


NAGARJUNA GOVT. COLLEGE (A)


IIT BOMBAY SPOKEN TUTORIAL

ACADEMIC YEAR: 2021-22


Organized by




NODAL
TELANGANA SKILLS & KNOWLEDGE CENTRE
TS KC
Telangana Skills & Knowledge Centre




CREATING OPPORTUNITIES




DEVELOPING SKILLS



SUCCESS




UNLEASHING POTENTIAL



NAGARJUNA GOVERNMENT COLLEGE (A)

Re-Accredited by NAAC with 'A' Grade
Affiliated to Mahatma Gandhi University



NALGONDA



CERTIFICATE

COURSE

The Spoken Tutorial project

- *Self explanatory - uses simple language
- *Audio-video - uses multisensory approach
- *Small duration - has better retention
- *Learner-centered - learn at your own pace
- *Learning by doing - learn and practice simultaneously
- *Empowerment - learn a new FOSS

Target Group

- *Students - High School and College
- *Working professional - Software users, developers and trainers
- *Research scholars
- *Community at large

Workshops

The Spoken Tutorial Projects Team conducts workshops on Scilab and other FOSS using Spoken tutorials and gives certificates to those who pass an online test.

For more details, please write to
contact@spoken-tutorial.org

Scilab is a major component of the FOSSEE (Free and Open Source Software for Science and Engineering Education) project, funded by the National Mission on Education through Information and Communication Technology, launched by the Ministry of Human Resource Development, Government of India

For Announcements:
<http://scilab.in/cgi-bin/mailman/listinfo/announce>

For Discussions:
<http://scilabin/cgi-bin/mailman/listinfo/discuss>

For more information contact us at:
contact@scilab.in



IIT Bombay

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Scilab is a cross-platform, free (free of cost and free to distribute and modify) and open source numerical computational package.
<http://scilab.in>
<http://scilab.org>
<http://fossee.in>

National Mission on Education through Information and Communication Technology (NMEICT)
www.sakshat.ac.in

Funded by MHRD, Government of India

<http://spoken-tutorial.org>

Scilab is a cross-platform, free and open source numerical computational package and an easy-to-use, interpreted, high-level, matrix based programming language with a versatile inbuilt mathematical library.

It can be used for

- Graphing and data visualization
- Control
- Signal and Image processing
- Statistical analysis
- Fluid dynamics
- Linear algebra
- Numerical optimization
- Modeling and simulation of dynamical systems

Its capabilities can be extended through the use of readily available or custom made toolboxes where the extensions can be written in ubiquitous lower level languages like Fortran and C.

Xcos Xcos is a graphical dynamical system

modeler and simulator. With this, the user can create block diagrams to model and simulate the dynamics of sophisticated dynamical systems and compile such models into executable code. Xcos is used for signal processing, systems control, queuing systems, and to study physical and biological systems. It can be used to model and simulate mechanical systems, hydraulic systems, electrical systems, chemical systems, biological systems and many more.

Lab Migration Project

Is your lab still paying hefty amounts for mathematical tools which can be replaced by a nifty, free-of-cost software called Scilab? Then we suggest its the time to switch to the world of free knowledge and also to grace your annual balance-sheets significantly.

Please get in touch with us at contact@scilab.in and we will help you.

Please allow us to assist your lab in shifting to Scilab.

http://scilab.in/lab_migration/proposal

For more information please visit

http://scilab.in/Lab_Migration_Project

The Textbook Companion Project

The Textbook Companion Project aims to port worked out examples (and optionally, select exercise problems) from standard textbooks using an open source software system, such as Scilab. In the following writeup, the word Scilab can be replaced by any other open source software as well. Any "standard" text-book can be used for this purpose. It will be referred to simply as textbook.

What is the objective of this exercise?

* To make it easy for the users of the textbook to start using Scilab

* To improve the documentation available for Scilab

For more details please visit http://scilab.in/Textbook_Companion_Project

Hardware Project

SBHS: Single Board Heater System (SBHS) is a lab-in-a box setup which is primarily used for teaching/studying the theory of control systems. The setup has been designed to cater the needs of undergraduate and postgraduate control courses. You can perform various control experiments on it - from tests as simple as Step Tests to complicated closed loop tests! This setup is also available for remote access under Virtual labs project

<http://vlabs.iitb.ac.in/sbhs/index.php>

<http://fossee.in/moodle/>

Data Acquisition System: Project aims to setup virtual labs based on standard DAQ cards available. (eg PCI 1711 Advantech DAQ card). Open source drivers ,tools and libraries are available from COMEDI (linux control and measurement device interface). HART toolbox provides interface between comedi and scilab to access ADC and DAC functionality of DAQ card.

