ACADGILD

SESSION 3:
FOUNDATIONAL R PROGRAMMING

Assignment 3

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1. Problem Statement

1. Define matrix mymat by replicating the sequence 1:5 for 4 times and transforming into a matrix, sum over rows and columns.

2. Solution

The R-script for the given problem is as follows:

```
rep(1:5, 4)     # replicating the sequence 1 to 5

mymat <- matrix(rep(1:5 ,4), nrow = 4 , ncol = 5, byrow = TRUE )

mymat

# sum over  rows and columns.

apply(mymat, 1, sum)     # sum of rows

apply(mymat, 2, sum)     # sum of columns
```

Explanation:

- Here , matrix **mymat** is created by replicating the sequence of 1 to 5 (1,2,3,4,5) for 4 times by using rep(1:5 ,4).
- The matrix mymat is of order 4X5 (4 rows and 5 columns)
- The sum over rows and columns is found by apply() function using the r-commands as follows:
    - apply(mymat, 1, sum)   # sum of rows
    - apply(mymat, 2, sum)   # sum of columns

  Here,1 is used for rows and 2 is used for columns.

The output of the R-Script is given as follows: