Explanation

1. Which merchants have the highest number of transactions? (Only Top 10)

Ans: - We have used a table chart to show the top 10 highest number of transactions. Looking at the table chart, the highest no. of transactions is 95, which is recorded by a single merchant.

2. Create a scatter plot to visualize the relationship between 'oldbalanceOrg' and 'amount' columns.

Ans: - The scatter plot is used to find outliers. It helps us to visualize the relationship between the initial balance amount before the transaction (oldbalanceOrg) and amount by highlighting the outliers.

3. Use a line chart to plot the transaction amount over time (step) to identify any unusual spikes or drops in transaction amounts.

Ans: - This chart gives the trend of the total transaction amount with steps. In the dataset, one step is equal to the hour. The chart highlights the highest total transaction amount, reaching 7.3 billion, observed at the 18th step.

4. Are there any merchants with a high occurrence of fraudulent transactions?

Ans: - We utilized a table chart to identify merchants with a high occurrence of fraudulent transactions. The data from the tables reveals that, out of 380 merchants, three were involved in two instances of fraud each.

Insights

- The fraud transactions happened only in **cash-out** and **transfer** type payments.

- The highest number of frauds happened in **cash-out** type payments which means that proper safety is to be ensured for this payment type along with the transfer type.

- The total number of transactions recorded is **630894** with **383 fraud** transactions. The percentage of fraudulent transactions is **0.06%.**

- The total number of transactions that happened in **cash-out** type payments is **224k** with **197** fraud transactions. The percentage of fraud transactions for cash-out type payments is **0.09%.**

- The total number of transactions that happened in **transfer** type payments is **52k** with **186** fraud transactions. The percentage of fraud transactions for cash-out type payments is **0.36%**.

- The maximum fraud amount is **10 million**.

- 3 different customers were targeted twice with the maximum fraud amount.

- The most used payment type is the **Cash-out** type.

- The least used payment type is the **Debit** type.