



Marwadi
University
Marwadi Chandarana Group

MARWADI EDUCATION FOUNDATION'S GROUP OF INSTITUTIONS
GAURIDAD CAMPUS, RAJKOT
DEPARTMENT OF INFORMATION AND COMMUNICATION TECHNOLOGY

R Programming

Event

Date: 29-04-2023

Event Report

R language programming event which was conducted by the students of SEM 2 Aryan Langhanoja and Umang Hirani in which they discussed the question of the Shark Tank Dataset and the concept of R Language.

PHOTOS :



“R PROGRAMMING TUTORIAL” is an event organized by the **Data Science Club** online on Google Meeting at 7PM. It was hands-on training session which covered basic tutorial of **R programming**, Mastering Conditional Statements, Loops, and Functions.

The flow of the event is as follows:

Introduction:

This report provides a comprehensive overview of R programming, covering the basic tutorial of R, as well as advanced topics such as conditional statements, loops, and functions. R is a powerful and widely-used programming language for statistical computing and graphics. It provides a wide range of tools and libraries for data manipulation, analysis, and visualization. Understanding these fundamental concepts is crucial for effective data analysis and programming in R.

Basic Tutorial of R Programming:

The basic tutorial of R programming is aimed at introducing beginners to the language and its syntax. It covers essential concepts such as data types, variables, arithmetic operations, and basic data structures.

1. **Data Types:** R supports various data types, including numeric, character, logical, integer, and complex. These data types are used to represent different kinds of information in R.
2. **Variables:** In R, variables are used to store data values. They can be assigned using the assignment operator (<- or =). For example, `x <- 10` assigns the value 10 to the variable x.
3. **Arithmetic Operations:** R allows performing arithmetic operations such as addition, subtraction, multiplication, division, and exponentiation. These operations can be performed on numeric variables and produce numeric results.
4. **Basic Data Structures:** R provides several data structures, including vectors, matrices, data frames, and lists. These structures are used to store and manipulate data in different formats.

Mastering Conditional Statements:

Conditional statements are an essential part of any programming language, including R. They allow the execution of different code blocks based on specified conditions. In R, conditional statements are implemented using the `if`, `else if`, and `else` constructs.

1. **If Statement:** The `if` statement evaluates a condition and executes a block of code if the condition is true. The basic syntax is as follows:

```
if (condition) {  
  # Code block executed if the condition is true  
}
```

2. Else If Statement: The else if statement allows checking additional conditions if the previous condition(s) evaluate to false. It can be used to test multiple conditions sequentially. The syntax is as follows:

```
if (condition1) {  
  # Code block executed if condition1 is true  
} else if (condition2) {  
  # Code block executed if condition2 is true and condition1 is false  
}
```

3. Else Statement: The else statement is used as a fallback option when all previous conditions evaluate to false. It allows executing a block of code when none of the preceding conditions are true. The syntax is as follows:

```
if (condition1) {  
  # Code block executed if condition1 is true  
} else {  
  # Code block executed if condition1 is false  
}
```

Loops in R Programming:

Loops are used to repeatedly execute a block of code until a certain condition is met. R provides different types of loops, including for loops, while loops, and repeat loops.

1. For Loop: The for loop is used to iterate over a sequence of values or elements. It allows executing a block of code a specific number of times. The syntax is as follows:

```
for (variable in sequence) {  
  # Code block executed for each value in the sequence  
}
```

2. While Loop: The while loop repeatedly executes a block of code as long as a specified condition remains true. It is useful when the number of iterations is not known in advance. The syntax is as follows:

```
while (condition) {  
  # Code block executed as long as the condition is true  
}
```

3. Repeat Loop: The repeat loop executes a block of code indefinitely until a break statement is encountered. It is useful when the termination condition is determined within the loop. The syntax is as follows:

```
repeat {  
  # Code block executed indefinitely until a break  
  statement if (condition) {  
    break # Terminate the loop when the condition is met  
  }  
}
```



Functions in R Programming:

Functions allow encapsulating reusable blocks of code in R. They enhance code modularity, reusability, and maintainability. In R, functions can be defined using the function keyword and can accept input arguments and return values.

