Government Degree College Khairatabad, Hyderabad

Academic Year 2021-22

Record of
Certificate course

Department of Computer Science & Applications

GOVERNMENTDEGREECOLLEGE-KHAIRATABAD

Department of Computer Science and Applications
Academic Year 2021-22

Department Meeting

Date: 27.04.2022

All the faculty members of the department have attended a meeting on 27.04.2022 in the department staff room Dr.S.Srinivasu, in-charge, department of Computer Science and Applications has presided the meeting. All other faculty members were present the meeting and following are the minutes discussed in the meeting.

Agenda

- To discuss on introduction of A **Certificate course on "R-Programming"**.
- To prepare syllabus for the certificate course
- To discuss any other matter, with the permission of the chair.

Discussions & Resolutions:

- All the participants of the meeting were thoroughly discussed the possibilities of introduction of the proposed certificate course in the department.
- Members also resolved unanimously resolved to start the course from 09.05.2022 to 25.05.2022.
- It was also resolved to circulate this information among all the students of non-computer and encourage them for good enrollment.
- And also resolved that not to collect any fee from the students for attending the course.
- All the department faculty are take classes of this certificate course.

A.Y.2021-22

Circular

Date: 02.05.2022

Department of Computer Science and Applications is going to organize **Certificate course in "R-Programming"** from **09.05.2022 to 25.05.2022**.

Interested staff members and students can enroll into this certificate course and further details contact the Department of Computer Science and Applications.

PRINCIPAL
GOVERNMENT DEGREE COLLEGE
& HAIRATABAD. HYDERABAD

Syllabus

1. **R – OVERVIEW:** Evolution of R, Features of R
2. **R – ENVIRONMENT SETUP**: Try it Option Online, Local Environment Setup.
3. **R – BASIC SYNTAX** :R Command Prompt, R Script File, Comments
4. **R – DATA TYPES**: Vectors, Lists, Matrices, Arrays, Factors, Data Frames
5. **R – VARIABLES**: Variable Assignment, Data Type of a Variable, Finding Variables, Deleting Variables
6. **R – OPERATORS:** Arithmetic Operators, Relational Operators, Logical Operators, Assignment Operators, Miscellaneous Operators.

7. **R – DECISION MAKING**:R - If Statement, R – If...Else Statement, The if...else if...else Statement ,R – Switch Statement
8. **R – LOOPS**:R - Repeat Loop, R - While Loop, R – For Loop, Loop Control Statements,   R – Break Statement ,R – Next Statement.
9. **R – FUNCTION:** Function Definition, Function Components, Built-in Function, User-defined Function, Calling a Function, Lazy Evaluation of Function
10. **R – STRINGS:** Rules Applied in String Construction, String Manipulation
11. **R – VECTORS**: Vector Creation, Accessing Vector Elements, Vector Manipulation.
12. **R – LISTS:** Creating a List, Naming List Elements, Accessing List Elements, Manipulating List Element, Merging Lists, Converting List to Vector
13. **R – MATRICES**: Accessing Elements of a Matrix, Matrix Computations.
14. **R – ARRAYS:** Naming Columns and Rows, Accessing Array Elements, Manipulating Array Elements, Calculations Across Array Elements.
15. **R – FACTORS**: Factors in Data Frame, Changing the Order of Levels, Generating Factor Levels
16. **R – DATA FRAMES**: Extract Data from Data Frame, Expand Data Frame
17. **R – CSV FILES**: Getting and Setting the Working Directory, Input as CSV File, Reading a CSV File, Analyzing the CSV File, Writing into a CSV File.
18. **R – EXCEL FILE**:Install xlsx Package, Verify and Load the "xlsx" Package, Input as xlsx File, Reading the Excel File.
19. **R – BINARY FILES**: Writing the Binary File, Reading the Binary File
20. **R – DATABASES:** R MySQL Package, Connecting R to MySql, Querying the Tables, Query with Filter Clause, Updating Rows in the Tables, Inserting Data into the Tables, Creating Tables in MySql, Dropping Tables in MySql.

Milestones in R

A list of changes in R releases is maintained in various "news" files at CRAN.

