने का मकसद अधूरा ही रहेगा। सरकार अपने सभी दस्तावेजों और वेबसाइटों का सहज हिन्दी में अनुवाद अनिवार्य रूप से कराए।
- केंद्र सरकार अभी राजभाषा हिन्दी सीखने के लिए अपने कर्मचारियों को आर्थिक प्रोत्साहन देती है। हिन्दी प्रोत्साहन के नाम पर पैसे पाने वाले ज्यादातर कर्मचारी कभी हिन्दी में कामकाज नहीं करते. सरकार को इस बुरी प्रवृत्ति पर लगाम लगानी चाहिए।
- देश में इंटरनेट पर करीब 20 प्रतिशत लोग हिन्दी में सामग्री खोजते हैं। लेकिन इंटरनेट पर इस भाषा में अच्छी सामग्री का काफी अभाव है। इसलिए सरकार को चाहिए कि वह अपने संसाधनों और निजी प्रयासों से सभी विषयों की हिन्दी में सामग्री तैयार करवाकर इंटरनेट पर डलवाए।

- सरकार को इन उपायों के अलावा हिन्दी के अनुकूल तकनीकी विकास में भी दिलचस्पी बढ़ानी चाहिए।
- उसे इस क्षेत्र में अनुसंधान तेज करने के लिए निजी क्षेत्र को भी प्रोत्साहित करना होगा।
- तकनीकी क्षेत्र में हिन्दी के आधार पर रोजगार की संभावनाओं को

बढ़ानी होगी सरकार को। तभी हिन्दी पढने वालों की संख्या में भी

वृद्धि हो सकती है।

संदर्भ सूची

- www.drbrambedkarcollege.ac.in/sites/default/files/04_acknowledgement.pdf
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- www.jagranjosh.com/careers/mass-communication-in-hindi-1297250853-2
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APPLICATIONS OF GEOMETRY IN VARIOUS FIELDS

Jignasa Students Study Project - 2021

Presented

By

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DECLARATION

We hereby declare that the study project entitled “**APPLICATIONS OF GEOMETRY IN VARIOUS FIELDS**” being submitted to Commissionerate of Collegiate Education, Telangana State.

The original work done by us under the supervision of **Dr.S. Jayaprasad** and Sri. **K. Gangadhar** and has not been submitted previously and not formed the basis for the award of any other degree, diploma, fellowship or any other similar titles.

Date:

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G. PRANATHI

B. SRILEKHA

M. NIHARIKA

K. AKSHAYA



CERTIFICATE

This is to certify that the Study project entitled “ **APPLICATIONS OF GEOMETRY IN VARIOUS FIELDS**” submitted to CCE TS, Hyderabad. By **T. PRAVALIKA (1905-5005-468-198), K. SOUNDARYA (1905-5005-468-102), G. PRANATHI (1905-5005-468-069), B. SRILEKHA (2105-5005-466-1012), M. NIHARIKA (2105-5005-466-1059), K. AKSHAYA (2105-5005-466-1031)** are bonafide work carried out by the students of B.Sc. 3rd & 1st Year under the supervision of Dr. S. Jayaprasad and Sri. K. Gangadhar, have successfully completed the Jignasa students study project -2021. The entire project work-done by him/her is found: **Excellent/Good/Satisfactory**.

Dr. S. JAYAPRASAD

Sri. K. GANGADHAR

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ABSTRACT

Geometry is one of the classical disciplines of maths. In Greek, it is roughly translated as “earth measurement” and is concerned with the properties of figures and space.

Geometry is a branch of mathematics which deals with the study of different shapes or figures and their properties. Geometry could be a plane or solid shape and their properties. Plane shapes are also called 2-dimensional shapes such as square, rectangle, circle, triangle, and Solid shape is a geometrical object with length, breadth and height or base area and height. Solid shapes are also called 3-dimensional shapes such as a cone, sphere, cylinder, prism, cube, and cuboids.

Geometry in real life as the statement seems is just simply geometry in real life, if we observe carefully in our everyday surroundings such as the shape of trees, cars, houses and even our own human body also shape of geometry.

Applications of geometry in the real world include architecture computer-aided design for construction blueprints, the design of assembly systems in manufacturing, nanotechnology, computer graphics, visual graphs, video game programming and virtual reality creation, medicine, biology, physical sciences. Geometry also plays a role in global positioning systems, cartography, astronomy, and geometry even helps robots see things and much more.

Hence it is observed that geometry affects us even in the most basic details of our lives. Irrespective of the form, it helps us understand specific phenomena and in uplifting the quality of life.

AIMS AND OBJECTIVES

- This project is designed to show how geometry has helped the world throughout history. Geometry has help to create art, construct buildings, build civilizations, empires, and discover other worlds. It has a long and glorious history and this project will give you a great introduction to one of the foundations of all math's.
- Geometry as a concept allows the students to connect mapping objects in the classroom to the real-world contexts in respect to their direction and place developing their practical thinking.
- Analyze geometric patterns to develop formulas and communicate how the formulas were derived and Use appropriate geometric vocabulary to describe properties and attributes of two- and three- dimensional figures.
- Model and solve geometric situations using algebraic properties.
- Examine, recognize, name and explore the properties of geometric solids and Use accepted geometric notations and shapes. And basic Geometry A learning of basic geometrical properties and identities as they apply to general mathematics and the real world
- Objectives Understand, describe, and apply the concepts of symmetry, similarity, and congruence. Explore properties of geometric figures using coordinate representation. Use inductive and deductive reasoning to discover and verify properties of figures. Classify figures in terms of congruence and similarity and apply these relationships.
- More Objectives Investigate, explore, and describe the geometry in nature and real-world applications using models, manipulatives, and appropriate technology The students will learn to work in groups to solve mathematical problems.
- To develop an awareness of the historical and cultural heritage of geometry in society, and of the contemporary applications of geometry.

1. REVIEW OF LITERATURE

1.1. Where to Find Geometry in Our World.

The word geometry itself finds its root in the Greek language. The word geometry comes from the Greek word which means earth measure.

1.2. What is Geometry in simple words.

Mathematical thinking and reasoning begin for students long before it is taught through any sort of schooling. Beginning as infants, humans are attracted to patterns, designs and shapes.

1.3. Importance of Geometry in Everyday Life

Mathematical thinking and reasoning begin for students long before it is taught through any sort of schooling. Beginning as infants, humans are attracted to patterns, designs and shapes. These shapes and designs are the very foundational level of the mathematical field of geometry. Parents reinforce this by often purchasing toys or mobiles with brightly coloured shapes, pictures or designs. Babies are attracted to these items. Later, toys are manipulated in such a way as to provide further hands-on learning to develop these types of skills.

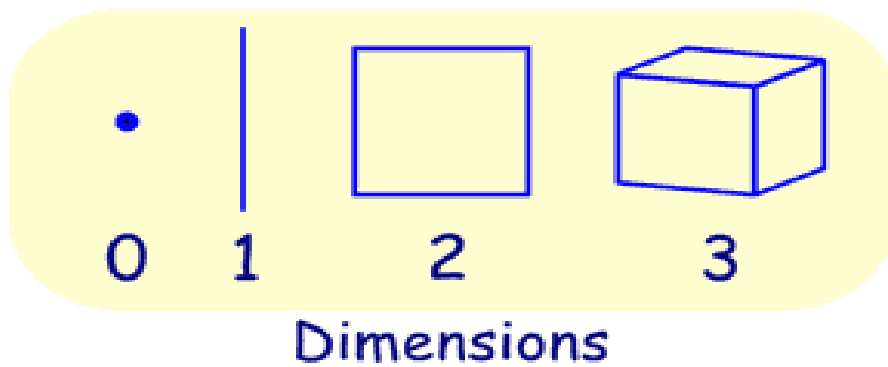
1.4. Real-Life Applications of Geometry

Everything from the roti we eat, to the pen we write with, from the TV we watch, the chair/sofa we sit on, the study desk, the bed...every item has a geometric shape.

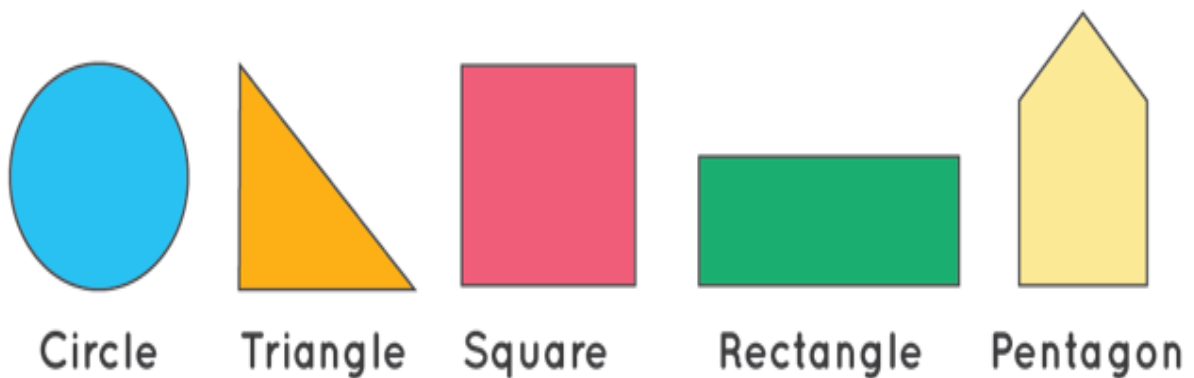
2. RESEARCH METHODOLOGY

In real life, geometry has a lot of practical uses, from the most basic to the most advanced phenomena in life. A thorough knowledge of geometry is going to help them a lot in determining the proper style (and more importantly, optimize its function) of a specific house, building, or vehicle etc.

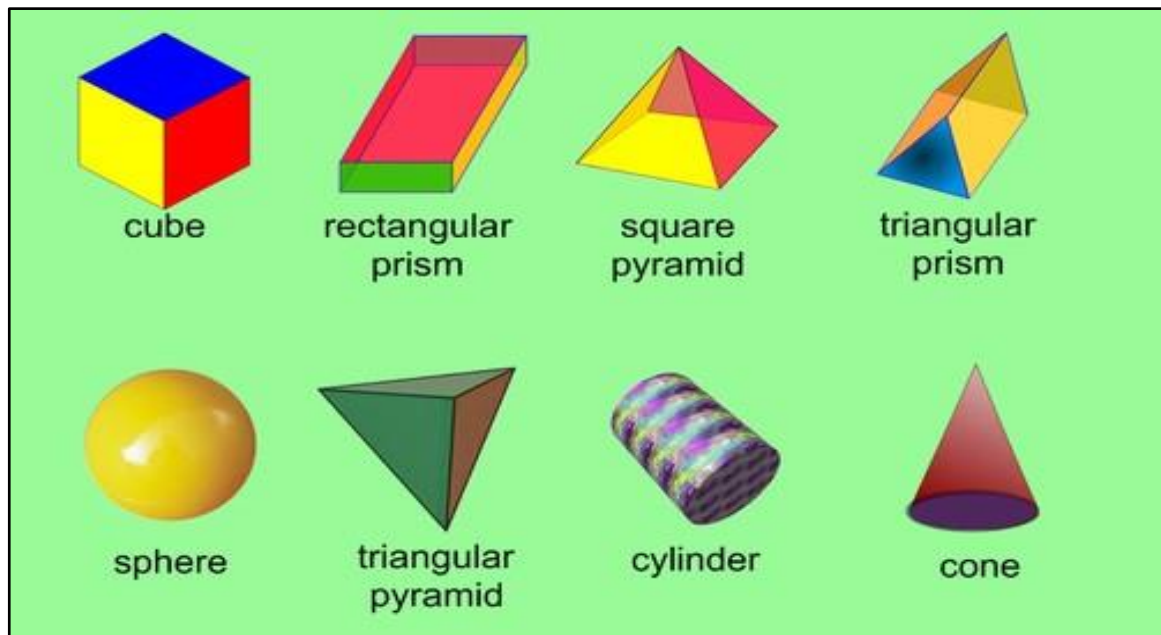
2.1. Shapes of geometry:



2 -Dimensional shapes:



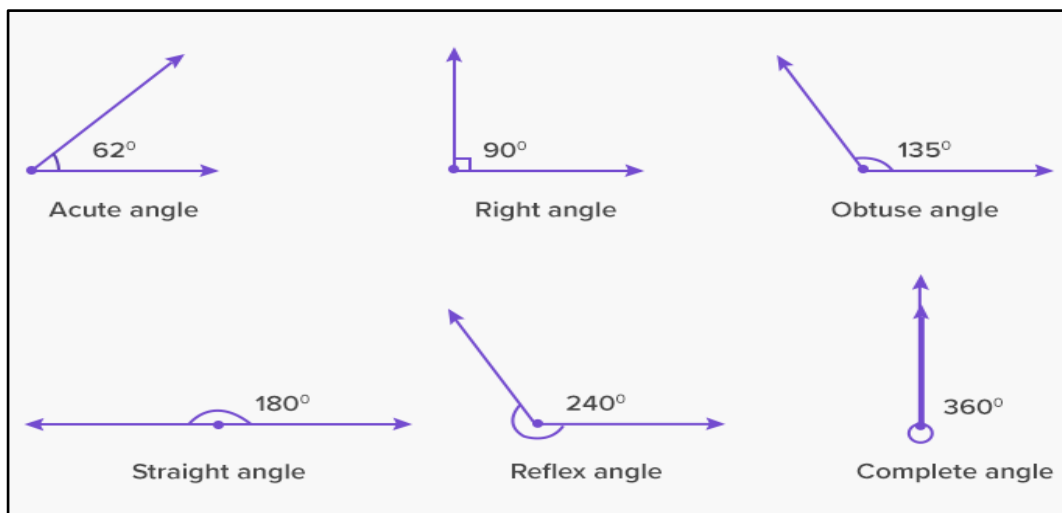
3-Dimensional shapes:



2.2. Angles:

An angle is formed when two rays come together at the same Point.

