The Anomaly Detection in Credit Card Transactions project leverages Power BI to develop an interactive dashboard for monitoring and identifying unusual or fraudulent activities in credit card transactions. By analyzing a comprehensive dataset, the project provides valuable insights into transaction patterns, security, and potential anomalies. Here's a brief summary of the key project components:

1. **Dataset Information:**
   * The dataset comprises various transaction attributes, including transaction type, amount, customer details, balances, and a flag indicating fraudulent transactions.
2. **Power BI Dashboard Creation:**
   * The project begins with connecting and visualizing the data using Power BI, designed to provide an intuitive and visually appealing interface.
   * Key visualizations offer insights into transaction statistics, such as total transactions, average amounts, and transaction frequency.
3. **Data Preprocessing:**
   * Data preprocessing tasks involve handling missing values, duplicates, and ensuring data types are appropriate for analysis in Power BI.
4. **DAX Functions:**
   * DAX functions are used to answer important questions about the dataset, including average transaction amounts, transaction counts, maximum fraud amounts, and the distribution of transaction amounts.
5. **Anomaly Visualization:**
   * Visualizations, such as a bar chart for top merchant transactions, scatter plots to assess relationships between variables, and line charts for monitoring transaction trends over time, are developed to identify anomalies.
   * Special attention is given to transactions involving high initial balances and merchant-specific fraud occurrences.
6. **Documentation and Deployment:**
   * The project includes summary sections and report pages to provide actionable insights to stakeholders.
   * Data privacy and security regulations are adhered to throughout the process to safeguard sensitive financial information.

Overall, this Power BI project equips users with tools and insights to detect, prevent, and respond to potential fraudulent activities in credit card transactions, enhancing security and trust in financial transactions