**Credit Flow: Smart ETL for Credit Card Data**

**Instructions:**

**Data Pre-processing (Python):**

* Outlier Detection and Treatment: Identify and address any outliers in the dataset using appropriate statistical methods.
* Missing Value Treatment: Locate missing values and impute or remove those using techniques such as mean/mode imputation or more advanced methods like KNN imputation.

**Data Preparation for Visualization:**

* Feature Engineering: Create new features that may help improve the visual analysis. This could include aggregating features, creating interaction terms, or normalizing/standardizing data.

**Visualization Using Power BI and Tableau:**

* Overview Dashboard: Create an overview dashboard to provide a summary of the data, including total number of customers, distribution of 'good' and 'bad' customers, and key statistics.
* Customer Segmentation: Develop visualizations to segment customers into 'good' and 'bad' categories. Use pie charts, bar charts, and heat maps and Many More to display the segmentation.
* Trend Analysis: Create line charts and area charts to visualize trends in loan repayment and credit status over time.
* Geographical Analysis: Use map visualizations to show the geographical distribution of 'good' and 'bad' customers.
* Interactive Dashboards: Design interactive dashboards that allow users to filter and drill down into specific segments and insights.

**Strategy Development:**

Good Customers:

* Retention Strategies: Develop loyalty programs, personalized offers, and incentives to retain good customers.
* Credit Limit Increase: Consider increasing credit limits for good customers as a reward for their reliability.

Bad Customers:

* Risk Mitigation: Implement stricter credit monitoring and review processes.
* Customized Repayment Plans: Offer tailored repayment plans to help bad customers improve their credit status.

**Deliverables:**

* Code: Submit the code used for data pre-processing.
* Visualizations: Provide Power BI and Tableau visualizations that illustrate the analysis and segmentation of customers.
* Presentation: Create a presentation summarizing the business outcomes and strategies for both good and bad customer segments.