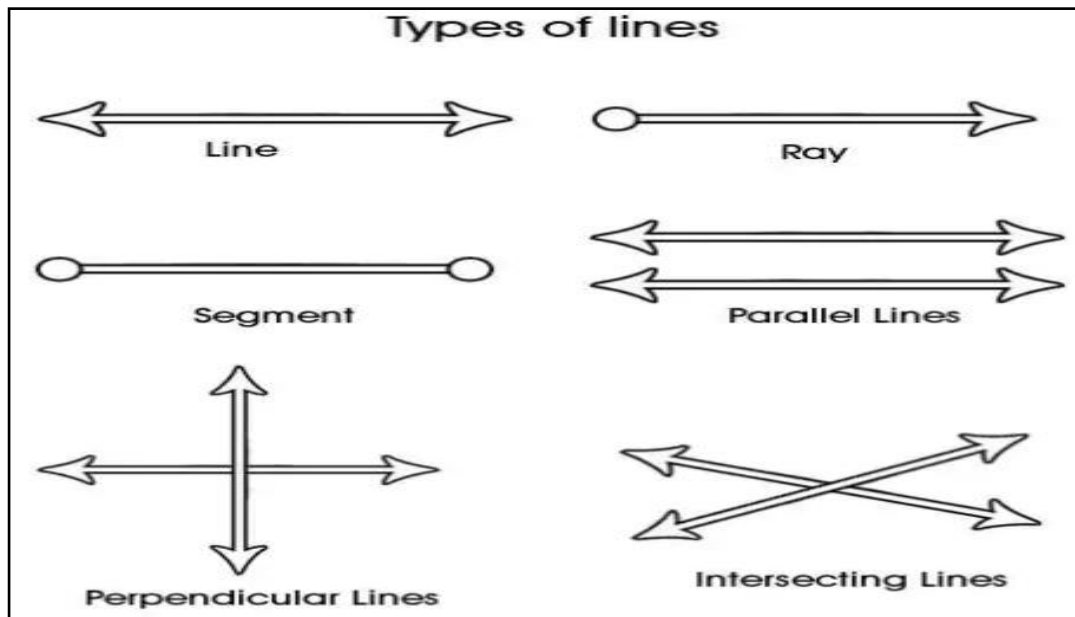
2.3. Types of Angles:



2.4. Lines:

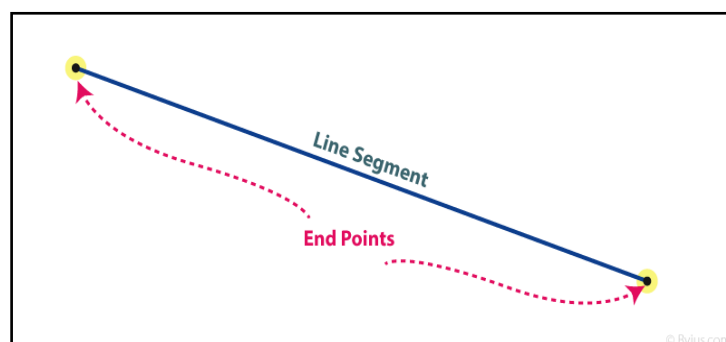
A line is a path, which is always straight, and extends out infinitely (forever). Lines are represented by a straight line with arrows on both ends, indicating that it could extend forever.

2.5. Types of Lines:



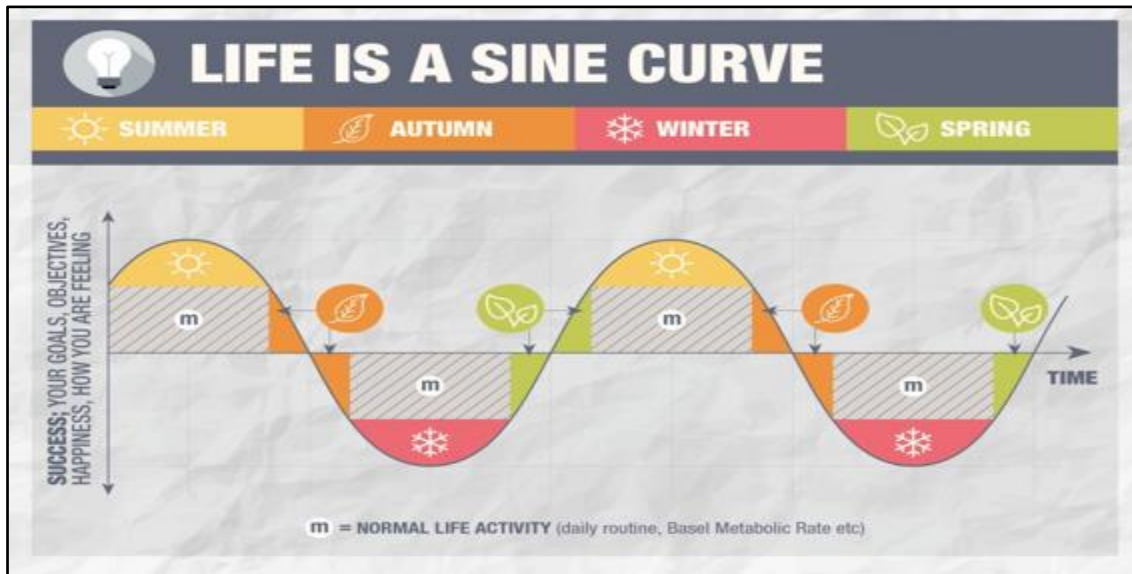
2.6. Line Segments:

Line segments are similar to lines, in that they are always straight, but they do not extend out forever, instead they end at specific points. Line segments are typically represented by a straight line with two dots at each end, representing the end points. These end points are generally given a label such as line segment AB.



2.7. Curves:

A Curve is similar to a line segment in that it has two specific end points, however it is never straight. A curve would be represented in the same manner however, instead of being straight the portion between the two end points would be curved.

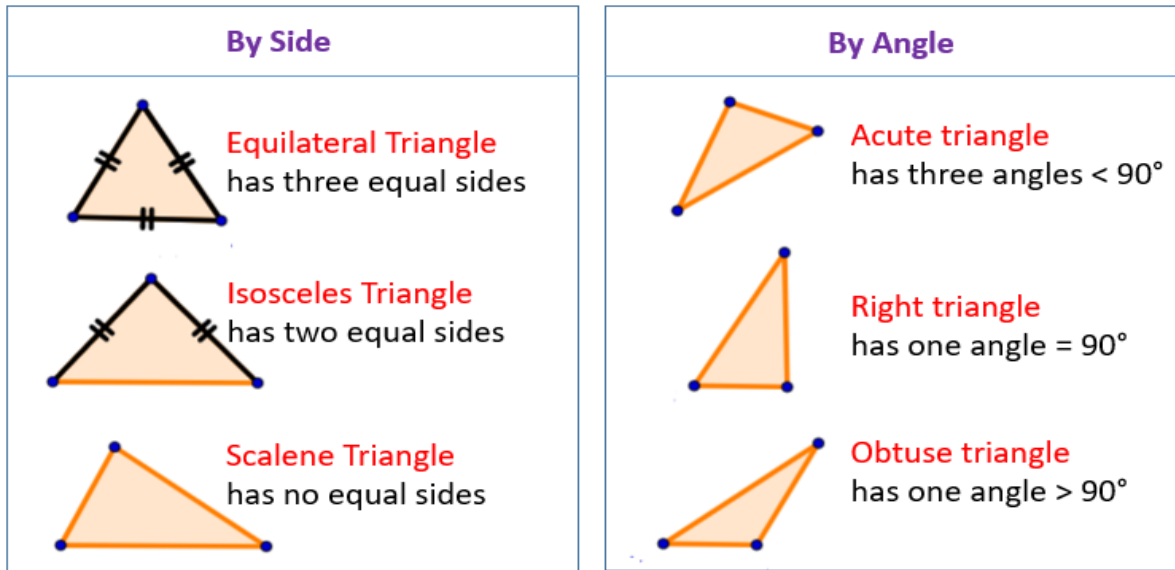


2.8. Triangles:

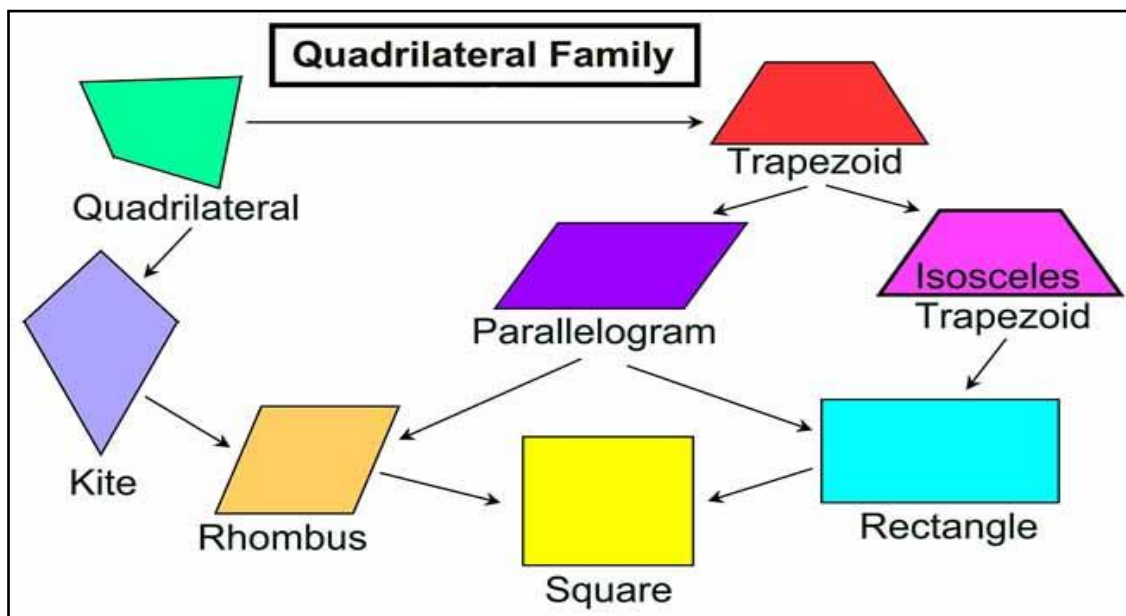
The Triangle is a shape that is formed by 3 straight lines are called sides. There are different ways of classifying triangles, according to their sides or angles.













Types of Triangles



2.9. Types of Quadrilaterals:



2.10. Examples of daily used 3D-shapes:

Cube		
Rectangular Prism		
Sphere		
Cone		
Cylinder		

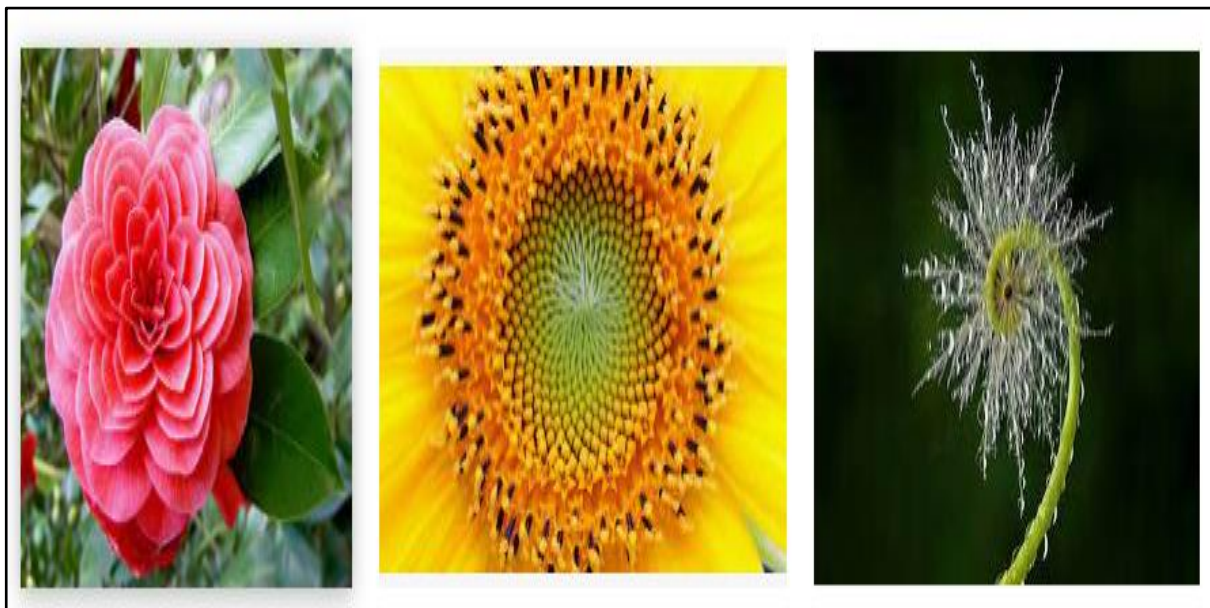
3. ANALYSIS OF DATA

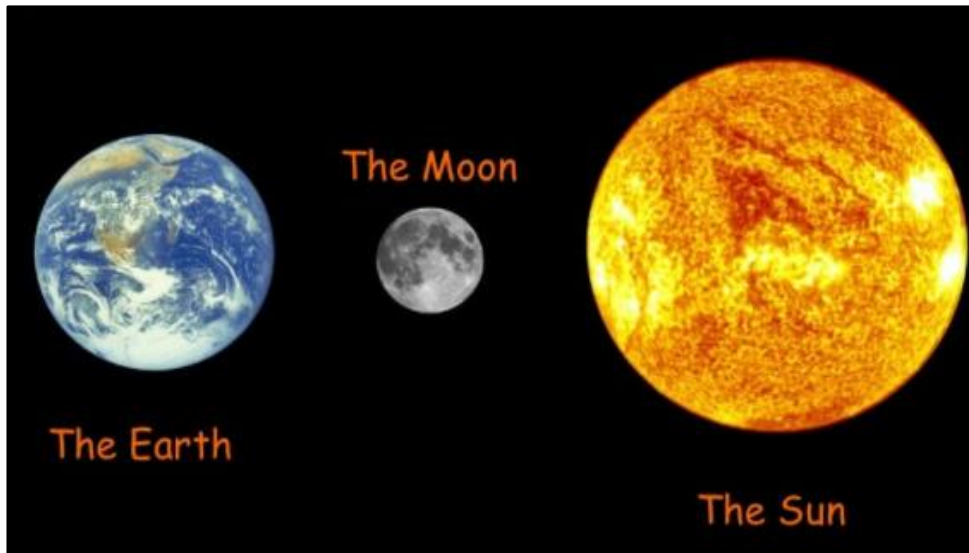
Application of geometry in various fields is the foundation of physical mathematics, calculate physical spaces, Architecture of a thing, design, engineering, building construction, nature, human body etc.