<http://comedi.org/>

<http://hart.sourceforge.net/doc.html>

Workshops

We propose to organise Level-0 Scilab workshops using spoken tutorials of ten minutes each. We believe that the extent of learning possible in the above mentioned scheme would be better than a usual workshop of much longer time duration. Possibly, the scheme proposed here could be considered as equivalent to a one week typical workshop. Hence it may be possible to give a certificate to this effect. For more details please visit: <http://scilab.in/wiki/index.php/Workshops> GNU Radio GNURadio is an open source Software Defined Radio (SDR) that was designed to convert all hardware problems into software problems. GNURadio package is provided with a complete HDTV transmitter and re-ceiver, a spectrum analyzer, an oscillo-scope, a multichannel receiver and a wide collection of modulators and demodulators. Its applications are primarily written using the Python programming language, while the supplied, performance-critical signal processing path is implemented in C++ using processor floating point extensions where available. For more details please visit <http://spoken-tutorial.org/script/index.php/GNURadio> The Links Project Links Project provides a mechanism to list all the available scilab documents and to rank them. This project allows community participation for both listing and ranking. For more information, please visit <http://scilab.in/links>

NAGARJUNA GOVT. COLLEGE (A) NALGONDA
TELANGANA SKILLS & KNOWLEDGE CENTRE

Scilab Certificate Course

in collaboration with

IIT Bombay Spoken Tutorial

Report:

Telangana Skills & Knowledge Centre (TSKC) conducted a certificate course on Scilab from 01-03-2022. In this course 35 MPG III Year students were enrolled and successfully completed their course.

Course outcome:

Scilab is a cross-platform, free and open source numerical computational package and easy to use, interpreted, high level, matrix based programming language with a versatile inbuilt mathematical library. By using this course student can able to understand the basic concepts of programming and able to understand how to apply SCILAB code for simulation/implementation for the verification of mathematical functions in Mechanical Engineering. Implement simple mathematical functions/ equations in numerical computation environment such as SCILAB. Interpret and visualize simple mathematical functions and operations by using plots.

**NAGARJUNA GOVT. COLLEGE (A) NALGONDA
TELANGANA SKILL & KNOWLEDGE CENTRE**

Date: 23-02-2022


NOTICE

All the B.Sc, B.Com & B.A students are hereby informed that, who are not registered in the IIT Bombay Spoken Tutorial, register immediately by scanning the QR Code



Note:

1. It is a free of cost & remote learning training
2. After completion of course you will get a certificate from IIT Bombay Spoken Tutorial
3. Course will be allotted and intimate on 28-02-2022
4. Already registered student no need to register again


TSKC Co-Ordinator (Nodal)
N.G. College (A), NALGONDA

NAGARJUNA GOVT. COLLEGE(A) NALGONDA**TELANGANA SKILL & KNOWLEDGE CENTRE****IIT BOMBAY SPOKEN TUTORIAL****Scilab- Certificate Course-Student Enrollment**

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NAGARJUNA GOVT. COLLEGE (A) NALGONDA TELANGANA SKILL & KNOWLEDGE CENTRE


Date: 28-02-2022

NOTICE

All the below mentioned groups of IIT Bombay Spoken Tutorial registered students hereby informed that, TSKC allotted your course for the Academic year 2021-22 shown below. In this regard instructed that complete your course before 31-03-2022.

Sl.No	Group	Year	Course Alloted	Duration
1	BCOM CA	III	C and Cpp	1 Month
2	BZCS	III		
3	MPCS	II		
4	BZC	III	Jmol Application	
5	MPC	III		
6	BBC	III		
7	MZC	III		
8	MBC	III		
9	BTZC	III		
10	MSCS	III	R	
11	MPG	III	Scilab	

Note: Any doubts contact @ TSKC Lab, NG College(A) Nalgonda


TSKC Co-Ordinator (Nodal)
N.G. College (A), NALGONDA



1 Online / Offline content

1. The online content of Spoken Tutorials can be accessed from :
<https://spoken-tutorial.org/tutorial-search/>
2. You can also download the Spoken Tutorials for offline learning from :
<https://spoken-tutorial.org/cdcontent/>
3. From this link download the FOSS categories in the language you wish to learn.
4. The Spoken Tutorial content will be downloaded as a zip file on your machine.
5. Extract the contents of the zip file & access them.

