

SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(A Unit of Shri Sode Vadiraja Mutt Education Trust®, Udupi)

Accredited by NAAC with 'A' grade | Affiliated to VTU, Belagavi

Approved by AICTE, New Delhi & Recognized by Govt. of Karnataka

Vishwothama Nagar, Bantakal - 574115, Udupi District, Karnataka.



SMVITM

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

VAC - R PROGRAMMING - Student list

SL. NO	USN	STUDENT NAME	SIGNATURE
1	4MW19CS006	AKSH S KOTIAN	Aksh. S.
2	4MW19CS009	ANANYA D	Ananya
3	4MW19CS013	ANJALI SHET	Anjali Shet
4	4MW19CS014	ANKUSH HEGDE	Ankush Hegde
5	4MW19CS015	ANUJNA	Anuj
6	4MW19CS016	ANUSHA	Anu
7	4MW19CS021	ASHLESH H GAMS	Ashles
8	4MW19CS024	B T ANVIT	B.T. Anvit
9	4MW19CS025	BHAGYALAKSHMI B SHETTY	Bhagyalakshmi.
10	4MW19CS030	DEEKSHA SHETTIGAR	Deeksha
11	4MW19CS031	DEEKSHA SHETTY	Deeksha.
12	4MW19CS032	DHATHRI TENDULKAR	Dhathri
13	4MW19CS033	DISHASHREE	Dishashree.
14	4MW19CS036	GOUTHAM N SHET	Goutham
15	4MW19CS037	HARIPRASAD BHAT K	Hariprasad
16	4MW19CS039	J TRESHIKA	J. Treshika
17	4MW19CS040	JEEVITHA	Jeevitha
18	4MW19CS041	JELENA RIYA LEWIS	Jelena Riya
19	4MW19CS042	JNANAESH B S	Jnanaesh
20	4MW19CS053	MANJUSHREE VINAYAK BHOOMKAR	Manjushree
21	4MW19CS055	MANVITHA ANANTH NILEKANI	Manvitha
22	4MW19CS059	NISHITH SHETTY	Nishith
23	4MW19CS073	RAKSHA B KOTTARI	Raksha
24	4MW19CS079	SANJANA S	Sanjana
25	4MW19CS093	SHREYA S	Shreya
26	4MW19CS121	RAKSHITH ACHARYA	Rakshith
27	4MW20CS402	SHANBHAG KARTHIKEYA	Shanbhag

Principal

SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY & MANAGEMENT
Vishwothama Nagar, Udupi Dist.
BANTAKAL - 574115

Department: Computer Science and Engineering

Class: 5th Semester Course

Title: R Programming

1. Course details

1.1 Primary information

1	L-T-P	1-1-0
2	Pre-requisite	Basic computer skills and knowledge
3	Teaching Department	Computer Science and Engineering
4	Course Duration	40 Hours
5	Faculty Handling the course	Ms. Deepthi G Pai Ms.Sneha N S Ms.Rukmini Bhat

1.2 Textbooks

1 R Programming for Beginners by Nathan Metzler

1.3 Other Resources (Online, Text, Multimedia, etc.)

<https://www.r-project.org/about.html>

<https://www.w3schools.com/r/>

1.4 Link of class web page (Google classroom/CANVAS etc.,)

Google Classroom Link

<https://classroom.google.com/c/NDIwNTQ3NTY0ODUz>

Code: c7i7d7k

1.5 Course Outcomes

Sl. No.	At the end of the course, Students will be able to	Bloom's Level
CO1	Understand the basics in R programming in terms of constructs, control statements, string functions	L2
CO2	Understand the use of R for Big Data analytics	L2
CO3	Learn to apply R programming for Text processing	L3
CO4	Able to apply the R programming from a statistical perspective	L3

Value Added Course on R Programming

Syllabus:

UNIT 1 : Background, Getting Started

Introducing to R – Overview and History of R –How to download and Install R studio -R Data Types – R Console Input and Evaluation- -R Objects and Attribute- Vectors and Lists – Matrices- Factors- Missing Values- Data Frames- Names Attribute- Summary-Reading Tabular Data

UNIT 2: Programming with R

Control Structures - Introduction-Control Structures - If-else-Control Structures - For Loops - While loops - Repeat, Next, Break-Your First R Function - Functions - Coding Standard -Dates and Times

UNIT 3- Loop Functions

Loop functions - l apply - s apply - apply- t apply- m apply-date and times in r

UNIT 4.-Debugging

Debugging and debugging tools – Diagnosing the Problem - Basic Tools- Using the Tools - trace back-Profiling R code: Optimizations

Course Learning Objectives:

This course will enable students to:

1. Explore and understand how R and R Studio interactive environment.
2. To learn and practice programming techniques using R programming.
3. Read Structured Data into R from various sources.
4. Understand the different data Structures, data types in R.
5. To develop small applications using R Programming



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DEPARTMENT OF COMPUTER SCIENCE

R PROGRAMMING – ASSESSMENT QUESTIONS

1. Use a nested for loop (a for loop inside a for loop) that produces the following matrix, preallocate the matrix with NA values.

```
0 1 2 3 4
1 0 1 2 3
2 1 0 1 2
3 2 1 0 1
4 3 2 1 0
```

1. Write a R program to Implement the working of Simple calculator using functions
1. Implement a simple version of Guess the number game using a while loop. The user should guess a number between 1 and 10, you can use scan() to get user input. The loop should break if the user guesses 5.
1. Write a simple R program function to calculate area and perimeter of a rectangle

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SMVITM

Department of Computer Science & Engineering

Certificate

This is to certify that Mr./Ms ANANYA D. of
Computer Science & Engineering department has successfully completed Value Added
Course on "**R PROGRAMMING**" held at Shri Madhwa Vadiraja Institute of Technology &
Management, Bantakal from 23rd October 2021 to 12th February 2022.


Dr. Nagaraj Bhat
Head, Dept. of CSE


Ms Rukmini Bhat B
Asst. Professor(sr.), Dept of CSE


Dr. Thirumaleshwara Bhat
Principal


Principal
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