Release	Date	Description
0.16		This is the last alpha version developed primarily by Ihaka and Gentleman. Much of the basic functionality from the "White Book" (see S history) was implemented. The mailing lists commenced on 1 April 1997.
0.49	1997-04-23	This is the oldest source release which is currently available on CRAN. CRAN is started on this date, with 3 mirrors that initially hosted 12 packages. Alpha versions of R for Microsoft Windows and the classic Mac OS are made available shortly after this version.
0.60	1997-12-05	R becomes an official part of the GNU Project. The code is hosted and maintained on CVS.
0.65.1	1999-10-07	First versions of update.packages and install.packages functions for downloading and installing packages from CRAN.[64]
1.0	2000-02-29	Considered by its developers stable enough for production use.
1.4	2001-12-19	S4 methods are introduced and the first version for Mac OS X is made available soon after.
1.8	2003-10-08	Introduced a flexible condition handling mechanism for signalling and handling condition objects.
2.0	2004-10-04	Introduced lazy loading, which enables fast loading of data with minimal expense of system memory.
2.1	2005-04-18	Support for UTF-8 encoding, and the beginnings of internationalization and localization for different languages.
2.6.2	2008-02-08	Last version to support Windows 95, 98, Me and NT 4.0
2.11	2010-04-22	Support for Windows 64-bit systems.
2.12.2	2011-02-25	Last version to support Windows 2000
2.13	2011-04-14	Adding a new compiler function that allows speeding up functions by converting them to bytecode.
2.14	2011-10-31	Added mandatory namespaces for packages. Added a new parallel package.
2.15	2012-03-30	New load balancing functions. Improved serialisation speed for long vectors.
3.0.0	2013-04-03	Support for numeric index values 2^{31} and larger on 64-bit systems.
3.3.3	2017-03-06	Last version to support Microsoft Windows XP.
3.4.0	2017-04-21	Just-in-time compilation (JIT) of functions and loops to byte-code enabled by default.
3.5.0	2018-04-23	Packages byte-compiled on installation by default. Compact internal representation of integer sequences. Added a new serialisation format to support compact internal representations.
3.6.0	2019-04-26	Improved sampling from a discrete uniform distribution, which was noticeably non-uniform on large populations. New serialisation format supported since 3.5.0 becomes the default.
4.0.0	2020-04-24	R now uses a stringsAsFactors = FALSE default, and hence by default no longer converts strings to factors in calls to data.frame() and read.table(). Reference counting is used for tracking object sharing, which reduces the need for copying objects. New syntax for raw string constants.
4.1.0	2021-05-18	Introduced |> as the pipe operator for base R syntax (similar to the %>% operator of the magrittr package) and the anonymous function shortcut syntax \(x) x+1
4.2.0	2022-04-22	R uses UTF-8 as the native encoding on recent Windows systems. Support for 32-bit Windows builds has been dropped. Calling if() or while() with a condition of length greater than one is now an error.

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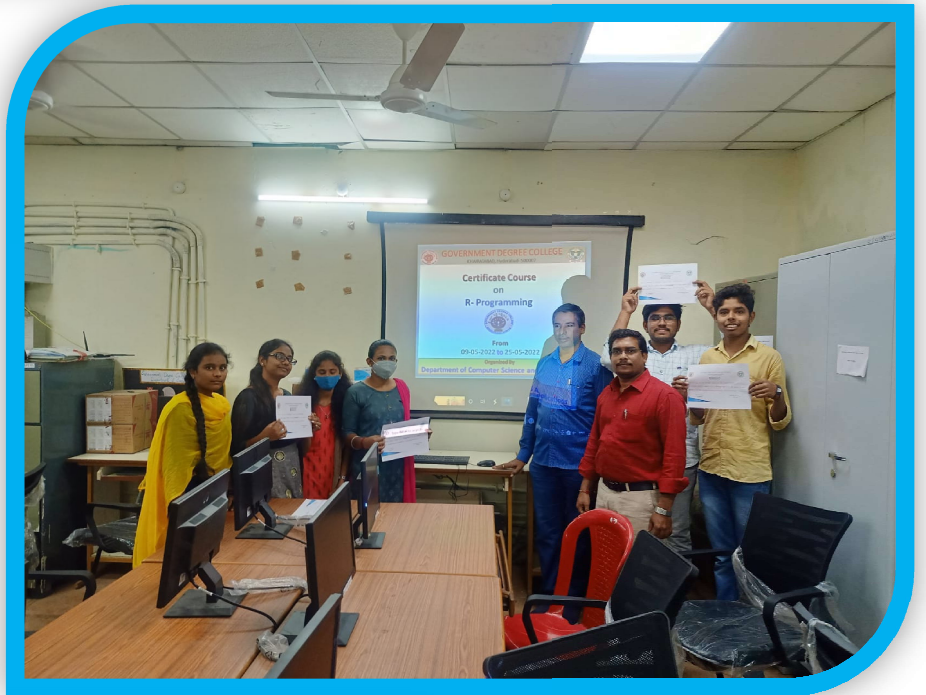## KHAIRATABAD, Hyderabad- 500007

