**ASSIGNMENT 1**

PDA-BTP

1. **Basic Data Manipulation with pandas**
   * **Task**: Load a dataset (e.g., a CSV file) into a pandas DataFrame. Perform basic operations like viewing the first 10 rows, finding the data types of each column, and summarizing the statistics of the dataset.
2. **Exploratory Data Analysis (EDA)**
   * **Task**: Take any dataset, perform exploratory data analysis to identify null values, duplicate entries, and unique counts for categorical columns. Provide a summary report.
3. **Data Visualization Basics**
   * **Task**: Use matplotlib and seaborn to create a bar chart, histogram, and scatter plot from a small dataset (any dataset of your choice).
4. **Descriptive Statistics**
   * **Task**: Calculate measures like mean, median, mode, standard deviation, and variance for numerical columns in a dataset.
5. **Data Filtering**
   * **Task**: Filter rows based on conditions. For example, select rows where a column's value exceeds a certain threshold and save the result to a new DataFrame.