

DSE – 2159 DATA ANALYTICS LABORATORY

Lab 1 – SECTION A , BATCH 1 Date:8th Nov 2021

EXERCISE 1 – Business Analytics

Perform analysis on the NORTHWIND (COMBINED) data set using the pivot tables and charts in MS Excel.

1. Identify the top 5 and bottom 5 selling products in the company.
2. Identify the top 5 selling products and the salesmen who sell them.
3. Tabulate the total sales of each product, ship country wise.
4. Tabulate the total sales of “Boston Crab Meat” , customer wise.
5. Tabulate the customer’s region wise sales of products in each category.
6. Visualize the customer’s region wise sales of products in each category using an appropriate chart.
7. Visualize the total sales of each product, employee wise with an appropriate chart.
8. Tabulate the total sales of each product, category-wise as a percentage of the entire sales.
9. Visualize the total sales of each product, category-wise as a percentage of the entire sales.
10. Summarize the sales for each product, year wise and visualize the same in an appropriate chart.

EXERCISE 2: - 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 3:

- **Exer 2 – Data Analysis using mtcars**
 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