



ACADGILD

SESSION 3: FOUNDATIONAL R PROGRAMMING

Assignment 3

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1. Introduction

This assignment will help you understand the concepts learnt in the session.

2. Objective

This assignment will test your skills on Operations on Data Structures in R.

3. Prerequisites

Not applicable.

4. Associated Data Files

Not applicable.

5. 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.

```
mymat <- matrix(rep(1:5,4),ncol=4)
mymat
```

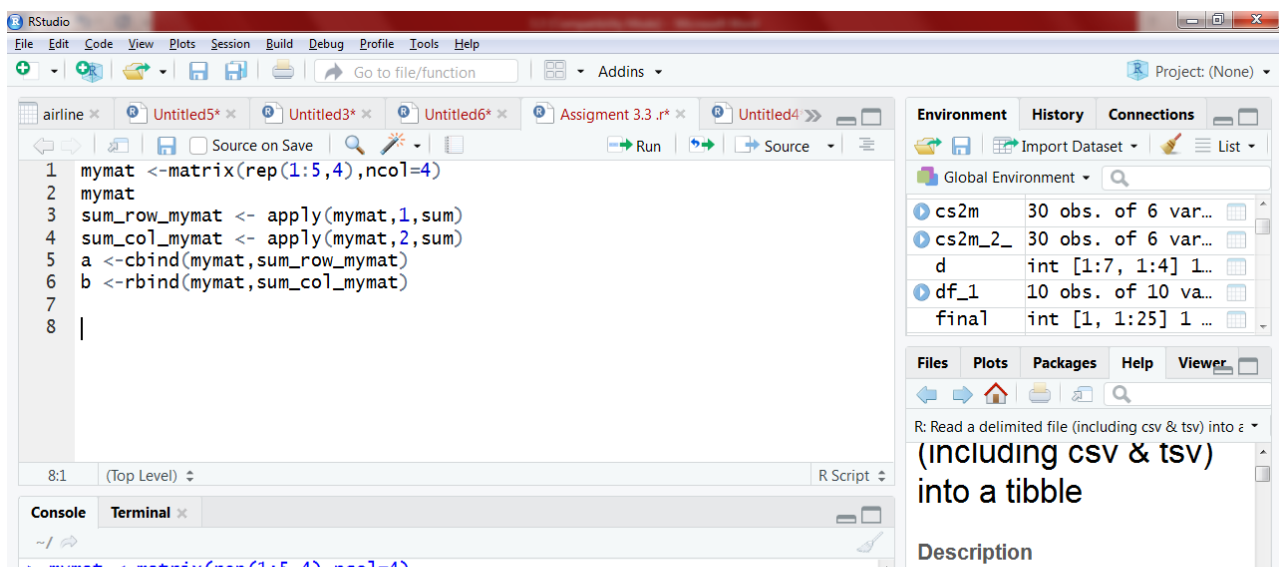
```
sum_row_mymat <- apply(mymat,1,sum)
```

```
sum_col_mymat <- apply(mymat,2,sum)
```

```
a <- cbind(mymat,sum_row_mymat)
```

```
b <- rbind(mymat,sum_col_mymat)
```

r screen



RStudio interface showing a script, console output, and environment pane.

Script Editor:

```
1 mymat <- matrix(rep(1:5,4), ncol=4)
2 mymat
3 sum_row_mymat <- apply(mymat,1,sum)
```

Console:

```
> sum_row_mymat <- apply(mymat,1,sum)
> sum_col_mymat <- apply(mymat,2,sum)
> a <- cbind(mymat,sum_row_mymat)
> b <- rbind(mymat,sum_col_mymat)
> a
```

sum_row_mymat:

	sum_row_mymat
[1,]	4
[2,]	8
[3,]	12
[4,]	16
[5,]	20

b:

	[,1]	[,2]	[,3]	[,4]
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
sum_col_mymat	15	15	15	15

Environment:

Variable	Value
cs2m	30 obs. of 6 var...
cs2m_2_	30 obs. of 6 var...
d	int [1:7, 1:4] 1...
df_1	10 obs. of 10 va...
final	int [1, 1:25] 1 ...

Files:

R: Read a delimited file (including csv & tsv) into a tibble

Description:

read_csv() and read_tsv() are special cases of the general read_delim(). They're useful for reading the most common types of flat file data, comma separated values and tab separated values, respectively. read_csv2() uses : for the field

Data Analytics

6. Expected Format

1. R file should be submitted where applicable.

2. R file should be in PDF or in .r format
3. Proper screenshots of the outputs should be submitted as well
4. The r codes, if submitted in any other format, will be subjected to deduction in marks

Note: Your solution will not be entertained if it is any other format, e.g., .zip, .doc, .rtf etc.

7. Approximate Time to Complete Task

30 mins.