Geometry is briefly used in various daily life applications such as Animation, Game Developer, surveying, astronomy, navigation, GPS, latitude & longitude and much more.

3.1. Geometry in Nature:

Sun and moon seem to be circular when we see them from the earth. Our earth is an example of a different kind of a shape which is oblate spheroid. We can see so many spirals in our nature.





3.2. Geometry in Architecture:

Some buildings wear their geometry on their sleeves – the Great Pyramids, or pretty much anything by Frank Gehry. It's the unsung but essential tool that architects use daily, whether they're designing a bridge or a block of flats, so in this article we've decided to shine a light on geometry in architecture



3.3. Geometry in Human body:

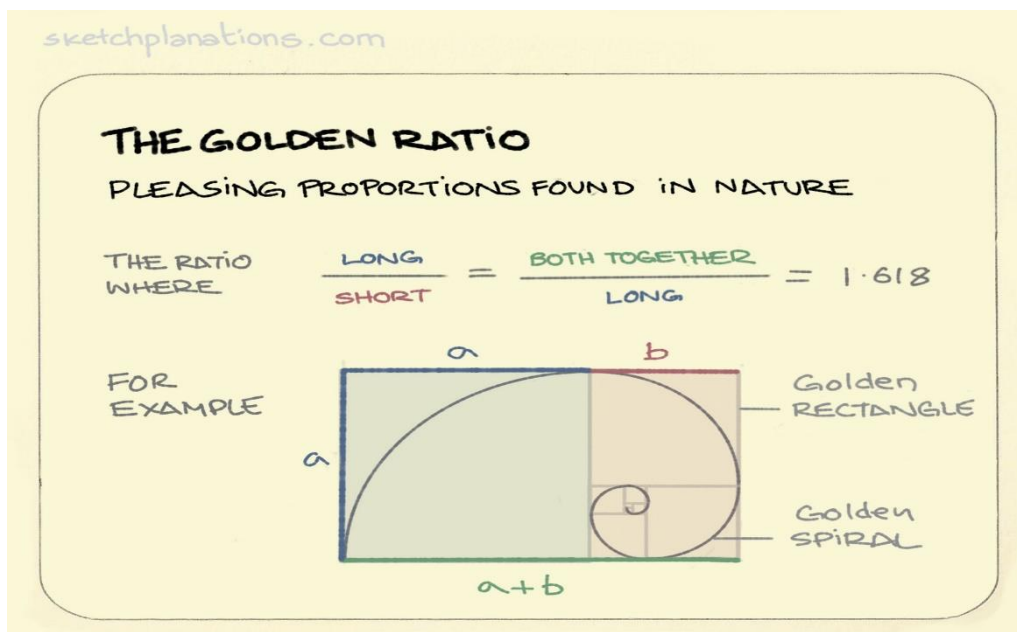
The human body is a multiform that is, a complex shape based on several parts that roughly correspond to basic geometric units. The head is very roughly spherical, the neck and limbs nearly cylindrical, the mid-body somewhat cylindrical, surmounted by pyramidal shoulders etc.

3.4. Golden Ratio:

The Golden Ratio is the limit of the ratios of consecutive terms of the Fibonacci numbers sequence 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, The Golden Ratio is a special number approximately equal to 1.618.

i.e. $\frac{233}{144} = 1.618$, $\frac{144}{89} = 1.61797753$, ... The symbol for Golden Ratio is φ .

The Golden Ratio occurs in many mathematical contexts. It is geometrically constructible by straight edge and compass, and it occurs in the investigation of the Archimedean and Platonic solids.

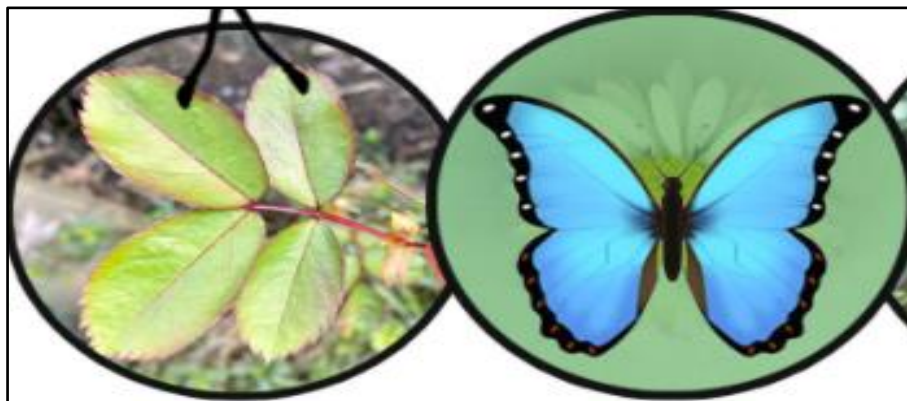


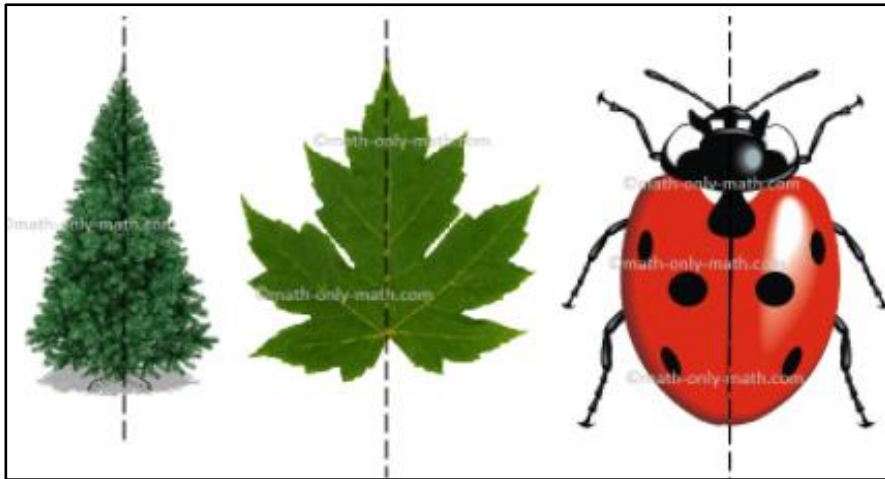
Examples of Golden Ratio:



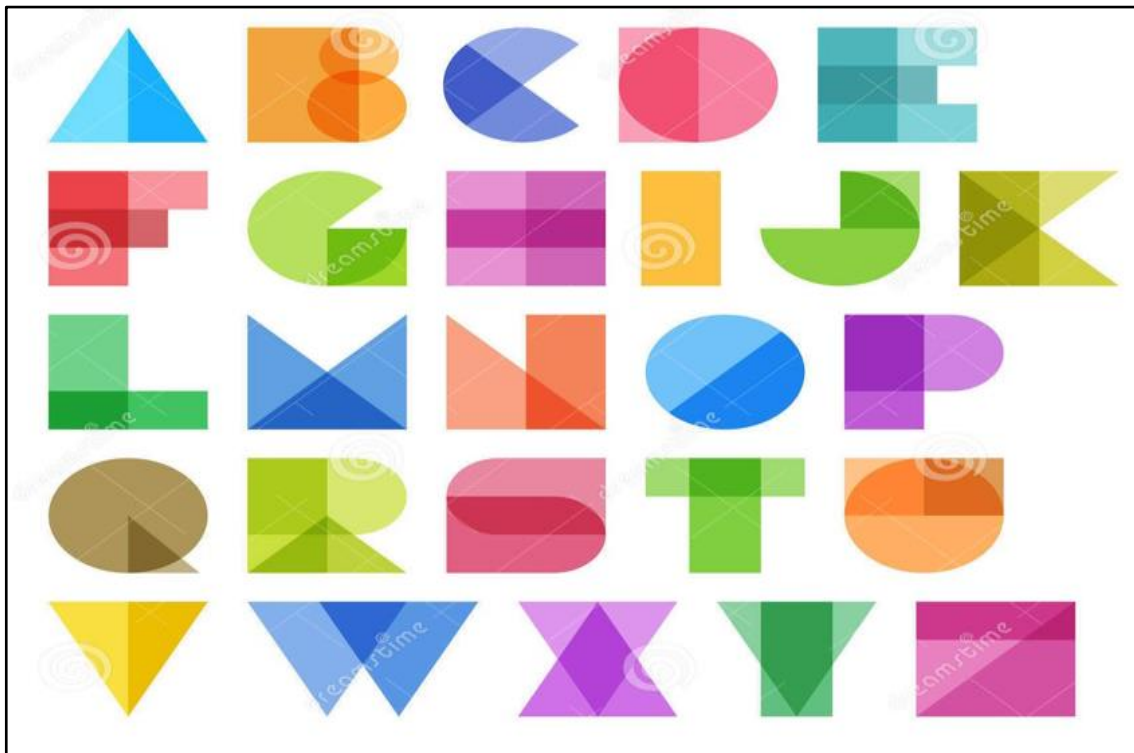
3.5. Symmetry:

The term symmetry is derived from the Latin word symmetric which indicated commensurateness. In geometry, this term continues to refer to the concept of equality. Instead, symmetry refers to both parts of a shape or figure as having equal or matching points. These matching points will match in shape, size, proportion, and all appearance.





3.6. Geometry in Alphabets:



3.7. Geometry in Sports:

Without geometry, you wouldn't have sports, athletic fields or equipment that enable competition and challenge participants to achieve the desired goals. For example, as a basketball, soccer, hockey or football kicker, you use geometry to determine how much arc you need to score from a certain distance. Hockey-equipment developers must determine how much angle to put on the end of a stick and how long to make the shaft. Geometry allows you to mark off athletic fields, such as rectangles for football, soccer and hockey and more complex diamond shapes for baseball or semicircle shapes for track and field.

Sports often does not fail a sole chance to make use of geometrical concepts. The buildings of the sports stadiums and athletic fields are taking into consideration as geometric shapes. The athletic fields also employ geometry; hockey, soccer, basketball, and football fields are rectangular in shape. The corner kick spots, goal posts, arcs, D-section, and centre circle are marked on the field. Similarly, the pitches of various other sports like volleyball and basketball take into consideration the geometrical aspects because these pitches have oval as well as circular arcs marked clearly. Talking of track field, semicircular shapes are often noticeable. Angles also play a critical role in predicting the movement of the players, enhancing their performance, and scoring a point.

3.8. Geometry in Food Designing:

Geometric shapes are a significant part of food design. For example, different shapes of chocolates, biscuits, cakes and scoop-shaped pasta is designed to hold sauce and ridged pasta soaks up sauce. Geometric cookie cutters allow you to make cookies in the shape of circles, squares, stars, bells, snowmen and other designs.



4. FINDINGS IN NATURE

4.1. Psychological effects of Geometry in Children:

From the birth, human beings are attracted to diverse shapes, designs and colors. Moreover, geometrical shapes of different toys plays a crucial role in development of the cognitive skills in the children during the early stages of their growth.



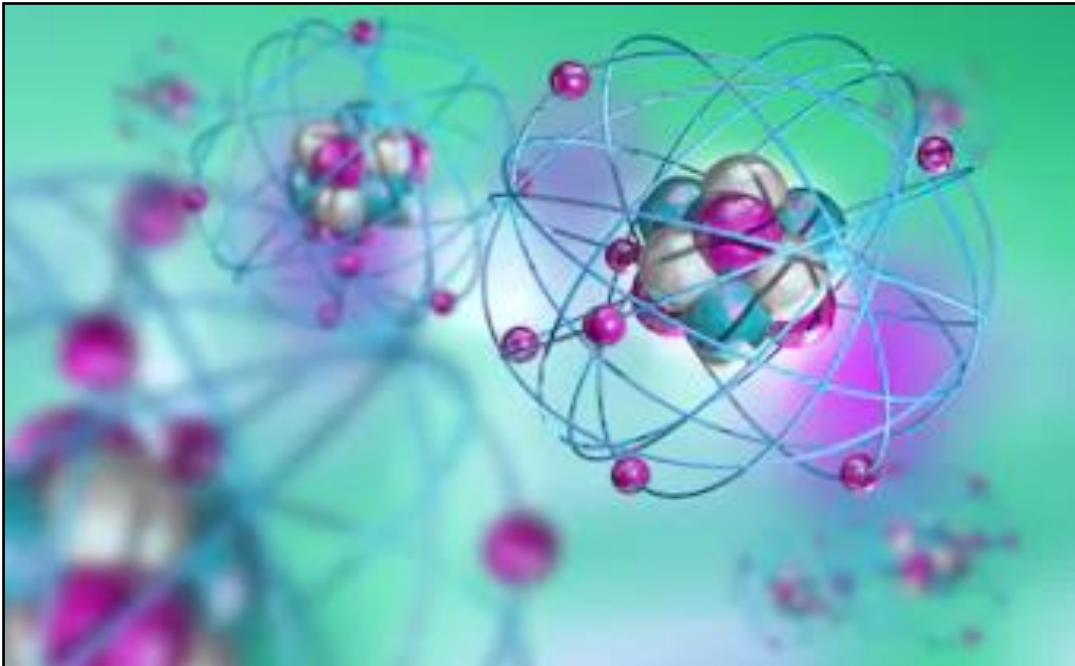
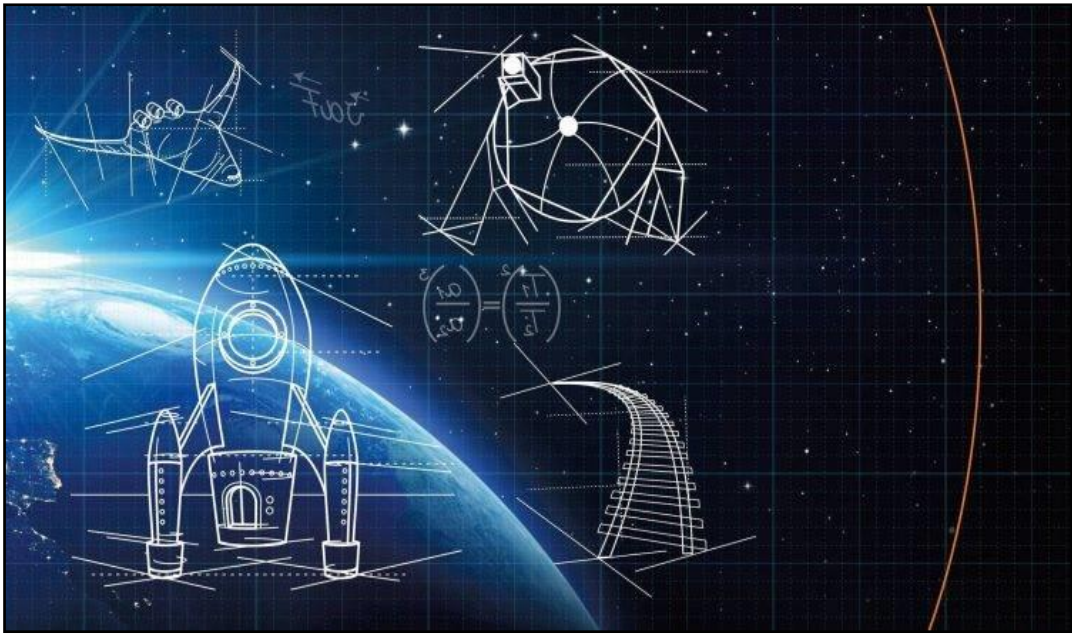
4.2. Spherical Shape of Liquid drops:

- Liquids, such as water or oil, can form droplets that are held together by surface tension.
- Rain drops are of spherical in shape because the water molecules have attraction with each other due to surface tension. So, when surface tension acts on it, it tends to acquire less surface area for the same volume. Hence it becomes spherical in shape (to have minimum area). Geometry helps us in understanding the phenomenon behind the spherical shape of rain drop.