2 The procedure to practise

1. You have been given a set of spoken tutorials and files.
2. You will typically do one tutorial at a time.
3. You may listen to a spoken tutorial and reproduce all the steps shown in the video.
4. If you find it difficult to do the above, you may consider listening to the *whole* tutorial once and then practise during the second hearing.

3 Side-by-Side learning video (only for offline content)

1. Go to the folder named `spoken` on your machine.
2. Locate `index.html` file.
3. Open this file with either `Firefox` or `Chrome` web browser.
4. The Side-by-Side learning video will appear. This video will explain how to learn from the spoken tutorials.
5. Click on the Play button to play the video.
6. Note all the steps explained therein.

4 Scilab

1. Click on "Select FOSS" or "All FOSS Categories" drop-down and choose "Scilab".
2. Click on "Select Language" or "All Languages" drop-down and choose the language (English, Hindi, Marathi ...) in which you wish to learn.
3. Click on "Submit" button.
4. You will see a list of tutorials based on your selection.
5. Start with the first tutorial in the displayed list.

5 First 4 Tutorials

1. The first 4 tutorials in the displayed list, explain about Scilab, its benefits, how to learn Scilab from spoken tutorials, `Scilab Textbook Companion` and `Scilab Lab Migration` activities
2. It is recommended that you view these 4 tutorials one-by-one for a deeper understanding of Scilab and FOSSEE project's Scilab activities.
3. To view the tutorial, click on the Play icon which is located in the player.

6 Fifth Tutorial: Installing

1. Locate the topic "Installing" and click on it.
2. To view the tutorial, click on the Play icon which is located in the player.
3. Refer to the `Installation Sheet` for additional instructions on installing Scilab
4. Skip this tutorial if you already installed Scilab.

7 Sixth Tutorial: Getting Started

1. Locate the topic "Getting Started" and click on it.
2. To view the tutorial, click on the Play icon which is located in the player.
3. Adjust the size of the browser in such a way that you are able to practise in parallel.
4. Play-pause-practise all the commands shown in the tutorial.
5. The `Pre-requisite` will be visible below the player (only for Online contents).
6. `Outline`, `Assignments`, `Code Files` and `Slides` are available below the player.

7.1 Open Scilab on Linux OS

- (a) The Linux users should follow the instructions given in the `Scilab Installation Sheet`

7.2 Open Scilab on Windows OS

- (a) To open "Scilab" on Windows OS, double click on "Scilab" shortcut icon.
- (b) Else click on `Start>> All programs>> Scilab>>Scilab Console .`
- (c) This will open the "Scilab" console window.
7. At 5:34, pause the tutorial.
8. The `diary()` command stores the Scilab session in a file, **after** you issue the command and **not before that**.

- At 5:34 - Change the directory to a destination where you have write access, preferably to a folder on the Desktop.

7.3 Instructions to practise

- Create a folder on the "Desktop" with your "Name-RollNo-Component". (Eg. "vin-04-scilab").
- Give a unique name to the files you save, so as to recognize it next time. (Eg. "Practise-1-vin").
- Remember to save all your work in your folder.
- This will ensure that your files don't get overwritten by someone else.
- Save your work from time to time, instead of saving it at the end of the tutorial.

7.4 Common instructions for Assignments

- Attempt the Assignments as instructed in the tutorial.
- Save your work in your folder.

7.5 Common instructions to use Code files

- Click on the link "Code files" located near the player and save it in your folder.
- Extract the downloaded zip file.
- You will see all the code/source files used in the particular tutorial.
- Use these files as per the instructions given in the particular tutorial.

- Once each tutorial is complete, choose the next tutorial from the playlist which is located near the player.
- Follow all the above instructions, till you complete all the tutorials in the series.

8 Eleventh Tutorial: Scripts and Functions

- Locate the topic "Scripts and Functions" and click on it.
- At 2:20 The video shows Load into Scilab. This is now changed to File with Echo
- At 3:25 pause the tutorial.

- Type `pwd` to check the present working directory.
- Change the directory using `Select a Directory` shortcut icon, to the directory where you have saved the `helloworld.sce` file before using the `exec` command.
- Now resume the tutorial.

