Data Mining Lab
Lab Assignments - Day 3

1. **Prepare the following data frame.**

SN	Age	Name
1	27	John
2	35	Dora
3	23	Martha

   a. **Change the age of Martha to 25.**
   b. **Add a new column State with the data frame.**
   c. **Delete the Age column.**

2. **Write a R code to create a data frame from a dictionary of marks in Physics,Chemistry and Mathematics of four students, as given below:**

Name	Physics	Chemistry	Mathematics
Abhishek	88	82	95
Usha	81	91	97
Shreya	90	85	89
Vijay	87	89	91

   - **Add another column showing the marks in Biology as 82, 79, 90, 80 respectively.**
   - **Find the average marks of each student and show it in a new column 'Average'; the computation would be the sum of all marks divided by (number of columns -1)**
   - **Display in tabular form, the descriptive statistics of all the four subjects and the aggregate.**

3. **Write a function with name 'roots_quad_eqn', having three arguments a, b, c. This function would find out the roots of a quadratic equation:- $ax^2 + bx + c = 0$ and return the following:**
   (i) Root # 1 : Real part + i (imaginary part)
   (ii) Root # 2 : Real part - i (imaginary part)
   (iii) A Boolean value (True if the roots are real and false if the roots are complex)

4. **Read the file "Assocclass24.csv". Answer the following questions:**

   (a) Find out the number of columns and their names. How many rows are there?
   (b) How many are male customers and how many are female customers?
   (c) How many "Middle" aged customers buy milk and diaper?
   (d) Compute the percentage of transactions that buy milk, bread and diaper together.

5. **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 for R programming.

Then Choose 7 to revise Matrices and Data Frames. Show the last screen reached at the end of this assignment.

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