4.3. Geometry in Astronomy & Physics:

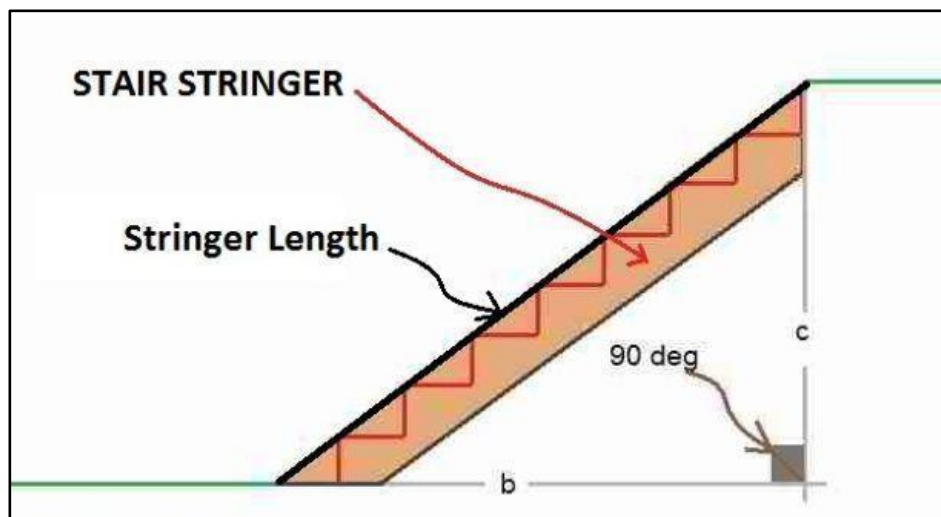
- The stars, planets and moon are mapped using the theories of geometry. The measurement of the distances between them, orbits, and their placements are mapped using geometry.
- Here, geometry is used in the field of astronomy, helping to map the positions of stars and planets on the celestial sphere and describing the relationship between movements of celestial bodies.
- In the field of Physics, there is a deep link between pseudo-Riemannian geometry and general relativity



4.4. Geometry in Stairs Inclination angle:

As the inclination angle of stairs increases, we can reach the required height easily. But with fewer steps, the people with old age feel uncomfortable in their knees, when they go through highly elevate stair construction.

The most important step when building concrete stairs is to use a proper formwork. The angle of flight, dimensions of thread and riser are to be properly checked. Usually while constructing a stair attached to wall, the line of flight, thread and risers are marked on the wall for proper fixing of shuttering or formwork.



4.5. Geometry in Interior Design:

The applications of coordinate geometry in daily life can also be found in interior design, architecture and art. Setting new items in an open space is done perfectly using the concepts of coordinate geometry.

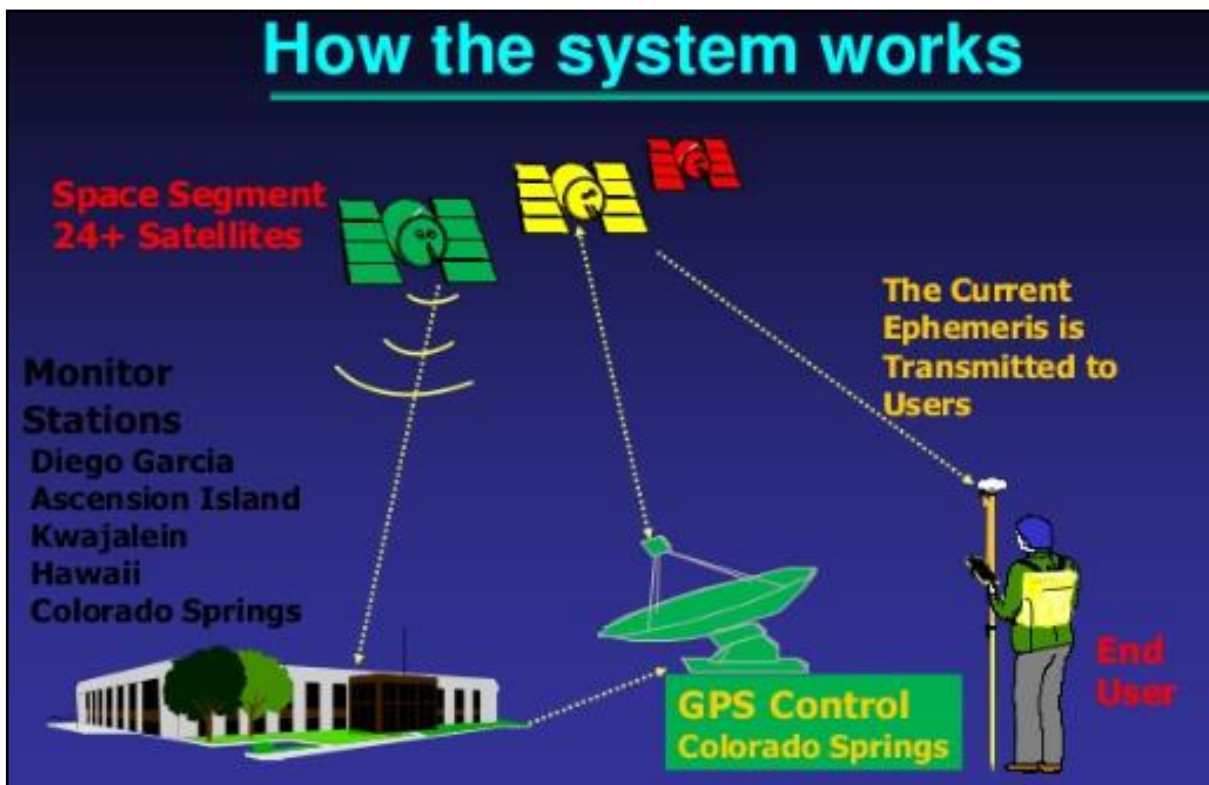


5. APPLICATIONS OF GEOMETRY

5.1. Global Positioning System (GPS):

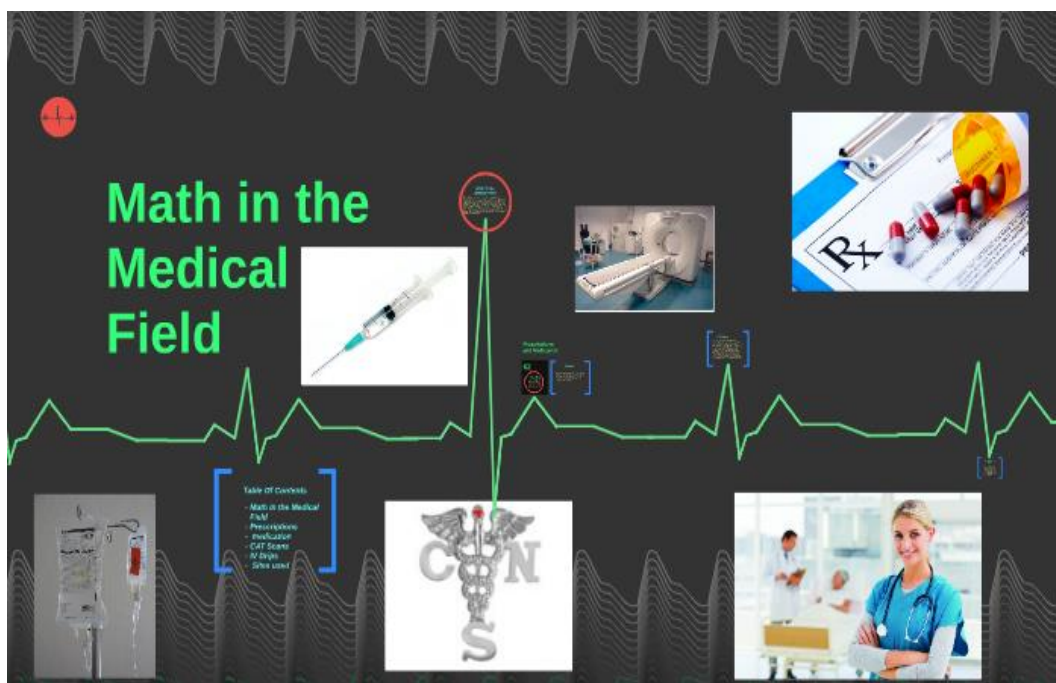
The Global Positioning System (GPS) is a U.S.-owned utility that provides users with positioning, navigation, and timing (PNT) services. This system consists of three segments: the space segment, the control segment, and the user segment.

Apart from all these, I am sure, most of you have used GPS in your smart phones. The Global Positioning System (GPS) is a space-based satellite navigation system that provides location and time information in all weather conditions.



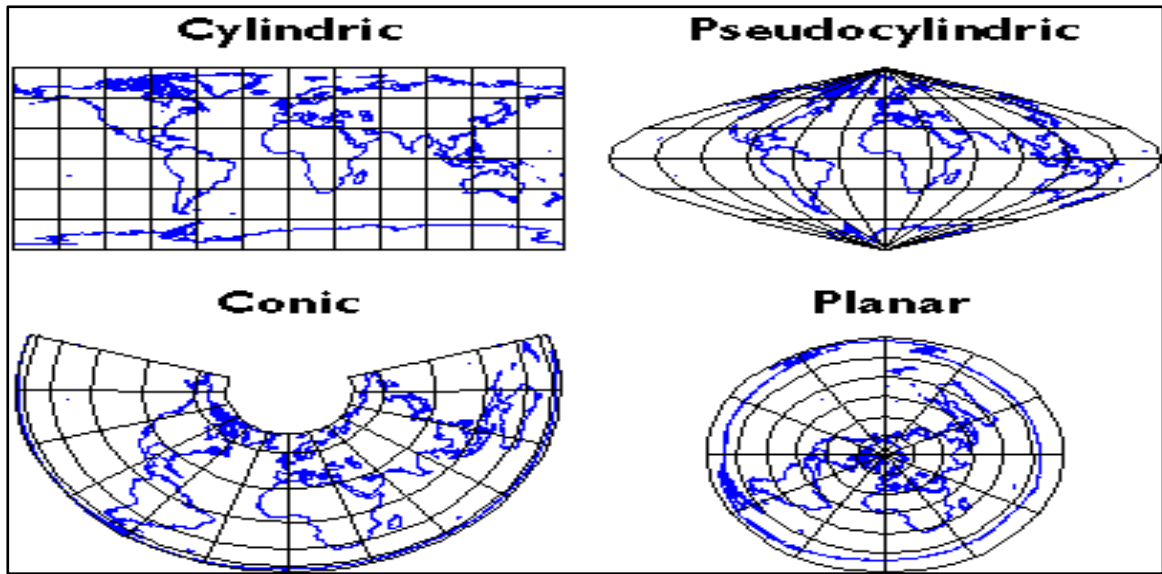
5.2. Medical Field:

Both doctors and nurses use math's every day while providing health care for people around the world. Medical professionals use math when drawing up statistical graphs of epidemics or success rates of treatments. Math applies to x-rays and CT scans, MRI scans are used both for diagnosis and surgical aids. Such methods enable doctors to do their job better, safer, and simpler.

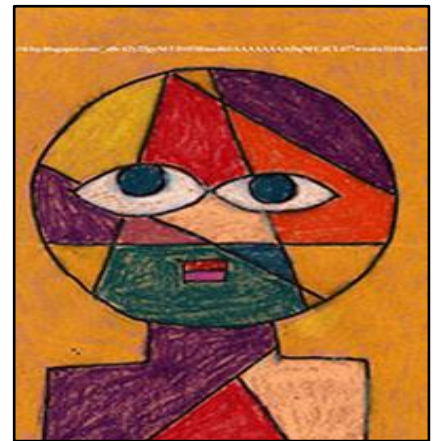


5.3. Map Projections:

Map Projection is a technique to map any 3D curved object on a flat 2D surface. For example, to represent the curved surface of earth on a flat map, this technique can be used. For this purpose, a special type of coordinate system is used called as a projected coordinate system. These are mainly used to represent the maps on computer screen.

