Lab 2 – SECTION A and B , BATCH 2 and 4 Date:2nd / 3rd Sept. 2022

EXERCISE 1: - Introduction to Pandas

Data frame creation and manipulation

1. Create a data frame with details of 10 students and columns as Roll Number, Name, Gender, Marks1, Marks2, Marks3.
2. Create a new column with total marks
3. Find the lowest marks in Marks1
4. Find the Highest marks in Marks2
5. Find the average marks in Marks3
6. Find student name with highest average
7. Find how many students failed in Marks2 (<40)

EXERCISE 2 – Using the MTCARS dataset, perform data analysis and answer given questions.

1. Find the car with the best mpg
2. Find the car with the worst mpg
3. Find the car with the best horsepower
4. Find 5 number summary of displacement
5. Find median horse power
6. What is average mpg for manual vs. automatic cars
7. Draw a histogram of miles per gallon
8. Boxplot of mpg for each cylinder type
9. Create a crosstab displaying count of automatic vs. manual cars
10. Create a crosstab displaying count of "am vs cyl"
11. What is the correlation between the weight of the car and mpg