Certificate Course
on
R- Programming

From
09-05-2022 to 25-05-2022

Organised By
Department of Computer Science and Applications

ATTENDANCE REGISTER OF......Certificate Course... YEAR...2021-22

MONTH: MAY

ROLL NO.	NAME OF THE STUDENT	1 (09)	2 (10)	3 (11)	4 (12)	5 (13)	6 (14)	7 (16)	8 (17)	9 (18)	10 (19)	11 (20)	12 (21)	13 (23)	14	15
425005	A. Anjaneyulu	P	P	P	P	P	P	A	P	P	P	A	P	P	P	P
06	Afreen Begum	P	P	A	P	P	P	P	A	P	P	P	A	P	P	P
18	A. Sathvik	P	A	P	P	P	A	A	P	P	P	P	P		P	P
19	A. Jaya Keerthi	P	P	P	P	P	A	P	P	P	P	P	P		P	P
23	A. Shiva prasad.	P	P	P	P	P	P	P	P	P	A	P	P		P	P
26	A. Srikanth	A	P	P	A	P	P	P	P	P	P	A	P		P	P
27	A. Govardhan.	P	P	P	P	A	P	P	P	P	P	P	P		P	P
29	B. varsha	P	P	P	P	P	A	P	P	P	A	P	P	A	P	P
34	B. Abhilash	A	P	A	P	P	P	P	P	P	P	A	P		P	P
38	B. Revathi	P	P	P	A	P	P	P	A	P	P	P	A	P	P	P
48	B. Haripriya	P	P	P	A	P	P	P	P	A	P	P	P		P	P
54	B. Nikitha	A	P	P	P	A	P	A	P	P	P	P	P		A	P
58	B. Kavitha	P	P	P	P	P	A	P	P	P	P	A	P		P	P
111	D. Venkatesh	P	P	P	P	P	P	P	P	P	P	P	P		P	P
120	G. Sandhya rani	P	P	A	P	P	P	P	P	A	P	P	P		P	P
145	Iyar Akshith	A	P	P	P	A	P	P	P	P	P	P	P		P	P
205	m. sandeep	P	P	P	P	P	P	A	P	P	P	P	P		P	P
255	Irfan Ali	P	P	P	P	P	A	P	P	P	P	A	P	P	P	P
310	P. Bhargavi	A	P	A	P	P	P	P	P	P	A	P	P		P	P
168012	B. Jayalaxmi	P	P	P	P	A	P	P	A	P	P	P	A	P	P	P
025	Ch. Naveen	A	P	P	P	P	P	P	P	P	P	P	P		P	P
040	D. Shiva Kumar	P	P	A	P	P	P	P	P	P	P	A	P		P	P
068	K. Mahalaxmi	A	P	P	P	P	A	P	P	P	P	P	P		A	P
88	K. Mahendar	P	P	P	P	P	A	P	P	A	P	P	P		P	P
93	M. Srinivas	P	P	P	P	P	P	A	P	P	P	P	A	P	P	P
99	M. Sai Keerthana	P	P	P	A	P	P	P	P	P	A	P	P		P	P
167046	M. meena	A	P	P	P	A	P	P	P	A	P	P	P		P	P
073	Cony Kumar	P	P	P	A	P	P	A	P	P	P	P	A	P	P	P
078	T. Shekar	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P
083	V. saipriya.	P	P	P	A	P	P	P	P	A	P	P	P	P		

Government Degree College, Khairatabad, Hyderabad
Department of Computer Science and Applications
Certificate Course
A.Y:2021-22

R-PROGRAMMING
(Question Paper)

Time: 60 min   **Max. Marks: 40**

Answer any four of the following questions   4*10M=40M

1. What are Basic Syntaxes?

2. Write Decision making Statements?

3. Write Creation of List?

4. Explain Arrays?

5. Write about Factors?

6. Write about R Databases?

GOVERNMENT DEGREE COLLEGE, KHAIRATABAD, HYDERABAD

AFFILIATED TO OSMANIA UNIVERSITY

RE-ACCREDITED WITH 'B' GRADE BY NAAC

CERTIFICATE

*This is to certify that*_____

has successfully completed a certificate course on "R-Programming" of two weeks duration held from

09.05.2022 to 25.05.2022 conducted by the Department of Computer Science and Applications.

Dr. S. Srinivasu   **Dr. B. Rajendra Kumar**

CONVENER   **PRINCIPAL**