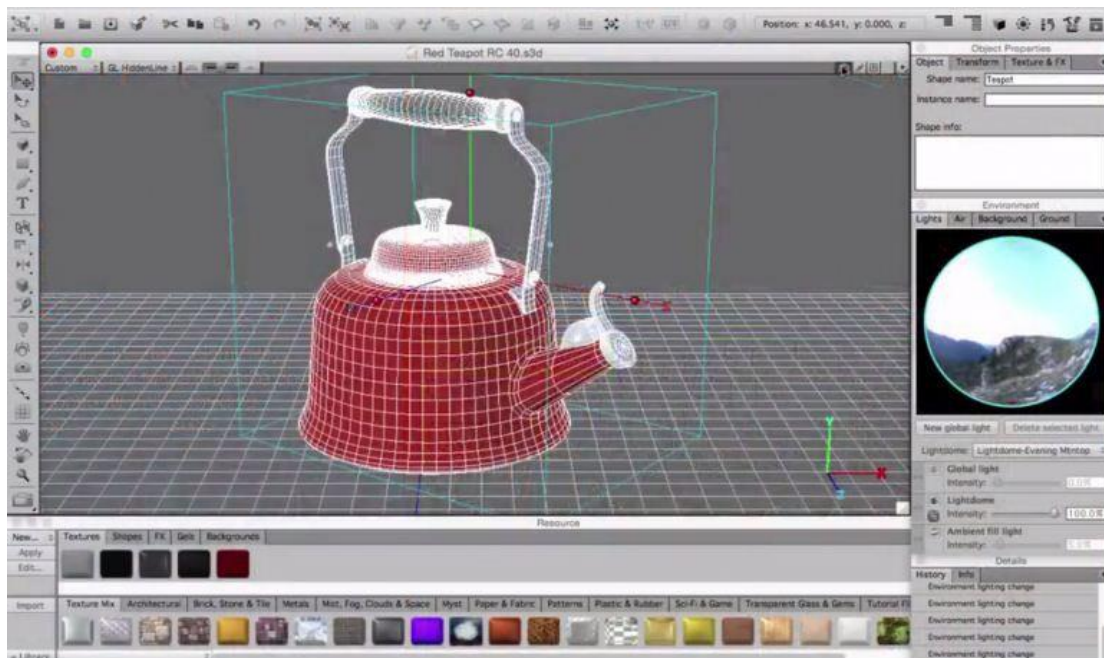


5.4. Geometry in Gardening, Arts and Culture:



5.5. Computer Aided Design- CAD:

Geometry, one of the important concepts of mathematics, entails lines, curves, shapes, and angles. Before any architectural design is made, a computer software helps in rendering visual images on the screen. CAD, a software, puts forth the blueprint of the design. Moreover, it also aids in the simulation of the architectural forms which allows for the better understanding of the finished product. The principles of geometry are being used extensively in various industrial processes which allows the designing of graphics.



5.6. Geometry in technology:

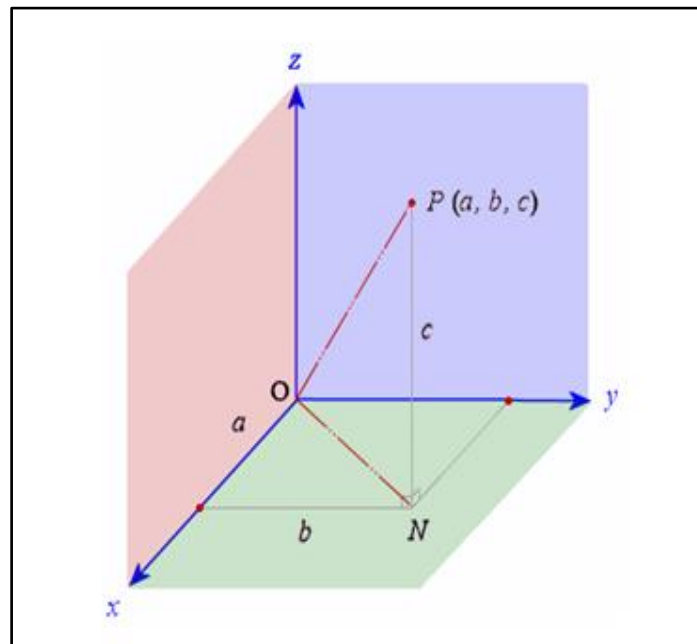
The most common example of geometry in everyday life is technology. Be it robotics or computers or video games, geometry is applied to almost all the underlying concepts. The computer programmers are able to work because the concepts of geometry are always at their disposal. The virtual world of video games is created only because the geometric computations help in designing of the complex graphics of the video games. Ray casting, the process of shooting, employs a 2-D map for stimulating the 3-D world of the video

games. Ray casting helps in increasing processing as the calculations are carried out for the vertical lines on the screen.















5.7. Describing position of an object:

Coordinate system can be used to find the position of any object from its original place (called origin) to its present location.



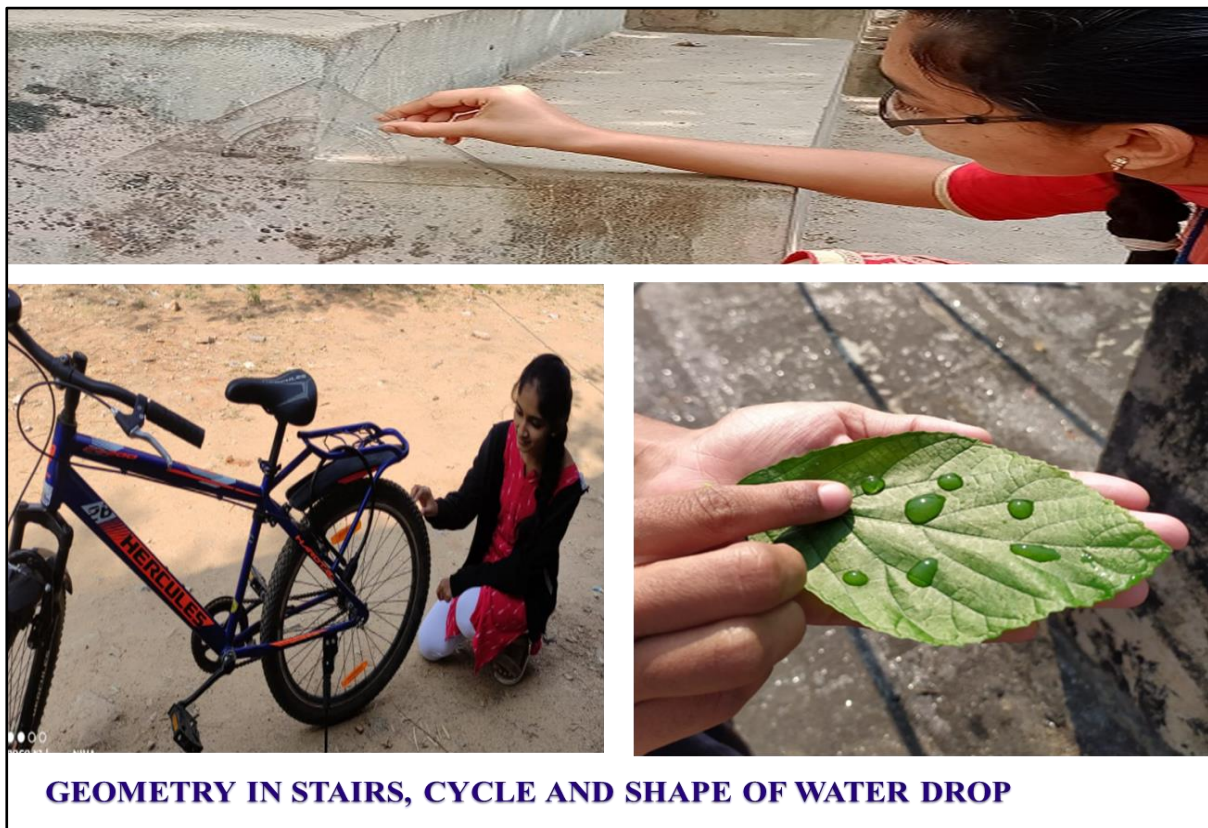
★ POSITIONS ★

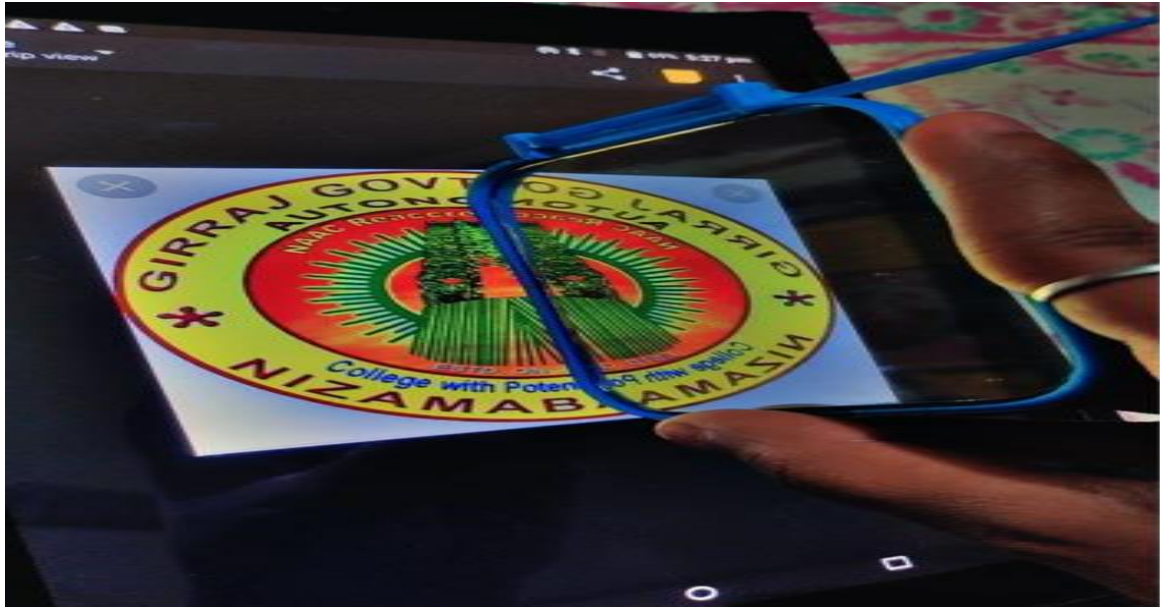
 <p>In</p>	 <p>On</p>	 <p>Under</p>
 <p>Between</p>	 <p>Among</p>	 <p>In front of</p>
 <p>Next to</p>	 <p>behind</p>	 <p>Far from</p>
 <p>Above</p>	 <p>Bellow</p>	 <p>Near</p>

Describe the
Position of an **OBJECT**



6. STUDENT WORK





GEOMETRY IN CHEMISTRY LAB OPERATORS AND DESIGN OF BUILDING

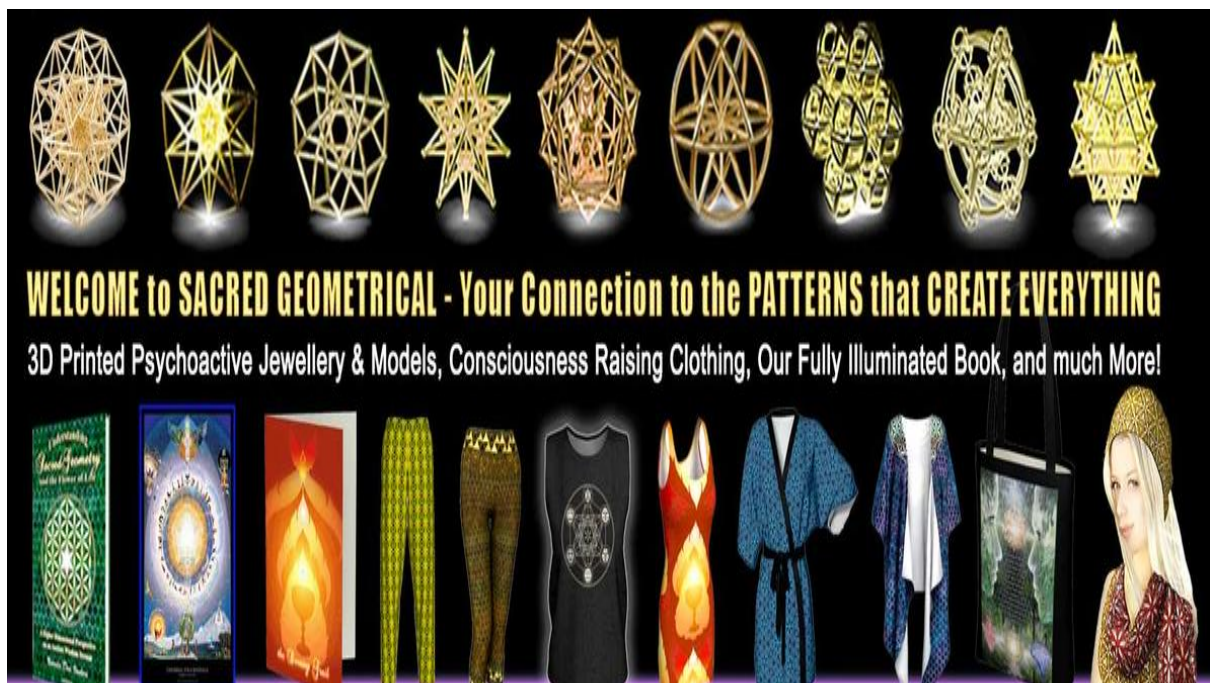


7. MORE ADVANTAGES OF GEOMETRY IN OUR FINDINGS

7.1. Sacred Geometry:

The term sacred geometry describes the geometrical laws which create everything in existence. It unites the mind and the heart, spirit and matter, science and spirituality. Everything in nature is made up of patterns, structures, and designs from the smallest atom to the infinite universe.

Sacred geometry ascribes symbolic and sacred meanings to certain geometric shapes and certain geometric proportions. It is associated with the belief that a God is the geometer of the world. The geometry used in the design and construction of religious structures such as churches, temples, mosques, religious monuments has sometimes been considered sacred. The concept applies also to sacred spaces such as temenoi, sacred groves, village greens, pagodas and holy wells, Mandala Gardens and the creation of religious and spiritual art.



7.2. Fractal Geometry:

In mathematics, fractal is a term used to describe geometric shapes containing detailed structure at arbitrarily small scales, usually having a fractal dimension strictly exceeding the topological dimension. Many fractals appear similar at various scales, as illustrated in successive magnifications of the Mandelbrot set. This exhibition of similar patterns at increasingly smaller scales is called self-similarity, also known as expanding symmetry or unfolding symmetry if this replication is exactly the same at every scale, as in the Menger sponge, the shape is called affine self-similar. Fractal geometry lies within the mathematical branch of measure theory.

Fractal is a new branch of mathematics and art. Perhaps this is the reason why most people recognize fractals only as pretty pictures useful as backgrounds on the computer screen or original postcard patterns. Fractal geometry offers almost unlimited ways of describing, measuring and predicting these natural phenomena.



7.3. Rotating Buildings:

David Fisher, founder of Dynamic Architecture Group, designed the 80-store skyscraper, extending 420m above ground, such that each floor can rotate 360 degrees in both directions while being held firmly to a concrete core. The rotation will provide the residents of the tower with a 360-panoramic view of Dubai.



