DAX

161,500.50
avg_normal

881,588.20
avg_fraudulent

630894
credit_card_tx

383
fraud_credit_card_tx

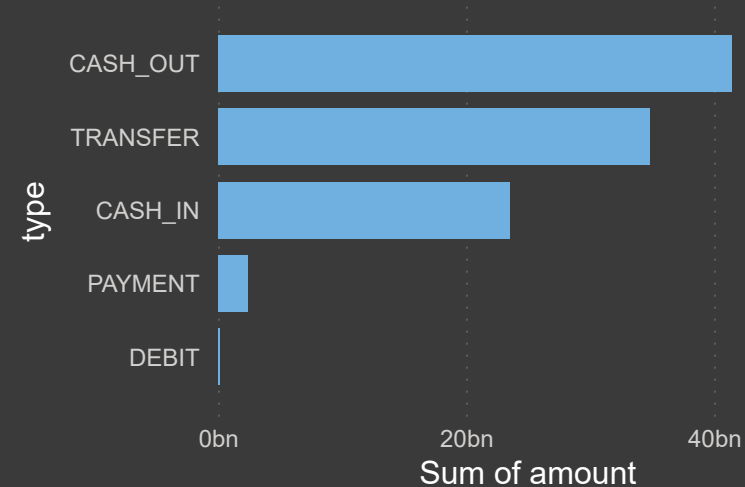## 10,000,000.00
highest_fraud_tx_amt

3,580,164.73
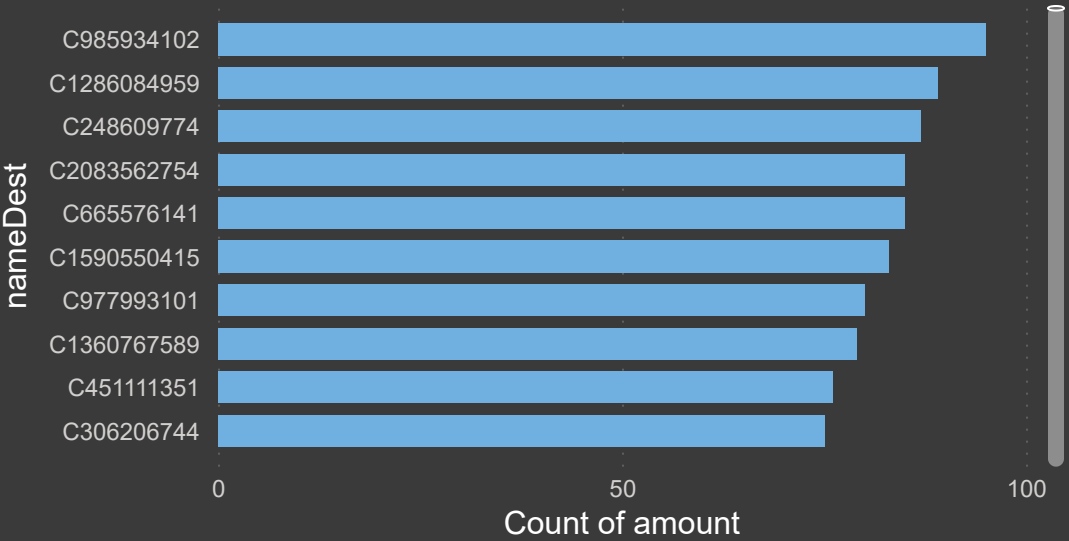difference_max_tx_amt

6.07%
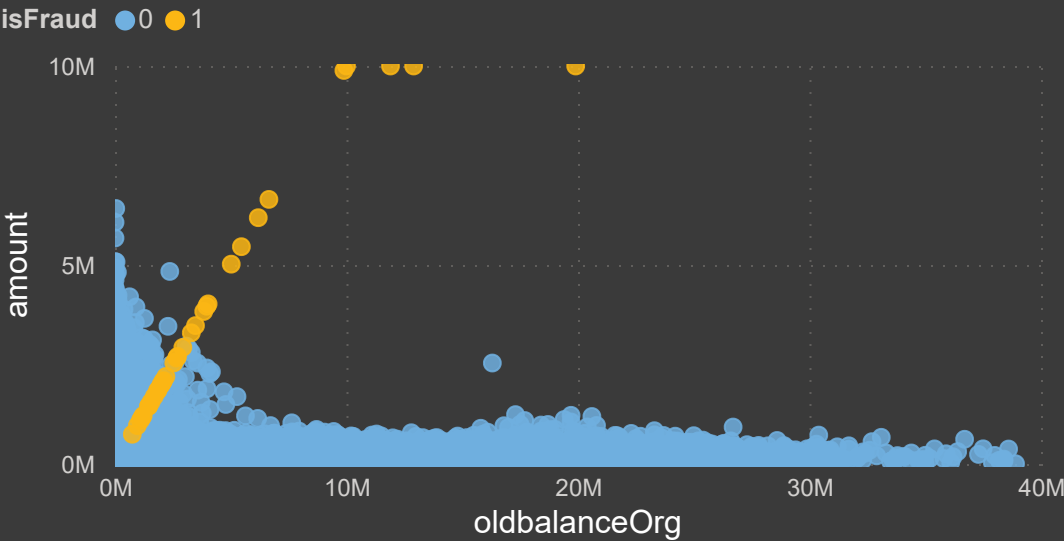percent_fraud_tx

Sum of amount by type

VISUALIZATIONS

Count of amount by nameDest

isFraud, oldbalanceOrg and amount

Sum of amount by step and type
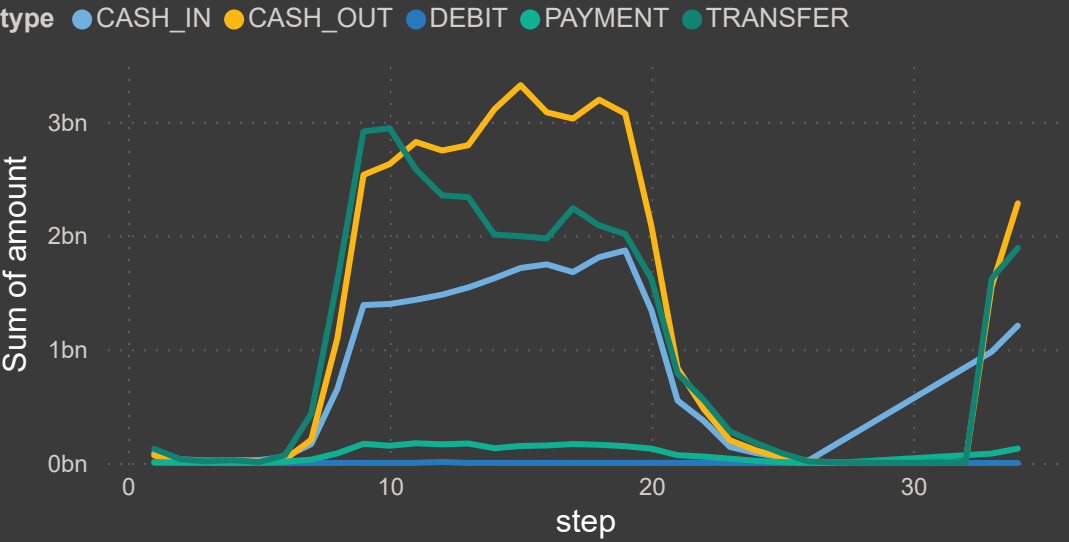
nameDest	Count of amount ▼
