**R LAB Exercises**

1. If x = c(1, 2, 3, 3, 5, 3, 2, 4, NA), what are the levels of factor(x)?
2. Find out the levels of Factor of a given vector.
3. Let x <- c(11, 22, 47, 47, 11, 47, 11). If an R expression factor(x, levels=c(11, 22, 47), ordered=TRUE)is executed, How do we access the fourth element of the factor ?
4. If z <- factor(c("p", "q", "p", "r", "q")) and levels of z are "p", "q" ,"r", write an R expression that will change the level "p" to "w" so that z is e qual to: "w", "q" , "w", "r" , "q".
5. Create a data frame with columns name,age,gender and check if R treats the gender column as a factor.
6. Determine the number of items in a factor
7. Create a factor with 4 apples, 5 bananas and 6 mangoes and access item 3
8. Changing the fourth item to pineapple. Explain the o/p
9. Consider the factor responses <- factor(c("Agree", "Agree", "Strongly Agree", "Disagree", "Agree")), with the following output:

         Agree Agree Strongly Agree Disagree Agree

Levels: Agree Disagree Strongly Agree

Later it was found that a new level "Strongly Disagree" exists. Write an R expression that will include "strongly disagree" as new level attribute of the factor and returns the following output:

          Agree Agree Strongly Agree Disagree Agree

       Levels: Strongly Agree Agree Disagree Strongly Disagree

1. Write an R statement that will replace levels a, b, c with labels "fertiliser1", "fertliser2", "fertiliser3".
2. Create a CSV file, read it, check whether it is read as a dataframe and find out the number of rows and columns.
3. Create a csv file with 3 attributes name, joining year, salary and department.
4. Retrieve the name of person who gets the maximum salary
5. Retrieve all the students who study in AI & DS
6. Retrieve the name of students who study in AI&DS and stay in hostel
7. Create a new CSV file for persons stuying in AI&DS alone
8. Read from an excel file sheet 1 data of your classmates like name, roll\_number, hostel/dayscholar, gender, gradepoint. Select only dayscholars. Write into a new excel file.