7.4. Graphical Designing:

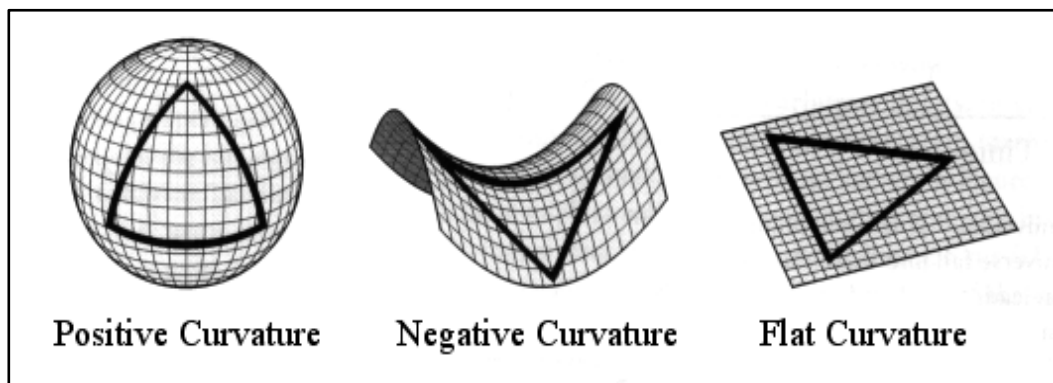
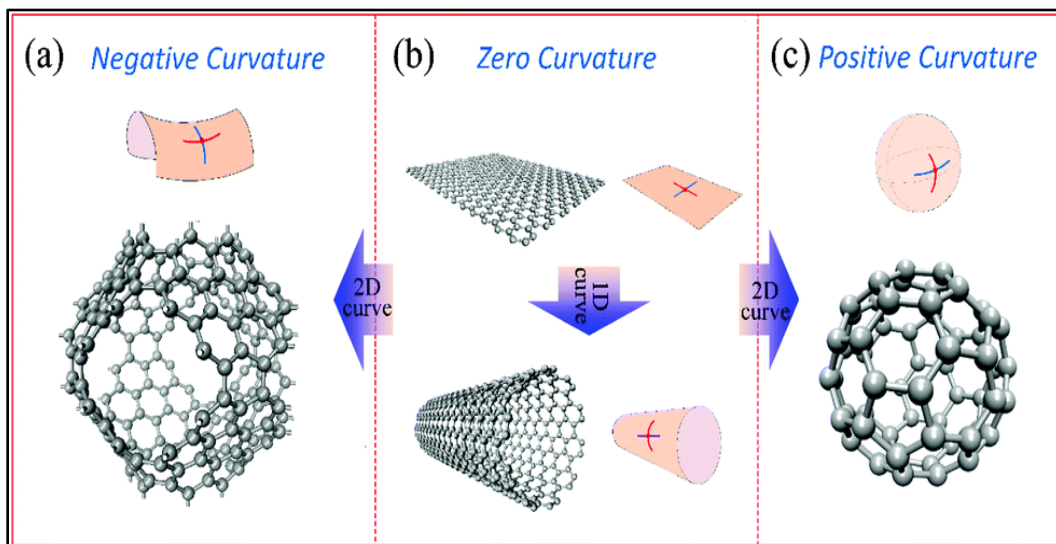
Graphic design is a craft where professionals create visual content to communicate messages by using geometrical shapes. By applying visual hierarchy and page layout techniques, designers use typography and pictures to meet users' specific needs and focus on the logic of displaying elements in interactive designs, to optimize the user experience.



7.5. Cosmology:

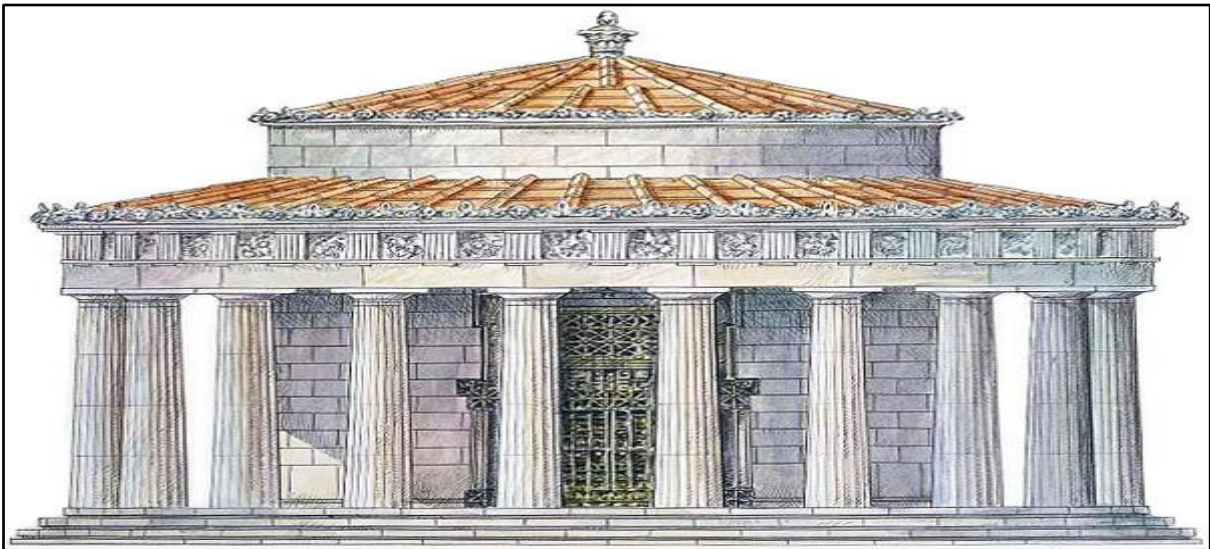
Cosmological evidence suggests that the part of the universe we can see is smooth and homogeneous, at least approximately. The local fabric of space looks much the same at every point and in every direction. Only three geometries fit this description: flat, spherical and hyperbolic.

There are basically three possible shapes to the Universe; a flat Universe (Euclidean or zero curvature), a spherical or closed Universe (positive curvature) or a hyperbolic or open Universe (negative curvature). Note that this curvature is similar to space time curvature due to stellar masses except that the entire mass of the Universe determines the curvature. So, a high mass/high energy Universe has positive curvature, a low mass/low energy Universe has negative curvature.



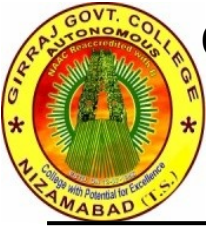
7.6. Euclidean Geometry:

Euclidean geometry, the study of plane and solid figures on the basis of axioms and theorems employed by the Greek mathematician Euclid (c. 300 BCE). In its rough outline, Euclidean geometry is the plane and solid geometry. It is the most typical expression of general mathematical thinking. Rather than the memorization of simple algorithms to solve equations by rote, it demands true insight into the subject, clever ideas for applying theorems in special situations, an ability to generalize from known facts, and an insistence on the importance of proof. In Euclid's great work, the *Elements*, the only tools employed for geometrical constructions were the ruler and the compass—a restriction retained in elementary Euclidean geometry to this day.



CONCLUSION AND SUGGESTIONS

1. We have learned variety of things through this geometry project. We learned how geometry is a huge part of our environment and how it develops our living in many ways. Also, we now have a broader understanding of geometry and its usefulness to everyday life.
2. Starting from the history and the background of geometry, we recognized the connections between mathematics and world history. In addition, in-depth understanding of one major historical figure in the evolution of geometry. With shapes and the terms of geometry.
3. We think geometry will continue to grow in various areas and will be used to create amazing technology. Geometry has so much to teach us. Geometry is very useful in daily life. Geometry has different forms. It is very useful to use. Geometry has been used by many famous mathematicians. Geometry has been used to create many new things.
4. Math's is incomplete without geometry.....it affects our life in all ways. Every day, each second.....geometry is around us.



GIRRAJ GOVT. COLLEGE (A), NIZAMABAD

(ID-College)

Re-accredited with ' B ' Grade by NAAC

ISO 9001:2015 Certified College

Principal: Dr. E Laxminarayana, M.A., Ph.D.,

To
Honourable Commissioner
Commissionerate of Collegiate Education
Nampally
Hyderabad

Dt 18-04-2022

Respected Sir,

Sub: GGC (A) Nizamabad – Jignasa student study project 2021- Submission of full length study projects selected for State Level Presentations- Reg
Ref: 1) CCETS, File No. CCE-AC/JIGN/1/2021-ACADEMIC CELL dated: 17/03/2022.

With reference to the subject cited, I hereby submit the Pdf copies of the full length study projects selected for the State Level presentation in various subjects from our college for your kind perusal. The details of the selected study projects are as follows

S.No	Subject	Name of the Project	Name of the Supervisor
01	English	<i>Mismatch between Spelling and Pronunciation: A Case study of Rural High School Students</i>	1.Dr.S.John Sukumar 2.B.Pratibha 3.S.Lavanya
02	Telugu	<i>Induru chindu yaksha ganam samskruthika varasatvam</i>	Dr. N. Amber singh
03	Hindi	<i>Sanchar madyamome hindi ka asthithve</i>	Dr.D. Hemalatha
04	Urdu	<i>A study on urdu news portals in telangana importance and effectso</i>	Mohd Abdul Rahman
05	Commerce	<i>"The New Way of Business with special reference to Food Booking APPs" (A Comprehensive Study on ZOMATO in Nizamabad)</i>	Dr. G. Linganna
06	Mathematics	<i>Applications of Geometry in Various Fields</i>	Dr.S.Jayaprasad
07	Botany	<i>Effect of Brassinosteroids on the Morphological</i>	Deepak Parmar
08	Zoology	<i>A Study and Survey On The Preservation Of Stem Cells In Nizamabad</i>	1.G.Srinivas Reddy 2. Dr.Rafiya Yasmeen
09	Bio-technology & Microbiology	<i>Global Dynamic Mapping of Omicron</i>	Shaikh Akbarpasha
10	Computer science	<i>G-tutor</i>	P.Vivekanand & M.Kiran Kumar

Thanking you sir

Signed by Dr. E Laxminarayana
Narayana

Date: 18-04-2022 13:09:48

Reason: Approved

Girraj Govt college(A) Nizamabad.
Department of Urdu

Urdu Jignasa Project
Study project Urdu

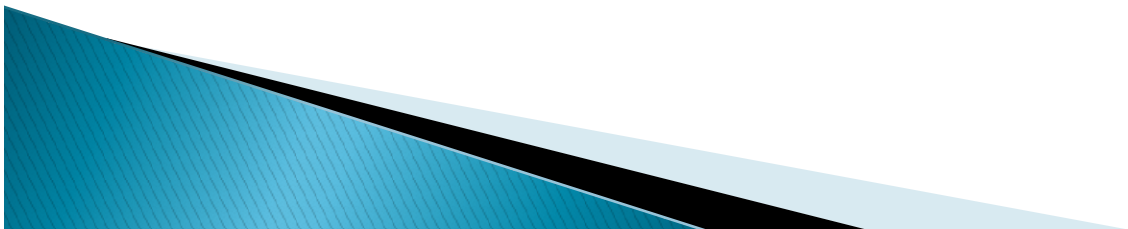
تلنگانہ میں اردو نیوز پورٹلس۔ اہمیت و اثرات ایک مطالعہ

► **Prepared by :**

1. Abdul Raqeeb
2. Maria Sameen
3. Muskan Tabassum
4. Shaik Muskan
5. Nasreen Firdouse
6. Afreen

Supervisor :

M. A. Rahman, HoD of Urdu Department



تلنگانہ میں اردو نیوز پورٹلس۔ اہمیت و اثرات ایک مطالعہ

کوویڈ-19 وبا کے بعد دنیا میں واقعات کی آگہی اور زندگی کے مختلف میدانوں میں کام و ترقی کے لئے انٹرنیٹ کی اہمیت دوچند ہو گئی 20 سال قبل خبروں کے لئے پرنٹ میڈیا اور کیبل ٹی وی واحد ذریعہ تھا لیکن ٹکنالوجی کی غیر معمولی ترقی نے۔ ویب میڈیا نے الیکٹرانک اور پرنٹ میڈیا کو پیچھے چھوڑ دیا۔ اور خبریں گھنٹوں کے بجائے منٹوں میں لوگوں تک پہنچنا شروع۔ دیگر زبانوں میں واٹس اپ، فیس بک اور ٹویٹر کے علاوہ خبروں کی ترسیل کے لئے ویب سائٹس کے صفحات استعمال شروع کیا گیا جنہیں نیوز نورٹل کا نام دیا گیا۔ نیوز پورٹل انٹرنٹ کے اس ویب سائٹ صفحات کے مجموعہ کو کہتے ہیں جس میں خبریں تحریر کی شکل میں پائی جاتی ہے اسکے علاوہ ادارے تجزیے اور دیگر موضوعات جیسے خواتین، ادب، ثقافت، تعلیم اور مذہب پر مضامین پائے جاتے ہیں۔

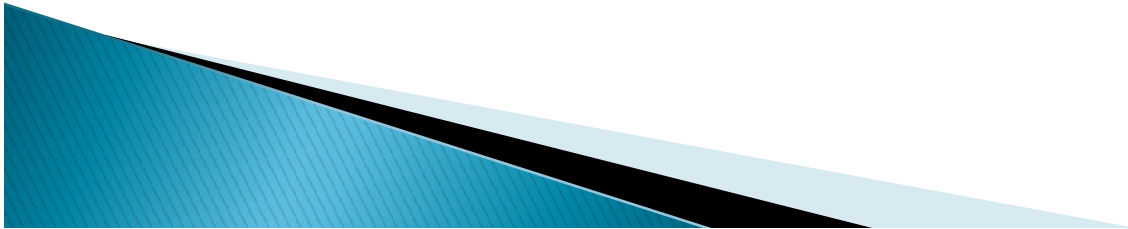
اسی طرح اردو میں بھی قومی اخبارات، نیوز چینلس کے علاوہ صحافیوں نے انفرادی طور پر پورٹلس کی ابتدائی کی ان میں بھرت آن لائن، ساحل آن لائن، ہرپل آن لائن دی وائر اردو وغیرہ قابل ذکر ہیں۔