1. Function Definition: The syntax for defining a function in R is as follows: `function_name <- function(arg1, arg2, ...) {`
Code block executed when the function is called
Optional: return statement to return a value
`}`

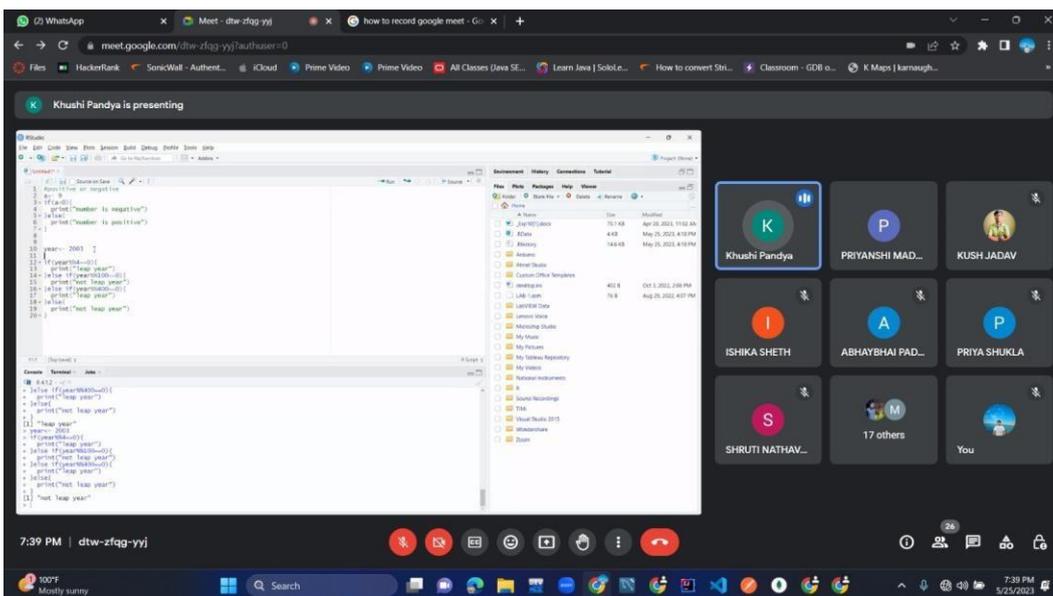
1. Function Call: Once a function is defined, it can be called by its name, passing the required arguments. The syntax for calling a function is as follows:

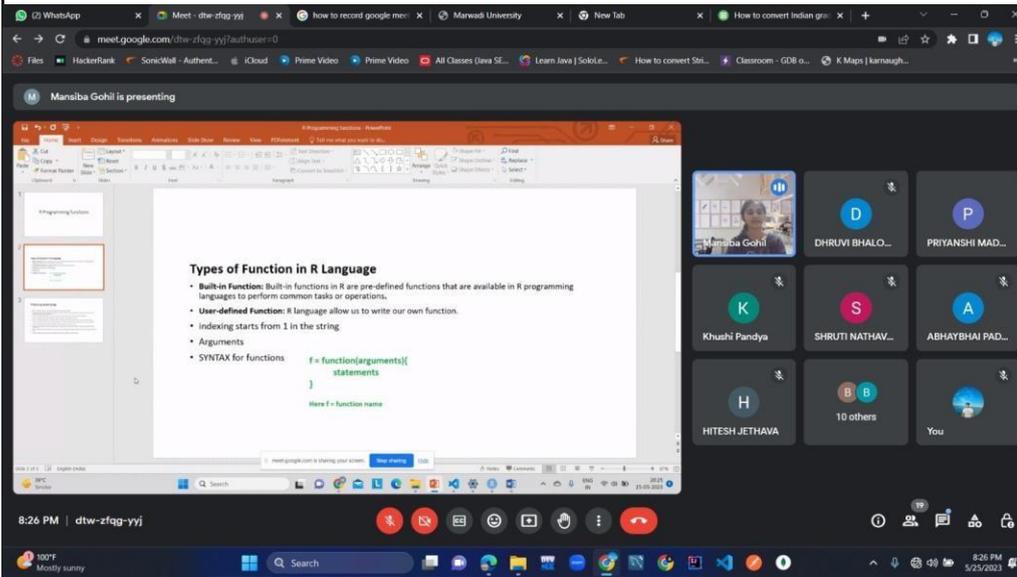
```
result <- function_name(arg1, arg2, ...)
```