9 Thirteenth, Twenty-seventh, Twenty-eighth Tutorials: Xcos Introduction, Calling User defined functions in Xcos & Simulating a PID Controller using Xcos

For all Xcos tutorials, to add grids, legends, titles and borders, please type the following in the Scilab Console, after you have obtained the plot:

- For grid, type: `xgrid`
- For legend, type (if you have plotted two lines):
`hl=legend(["Line1 title", "Line2 title"]);`
- For title, type: `xtitle("Title of graph");`
- For borders, type: `a = gca(); a.box = "on";`

10 Sixteenth and Nineteenth Tutorial: Integration, Linear equations Iterative Methods

- These tutorials must be practised using Scilab 5.5.2

11 Twenty-fourth Tutorial: Digital Signal Processing

- Pause the tutorial at 3:28
- The video shows how to execute `dft` function. This function has been deprecated.
- Instead of typing `dft` type `fft`.
- This will cause the 3rd term to NOT have the imaginary component, which has a magnitude of 10^{-16}
- Resume the tutorial.

12 Twenty-fifth Tutorial: Control Systems

- At 11:58 The video shows a unit circle. In Scilab version 5.5.2 the unit circle is replaced by a line, which defines stability of the system.



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Certificate of Participation

This is to certify that **AKULA ASHOK** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **Scilab** were covered in the training.

March 2nd 2022

Prof. Kannan M Moudgalya
IIT Bombay



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This is to certify that **AVULA MAMATHA** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

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This is to certify that **BUTHAM USHARANI** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

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This is to certify that **CHILUKURI LATHA** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

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This is to certify that **MAROJU AMULYA** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

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Certificate of Participation

This is to certify that **PAYYAVULA MOUNIKA** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

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Certificate of Participation

This is to certify that **KOMMU CHARAN KUMAR** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

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This is to certify that **AKHIL KUMMARI** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

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This is to certify that **MUDIGONDA VAISHNAVI** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

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This is to certify that **NAMA SHIVA SHANKAR** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

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This is to certify that **ANANTHA ANUPAMA** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

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Certificate of Participation

This is to certify that **MADAGONI NAVEEN** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **Scilab** were covered in the training.

March 2nd 2022

Prof. Kannan M Moudgalya
IIT Bombay



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Certificate of Participation

This is to certify that **MAILA PRAVEEN** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **Scilab** were covered in the training.

March 2nd 2022

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Certificate of Participation

This is to certify that **PANDULA SHIRISHA** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **Scilab** were covered in the training.

March 2nd 2022

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Certificate of Participation

This is to certify that **RAVIRALA GOPI** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **Scilab** were covered in the training.

March 2nd 2022

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Certificate of Participation

This is to certify that **SAPAVATH SAIDA** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **Scilab** were covered in the training.

March 2nd 2022

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Certificate of Participation

This is to certify that **SUDAMALLA SURESH KUMAR** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **Scilab** were covered in the training.

March 2nd 2022

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Certificate of Participation

This is to certify that **VADITHYA RAJENDER** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **Scilab** were covered in the training.

March 2nd 2022

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Certificate of Participation

This is to certify that **VARUN MACHARLA** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **Scilab** were covered in the training.

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Certificate of Participation

This is to certify that **PILLI PAVANI** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **Scilab** were covered in the training.

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Certificate of Participation

This is to certify that **SHIVARATHRI VENKATA VARA PRASAD** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **Scilab** were covered in the training.

March 2nd 2022

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Certificate of Participation

This is to certify that **VADDE DIVYA** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **Scilab** were covered in the training.

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Certificate of Participation

This is to certify that **YAMPALLA HIMA** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **Scilab** were covered in the training.

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Certificate of Participation

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A comprehensive set of topics pertaining to **Scilab** were covered in the training.

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Certificate of Participation

This is to certify that **ABBAGONI SURENDER** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **Scilab** were covered in the training.

March 2nd 2022

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Certificate of Participation

This is to certify that **GADAGOTI NAVYA** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **Scilab** were covered in the training.

March 2nd 2022

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Certificate of Participation

This is to certify that **N THULASI** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **Scilab** were covered in the training.

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Certificate of Participation

This is to certify that **VADDEPALLY ASHWINI** participated in the **Scilab** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **Scilab** were covered in the training.

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