پراجکٹ کی اہمیت و افادیت

ویب سائٹ پر موجود نیوز پورٹلس کی اہمیت و افادیت فی زمانہ اور زیادہ بڑھ گئی ہے۔ جہاں قومی صحافت صحیح خبر پہنچائے اور صحیح تجزیہ کرنے میں ناکام ہے ان پورٹلس کے ذریعہ صحیح خبر اور خبر کا صحیح تجزیہ پیش کیا جاسکتا ہے۔ یہ ویب سائٹس آسانی سے کم سرمائے سے شروع کئے جاسکتے ہیں دیگر زبانوں کے بہترین حواد کے اردو داں طبقہ تک پہنچا جاسکتا ہے راست طور پر عام افراد تک پہنچا جاسکتا ہے وہ مسائل جو قومی و ریاستی میڈیا میں جگہ نہیں پاتے انہیں یہاں زیر بحث لایا جاسکتا ہے۔ زمینی حقائق سے واقفیت میں یہ معاون ہیں۔

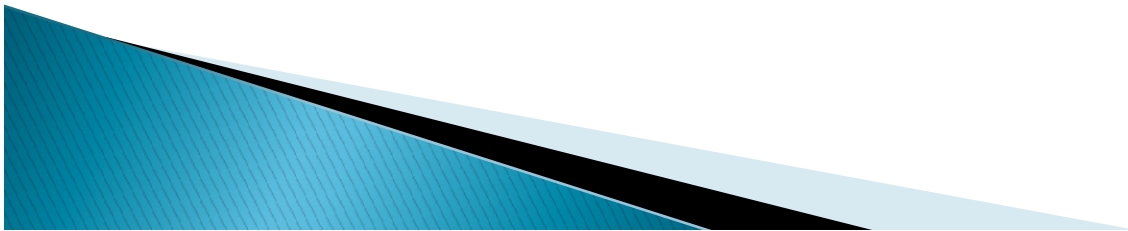
مقاصد مطالعہ

- ▶ اس مطالعہ کا اہم مقصد انٹرنیٹ پر موجود تلنگانہ سے جاری اردو نیوز پورٹلس کا جائزہ لینا اور یہ بتانا ہے کہ انکی کیفیت و کمیت کتنی ہے؟ طلباء اس مشاہدہ سے فائدہ اٹھا کر اس میدان کو مستقبل میں اپنا سکتے ہیں علمی سطح پر ان تجربات کو اور زیادہ وسیع کیا جاسکتا ہے۔ سماجی مسائل اور اسکے حل کے لئے صحیح رہنمائی کی جاسکتی ہے۔



طریقہ کار

اس پراجیکٹ میں انٹرنیٹ اور سوشل میڈیا پر دستیاب مواد کا مطالعہ کیا گیا اور اس مواد کی سوالات فون چھان بین کے ذریعہ تحقیق و تجزیہ کیا گیا اور تمام حاصل شدہ معلومات و حقائق سے نتیجہ اخذ کیا گیا۔



تلنگانہ سے جاری اردو نیوز پورٹلس

اس وقت تلنگانہ سے جاری اردو نیوز پورٹلس کی تعداد چھ ہے

(1) اردو لیکس ڈاٹ کام

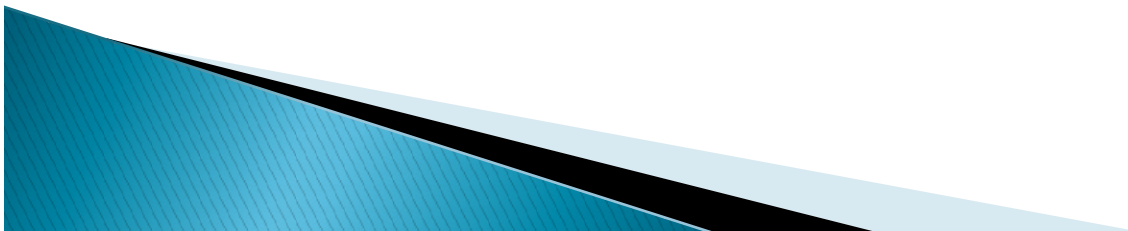
(2) اوداد عالم

(3) سحر نیوز

(4) تعمیر نیوز

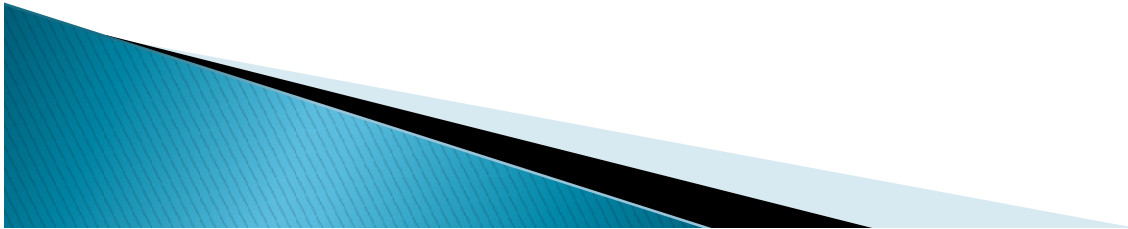
(5) عصر حاضر

(6) اردو دنیا ڈاٹ ان



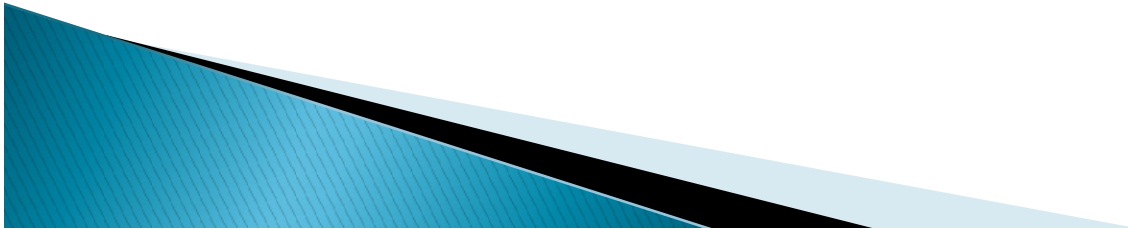
حقائق و تجزیہ

ان ویب سائٹس میں اداریے پائے نہیں جاتے جبکہ دی وائرڈ میں اداریہ موجود ہوتا ہے تجزیاتی اور علمی مضامین مزید شامل کئے جاسکتے ہے اہم شخصیات کا انٹرویو لیا جاسکتا ہے۔ اعداد و شمار سے نتیجہ نکالے جاسکتے ہیں۔ حکومت سے سوال کئے جاسکتے ہیں ان کمیٹیوں کو پورا کیا جائے تو اردو نیوز پورٹلس معیاری پورٹلس میں اپنا مقام بنا سکتے ہیں۔



خلاصہ

اس مطالعہ سے یہ معلوم ہوتا ہے کہ صحافت میں ذاتی نظر و فکر بوجہ تجربہ اور علم کے بعد ترقی پاتا ہے اردو نیوز پورٹلس میں یہ خلا پایا جاتا ہے جسے طلبا محنت و مشقت کے بعد اسے پورا کر سکتے ہیں اردو نے صحافت و کمپیوٹر ٹکنالوجی میں جو ترقی کی ہے وہ قابل ستائش ہے اسے اور زیادہ وسعت دی جاسکتی ہے اسکے لئے حکومت اور ادارے مل کر منصوبے بنائیں۔ آج بھی سوشل میڈیا میں اردو نیوز پڑھنے اور دیکھنے والے ہزاروں لوگ موجود ہیں اسی لئے اردو کے مستقبل سے مایوس ہونے کی کوئی وجہ نہیں ہے۔



شکر





JIGNASA
STUDENT STUDY PROJECT
ON



**A Study and Survey on the Preservation of Stem
Cells in Nizamabad District**

Submitted by:

- | | |
|---|--|
| 1. P.V.Laasya (20055005489006)
BtZC II Year | 4. P. Lahari (20055005445145)
BZC II Year |
| 2. J. Sreeja (20055005489005)
BtZC II Year | 5. K. Sathwika (20055005457017)
MZC II Year |
| 3. D.Praharsha (20055005489003)
BtZC II Year | |

Under the Guidance of:

1. G. Srinivas Reddy
Asst. Prof. of Zoology
2. Dr.Rafia Yasmeen
Asst. Prof. of Zoology

Submitted to:

Commissionerate of Collegiate Education, Hyderabad

DEPARTMENT OF ZOOLOGY
GIRRAJ GOVERNMENT COLLEGE (A), NIZAMABAD

CERTIFICATE BY SUPERVISOR(S)

This is To certify that the Student Study Project Entitled “ **A Study and Survey on the Preservation of Stem Cells in Nizamabad District**” is submitted to Commissionerate of Collegiate Education, Hyderabad for **JIGNASA** State Level Presentation in Zoology, is a record of work carried out by B.Z.C, Bt.Z.C &M.Z.C II Year students of Girraj Government College(A), Nizamabad under our supervision and guidance

SUPERVISOR(S)

G. Srinivas Reddy

Asst. Prof. of Zoology
DEPARTMENT OF ZOOLOGY
GIRRAJ GOVERNMENT COLLEGE (A),
NIZAMABAD

Dr.Rafia Yasmeen

Asst. Prof. of Zoology
DEPARTMENT OF ZOOLOGY
GIRRAJ GOVERNMENT COLLEGE (A),
NIZAMABAD

DECLARATION BY STUDENTS

We hereby declare that the Project entitled “ A Study and Survey on the Preservation of Stem Cells in Nizamabad District” has been prepared and submitted to Commissionerate of Collegiate Education, Hyderabad for **JIGNASA** State Level Presentation in Zoology, is bonafide work undertaken by us and is not submitted to any other Institution

Participants :

1. P.V.Laasya (20055005489006)
BtZC II Year
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INTRODUCTION

What are stem cells?

Stem cells are the master cells which act as the building blocks of our body. Just like the seeds of a plant gives rise to roots, stem, branches, leaves, flowers, fruits, these stem cells have the potential to develop into specialised cells such as blood cells, muscle cells, bone cells etc., of our body.

Where do these stem cells come from?

Stem cells are found in both embryonic and adult stem organisms, but they have slightly different properties in each.

Where these blood stem cells are found?

Stem cells are found and retrieved from various parts of the body such as the peripheral blood, umbilical cord blood and bone marrow. - Among these sources, UMBILICAL CORD BLOOD is considered to be a ready source of stem cells. These stem cells are extracted from a cord blood and are used efficiently in the treatment of blood related conditions such as Beta Thalassemia Major, Leukaemia, Lymphoma, Neuroblastoma, Sickle Cell Disease, Aplastic Anaemia and so on....

How do these stem cells work?

Stem cells have the ability to replace effected cells and repair the effected parts. Thus, restoring the normal functions of our body.

Where these stem cells are used?

Stem cells are currently used in modern day medicine & can help to treat 80+ blood disorders. - Over 500 human clinical trials for conditions such as Autism, Cerebral Palsy, Stroke, Diabetes is currently Underway increasing the scope of future treatments.

As stem cells are capable of dividing and renewing themselves for long period of time, the HUMAN UMBILICAL CORD BLOOD STEM CELLS has become a tissue of great and increasing interest in regenerative medicine.

AIMS & OBJECTIVES

- To know briefly about stem cells
- A visit to local maternity hospitals
- To collect data from various local maternity hospitals
- To know whether people are aware of preserving stem cells or not
- To acknowledge the growth of stem cells as a “Regenerative Medicine”

REVIEW OF LITERATURE

1. Stem cells were first identified by Ernest Mc Culloch & James Till and later confirmed by Andrew John Becker & Liou Siminovitch in the 19th century.
2. The first therapy using stem cells was a bone marrow transplant performed by George Mathe in 1958.
3. In 2011, the first case recorded was that of the use of stem cells to heal injuries in a wild animal.
4. Apart from blood stem cells, there are clinical trials going on embryonic stem cells which can increase the life expectancy rate with it.

MATERIAL & METHODOLOGY

As we collected primary data from various local maternity hospitals by interacting and interviewing the Gynaecologists. In the visit of various local maternity hospitals, we came across the information regarding Stem Cell and it's Preservation as follows:-

During this survey, we noticed that there were no Stem Cell Preservation Banks in our locality i.e., in Nizamabad District.

As there were no preservation banks in our locality, a few couples who were aware and being responsible for their child's Umbilical Cord Blood Stem Cells Preservation. This preservation is done by a private stem cell banks i.e., community/public banking.

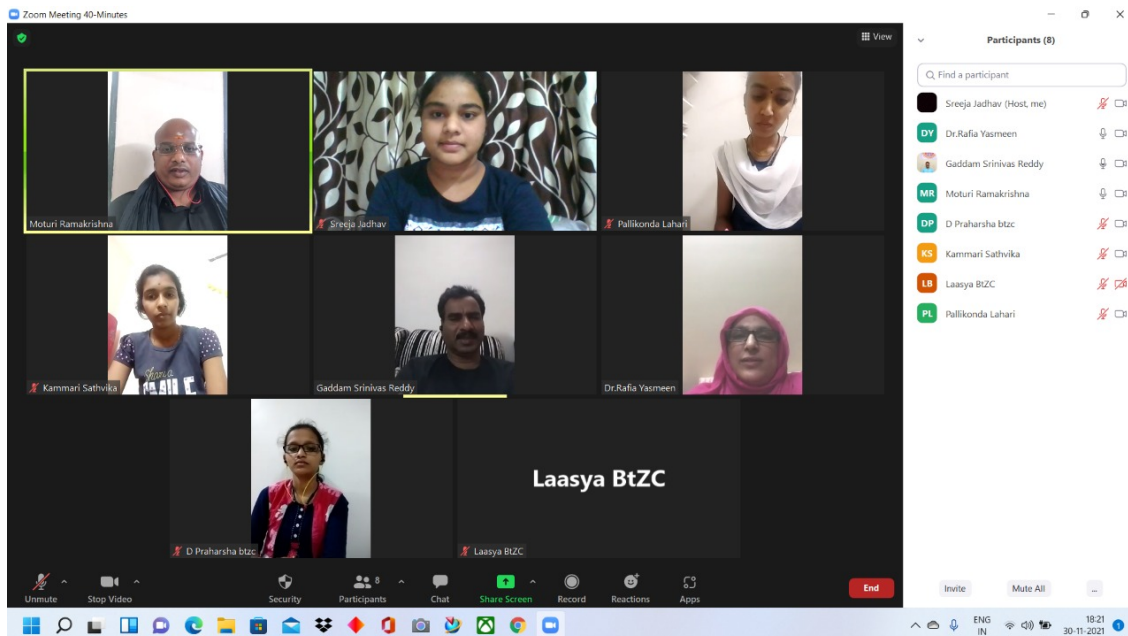
The secondary data collection was done by scheduling a zoom meeting and interacting with a private stem cell bank marketer, so as to know about the sample collection, transportation and preservation of the stem cells in the available community banks.



