Practical no. 3

AIM:

Data Analysis and Visualization using Advanced Excel

Requirements:

Microsoft Excel, Call centre dataset.

Theory:

Data Analysis In Excel:

- **Data Cleaning:**
  Loaded the downloaded dataset into Microsoft Excel, duplicated it onto another sheet, which is named “working_sheet” to preserve the integrity of the original data and prevent any irreversible changes.
  Cleaning and preparing the data for analysis. This means removing any errors or outliers, and formatting the data in a way that makes it easy to analyze.
  The column ‘call_timestamp’ had mixed formatting both text and date.
  To format, select the entire column E, Go to Data ribbon > Text to Columns > choose ‘delimited’ > click Next > click Next> under ‘column data format’ select ‘date format’ and change it to ‘MDY’ from the drop-down list > click Finish.
  I checked the remaining columns and they didn’t require any data cleaning.

- **Data Manipulation:**
  To perform a daily trend analysis a new column has been inserted with the help of shortcut keys ‘CTRL Shift +’ and named the new column as “***day”.*** To extract the day, I used the DAY function. The formula used is =DAY([@[call_timestamp]]).

- **Data Analysis:**
  Using Pivot tables and Basic Statistics, we calculated metrics like
  1. **Primary KPIs:**
  2. **Secondary KPIs:**

DATA VISUALIZATION:

Once I have collected the data, I used them to visualize in a way that is easy to understand. This will help to identify trends and patterns in the data. Generated bar charts, Pie chart, Line chart and Map to compare different KPIs and line graphs to display call trends over time.

To make the Dashboard interactive I have used Slicers for Channel, Center and Days.

DASHBOARD: