Lab Assignments - Day 2

1. Write R programs to find the maximum, minimum, sum, and mean value of a given vector without using the in-built functions.

2. Create the following matrices

a) **A matrix of dimension 5×5 which contains 5L (integer) everywhere.**
b) **A matrix of dimension 10×1 which contains -100 (numeric) everywhere.**
c) **Check that the class of your result matrix is c("matrix", "array") or not?**
d) **Use is.matrix(), is.double(), is.integer(), and is.numeric() to check the type of the data of the matrix**.

3. Create the matrix

```
## [,1] [,2] [,3] [,4] [,5]
## [1,]   -1   -1   -7   -1   -1
## [2,]    0    0   10    0    0
## [3,]   11   12    7    9    1
```

Get the largest and smallest value in the matrix (minimum and maximum).

4. Perform transpose operation on the matrix.

5. Write a R program to create a list of heterogeneous data, which include character, numeric and logical vectors. Print the lists.

6. Write a R program to create three vectors a,b,c with 3 integers. Combine the three vectors to become a 3×3 matrix where each column represents a vector. Print the content of the matrix.

7. Write a R program to extract first 10 english letter in lower case and last 10 letters in upper case and extract letters between 22nd to 24th letters in upper case.

8. Write a R program to create a two-dimensional 5x3 array of sequence of even integers greater than 50.

9. Write a program in R to multiply each element of the above matrix by 3

ar*3

10. Write a program in R to multiply elements of the matrix obtained in 8 in the order 2,3,4 (first element by 2, second element by 3, third element by 4, fourth element again by 2, and so on)

ar*2:4

11. Run swirl()

Select 1 to learn R programming.

```
Please choose a course, or type 0 to exit swirl.

1: R Programming
2: Take me to the swirl course repository!

Choose 1.

Please choose a lesson, or type 0 to return to course menu.

 1: Basic Building Blocks      2: Workspace and Files
 3: Sequences of Numbers       4: Vectors
 5: Missing Values             6: Subsetting Vectors
 7: Matrices and Data Frames   8: Logic
 9: Functions                 10: lapply and sapply
11: vapply and tapply         12: Looking at Data
13: Simulation                14: Dates and Times
15: Base Graphics


Choose 3 and then 4 to revise sequence of numbers and Vectors.
Show the last screen reached at the end of this assignment.
```