**INTRODUCTION**

**AIM:-**

* In this project, the Aim was to perform data cleaning and analysis on a dataset related to customer spending and repayment.
* The dataset contained information such as customer age, monthly spend, monthly repayment, credit limit, and segment.
* The tasks involved treating values where age is less than 18, imposing penalties for exceedingly monthly spend limits, providing credits for overpaid amounts,
* Analysing customer spending and profitability, identifying the most profitable segment, and determining the monthly profit for the bank.

**Tools Used:**

* I have used Python to its versatility in data cleaning and analysis tasks.
* Additionally, I have used Power BI for visualization tool to present the analysed data in an interactive and insightful manner.

**METHODOLOGY**

**Data Collection and Preparation:**

* The initial step involved gathering the necessary dataset comprising customer information such as age, monthly spend, monthly repayment, credit limit, and segment.
* The dataset was obtained from reliable sources and saved in a suitable format for analysis, such as CSV, Excel, or a database.

**Data Cleaning:**

* The collected dataset underwent a comprehensive cleaning process to ensure data integrity and accuracy.
* Identification and handling of missing values: Missing values were identified and treated appropriately by either imputation or removal, depending on the context and significance of the missing data.

**Data Analysis:**

* Calculation of monthly spend for each customer:
* The total monthly spend for each customer was computed by summing the spend amounts across all months.
* Determination of the segment with the highest spending: The segment in which customers were spending the most money was identified by analyzing the total spend for each segment.

**Visualization:**

* To enhance the presentation and interpretation of the analysed data,
* Power BI was employed as a visualization tool. Interactive and visually appealing charts, graphs, and dashboards were created
* it provides a comprehensive view of the insights derived from the analysis. These visualizations aided in understanding key trends, patterns, and relationships within the dataset.