ACADGILD

SESSION 14: GETTING STARTED WITH R

Assignment 2

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1. Introduction

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

2. Objective

To understand the concepts in R.

3. Prerequisites

Not applicable.

4. Associated Data Files

N/A

5. Problem Statement

4. Use the function paste to create the following character vectors of length 30:

(a) ("Label 1", "Label 2", ..., "Label 30").
*Note that there is a single space between label and the number following.
(b) ("FN1", "FN2", ..., "FN30").
**In this case, there is no space between fn and the number following.

5. Compound interest can be computed using the formula

$A = P \times (1 + R/100)n$, where P is the original money lent, A is what it amounts to in n years at R percent per year interest.

Write R code to calculate the amount of money owed after n years, where n changes from 1 to 15 in yearly increments, if the money lent originally is 10000 Rupees and the interest rate remains constant throughout the period at 11.5%.

6. Generate the following matrices.

```
     [,1] [,2] [,3] [,4]
[1,]    1  101  201  301
[2,]    2  102  202  302
[3,]    3  103  203  303
[4,]    4  104  204  304
[5,]    5  105  205  305
```

7. Create a 6 by 10 matrix of random integers chosen from 1 to 10 by executing the following two lines of code:

```
set.seed(100)
GMAT <- matrix( Sample(10, size=60, replace=T), nr=6)
```

(a) Find the number of entries in each row which are greater than 4.
(b) Which rows contain exactly two occurrences of the number seven?
(c) Find those pairs of columns whose total (over both columns) is >= 50. The answer should be a matrix with two columns.

6. Expected Output

N/A

7. Approximate Time to Complete Task