2. Return Value: Functions can return values using the return statement. The returned value can be stored in a variable or used directly. The syntax for returning a value is as follows:

```
return(value)
```

PHOTOS :





List Of Participates:

GR NO	EN Roll No	Participate Name
119519	92200133041	DHRUVI BHALODIYA
119144	92200133016	MALHARKRISHNA SAHILKRISHNA SHAH
119680	92200133035	KRISHNA HARESHBHAI DIXIT
119694	92200133036	HARSHIL PIYUSHBHAI VADHER
119563	92200133031	KIRTAN AJAYBHAI MAKWANA
119774	92200133040	JAY TUSHIT MANGUKIYA
120002	92200133046	RACHEL LEILA AKOL MUORWEL
118173	92200133010	VASU ATULBHAI PARSANIYA
119539	92200133029	DHRUVIBEN JITENDRA PATEL
118565	92200133013	RAJNIKANT UDAYBHAI HIRAPARA
116118	92200133002	HARSH MANISHBHAI DOSHI
119402	92200133022	KRISH KIRTIBHAI MAMTORA
119585	92200133024	SHANTANUSINH CHANDRASINH PARMAR
119311	92200133019	NIDHI SUBHASHBHAI DATTANI
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117229	92200133005	SHYAMA PRAKASH VAGADIA
118613	92200133014	HENCY HITESHBHAI DEPANI
120294	92200133048	UMUTONI JUSTINE
118307	92200133012	PRIYA PREMNARAYAN SHUKLA
119296	92200133018	VRAJKUMAR KANTILAL NANDWANA
119561	92200133030	ARYAN DILIPBHAI LANGHANOJA
117709	92200133007	VISHVARAJSINH JITENDRASINH PARMAR
118531	92200133020	FAITH JACKSON NKUBA
117890	92200133009	ACHYUT KARSHANBHAI SANGANI
119699	92200133037	NANDINI JAYESH LASHKARI
119893	92200133044	AKASH JAGABHAI CHUDASAMA
119704	92200133038	RAJVI ROHITBHAI DAVE

119437	92200133023	FENIL JIGNESHBHAI VADHER
118299	92200133011	ARYAN JAGDISHBHAI MAHIDA

Feedback Form:

 **Marwadi**
University
Marwadi Chhatrapati Group

Club Name: Data science club Date: 29/06/2023

Event Name: R Programming

How would you rate the overall event experience?(Select one)

Poor
 Average
 Good
 Very Good
 Excellent

How satisfied were you with the quality of the speakers/presenters?(Select one)

Highly Satisfied
 Satisfied
 Neutral
 Dissatisfied
 Highly dissatisfied

How satisfied were you with the flow of the event?(Select one)

Highly Satisfied
 Satisfied
 Neutral
 Dissatisfied
 Highly dissatisfied

Was the content relevant to your technical interests and knowledge level?(Select one)

Extremely Relevant
 Slightly Relevant
 Neutral
 Slightly Relevant
 Not relevant at all

Any Other comments that you would like to mention?

Event was good & well organized