Interaction with the gynaecologist of local maternity hospital

QUESTIONS ASKED TO THE GYNAECOLOGIST

- How many gestated women are aware of preserving stem cells?
- How many people are actually preserving them?
- How do you preserve stem cells?
- What might be the reason for not preserving stem cells?
- How do you bring awareness among people regarding stem cell preservation?



Interaction with the private stem cell marketer

Amongst all the sources available, UMBILICAL CORD BLOOD STEM CELLS is considered to be a ready source of stem cells. It can be preserved at birth and used for treatments when required.



As these stem cells required preservation, STEM CELL BANKS come on stream. We can get matching stem cells from a PUBLIC / COMMUNITY STEM CELL BANKS, where frozen Umbilical Cord Blood Stem Cells from unrelated donor are available at a cost as given below



Choose From Our Pocket-Friendly Payment Plans

Annual Storage Plan

₹ 19,990*
Testing and Processing Fee
₹ 4,000^
Annual Storage Fee payable every year

Long Term Plans

Upgrade to Long Term Plans by paying the upgrade price at the time of enrolment or through e-NACH, payable 6 months after EDD. #T&C apply.

21 Years Prepaid Plan
Upgrade Price ₹ 30,000

75 Years Prepaid Plan
Upgrade Price ₹ 45,000

Note: Annual Storage Fee not payable for Long Term Plans



Pricing & Payment Terms:

- * Sample collection charges payable extra as applicable basis the delivering hospital
- ^ Payable every year on the child's birthday
- * Cheque subject to realisation. In case this amount is not honoured the Annual Storage Fee will become applicable.



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Pay through Net Banking / Credit Card / Debit Card / Range of EMI options available. Speak to our representative or visit our website www.lifecell.in for details.

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₹ 19,990 Onwards

Genome-Scope

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₹ 20,000

GenoCord

The Ultimate Preventive Healthcare Package

Initial Fees
₹ 39,990# Onwards



One Time Payment
₹ 12,000 per family member

To Know More Scan Me



LC/BIO/FP-REG/ENG/0421/001/V004

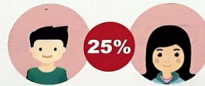
*GenoCord offers Genome-Scope with each of the Stem Cell banking storage plans at attractive prices.
No Cost EMI options available

In order to find a matching donor for stem cell transplantation, HLA Typing is required. HLA Typing refers to Human Leukocyte Antigen – these are special proteins that form HLA Markers. These markers help the immune system identify which cells belong to you. 6 out of 8 HLA Markers i.e., 75% should be match between the patient and the donor is sufficient for cord blood stem cell transplant

Challenges Of Finding A Matching Donor In Our Own Family



1/2 of your HLA markers are inherited from father and 1/2 from mother, so a match is difficult for any of the parents.



Siblings have 25% chance of being a full match.



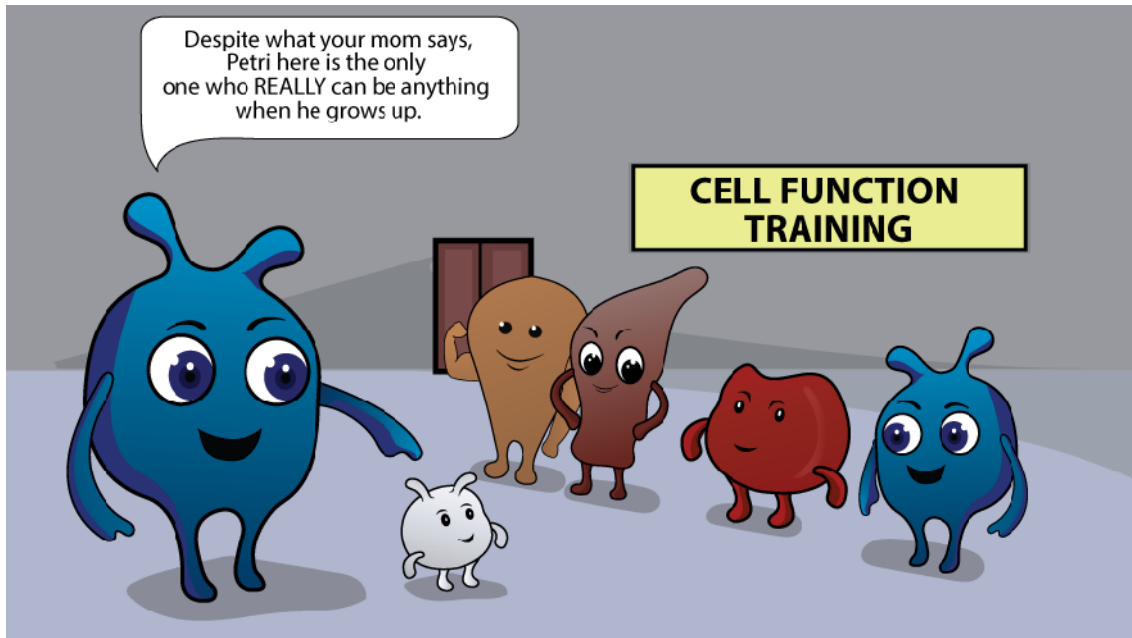
70% of Indian patients DO NOT find a match in their family.



TO KNOW MORE SCAN ME

STEM CELLS ARE THE NEED OF THE HOUR!

- Stem cells are cells with the potential to develop into different types of cells in the body. - Stem cells are cells with the potential to develop into many different types of cells in the body. They serve as a repair system.



CASE STUDIES



We Believe In Keeping Our Promise!

A 15-year old girl from Surat diagnosed with Thalassemia Major received INR 17,54,664 from LifeCell towards her lifesaving peripheral blood stem cell transplant.

Printed from
THE TIMES OF INDIA

His sister's keeper: Brother's blood is boon of life



CASE STUDY: FAMILY MATTERS

- Nitya Dua, 14, is like any other teenager, but not so long ago, she needed two units of blood every month to treat her thalassaemia.
- Her father, Mohit, a businessman from Ghaziabad, read about bone-marrow transplants being used to treat thalassaemia, and when his son was born in 2009, he had the infant's cord blood banked.
- In 2012, doctors performed a bone marrow transplant using the cord blood and bone marrow donated by Nitya's brother.
- "The cord blood wasn't enough on its own," Mohit says.
- Would he recommend that people to get cord blood banked. "How can I not? It did help," he says.
- Nitya is now cured and is focussing on her class 9 studies.



MYTHS v/s FACTS –

Embryonic Stem Cell research uses aborted foetuses.

There is no connection between abortion and human embryonic stem cells. By the time a human embryo has implanted in the uterus, its cells have specialized to the point where they can no longer be used for the derivation of embryonic stem cell lines.

The embryos used to derive stem cells are created in dishes in fertility clinics. They are never transferred into the human body and are donated for medical research only when parents decide they are no longer needed for fertility treatment

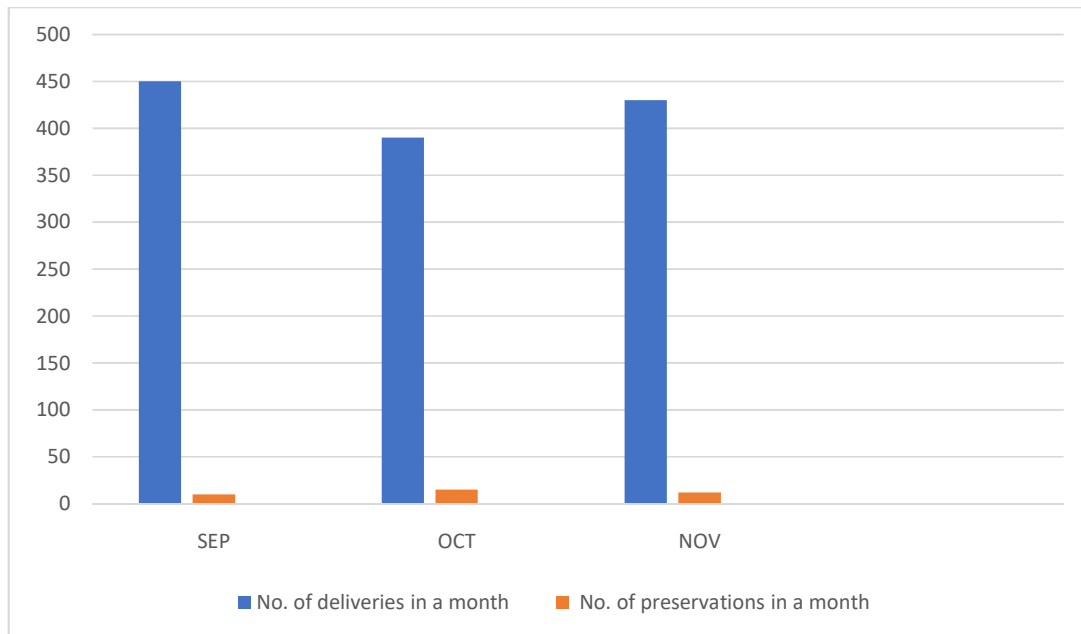
Religious people oppose stem cell research.

Some religious people are in opposition. Different religious groups hold a wide variety of opinions on embryonic stem cell research. But many opponents, including some religious leaders, believe that stem cell research raises the same moral issues as abortion.

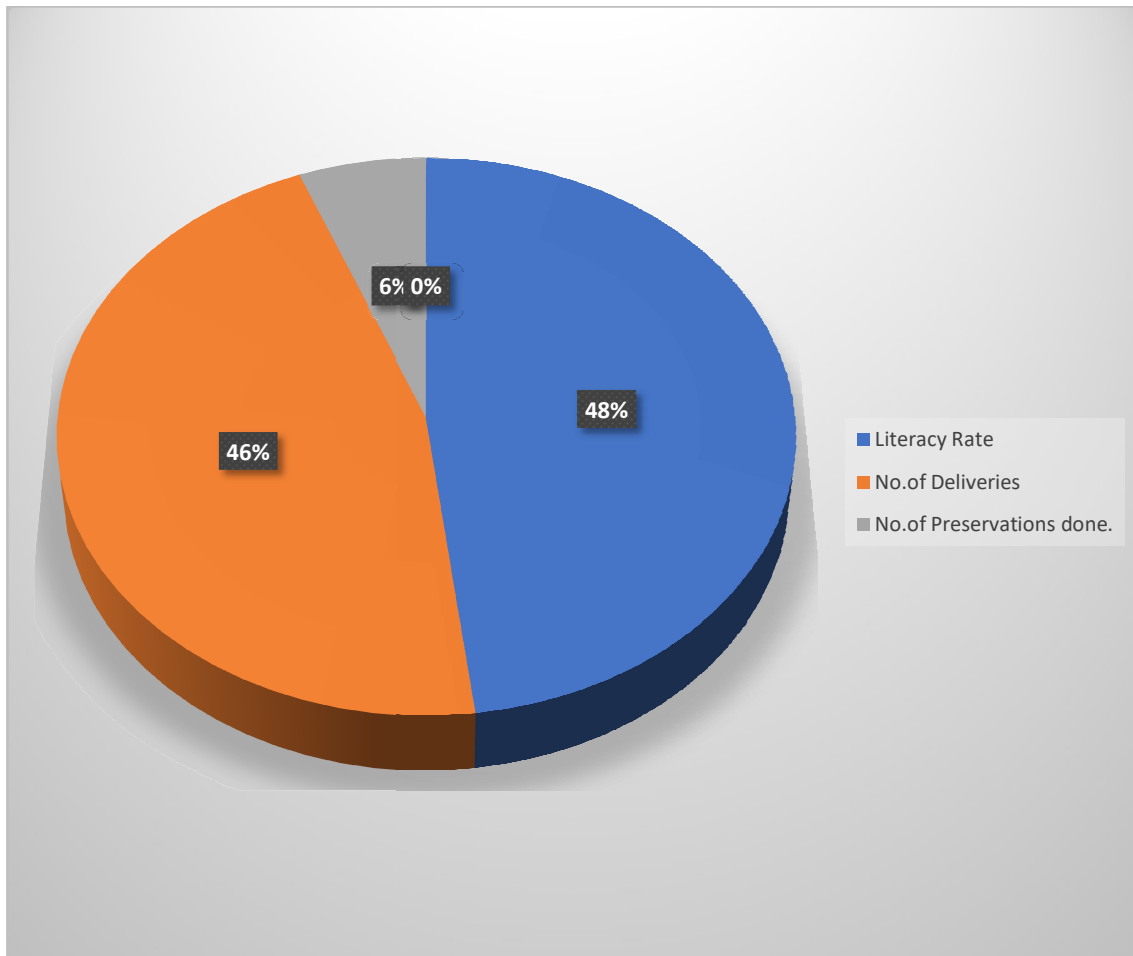
RESULTS

In our 3 months survey on the preservation of stem cells, as we visited various hospitals we came to know that, though there were 1000's of gestated women giving birth to their younger ones not even 25% of them are preserving their Umbilical Cord Blood Stem Cells.

The histogram data showing the No. of deliveries & No. of stem cells preservation in a month in a hospital.



Despite of high literacy rate and knowledge of preserving stem cells, only few people who actually are preserving them.



The reasons for not preserving their child's umbilical cord blood stem cells found in the study were as follows:

- Financial Status
- Misconceptions
- Superstitions
- Negligence
- Myths
- Religious Beliefs

CONCLUSION

- After several decades of experiments, stem cell therapy is becoming a magnificent game changer for medicine.
- With each experiment, the capabilities of stem cells are growing although there are still many obstacles to overcome.
- With stem cell therapy and all its regenerative benefits, we are better able to prolong human life than any time in history.
- 1 in 217 will undergo a stem cell transplant by the age of 70 years.
- In India about 1 in 100 children are diagnosed with Autism.
- In India, about 3 children per 100 live births are diagnosed with Cerebral Palsy
- Annually about 1,20,000 Indians are diagnosed with Blood Cancers and another 10,000 children are born with Thalassemia Major.
- All these diseases and disorders can be cured with one and only stem cells.

“STEM CELL RESEARCH CAN REVOLUTIONIZE MEDICINE, ANYTHING SINCE ANTIOTICS.”

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