C185805228	2
C200064275	2
C410033330	2
Total	**6**

Anomaly Detection in Credit Card Transactions Dashboard

Average transaction amount for normal transaction
161.50K

Average transaction amount for fraudulent transactions
881.59K

Credit card transactions recorded
631K

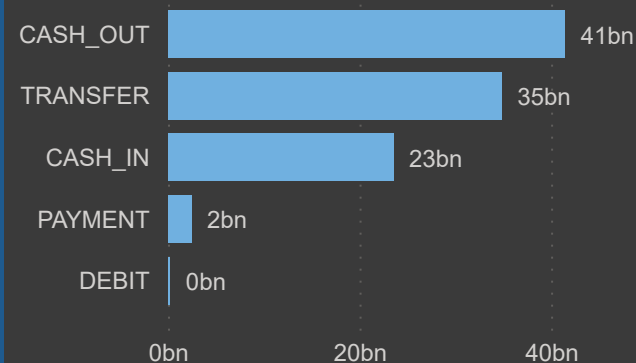## Fraudulent credit card transactions
383

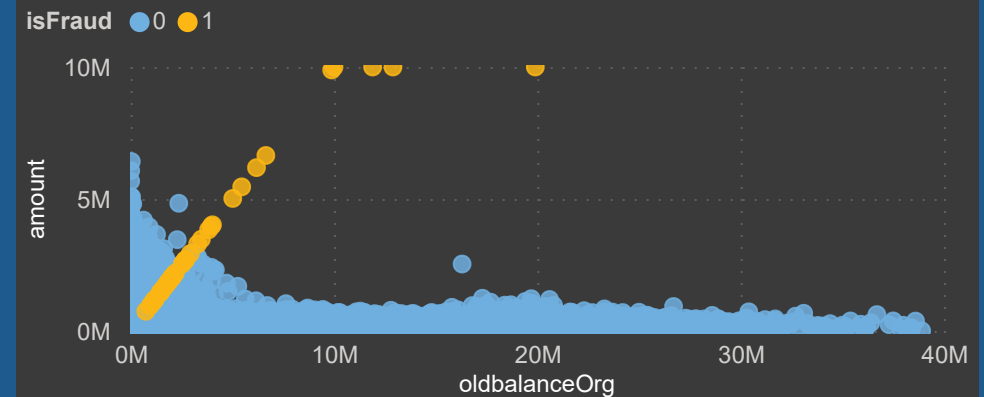## Highest Fraudulent transaction amount recorded
10.00M

Difference in the max txn amount for normal and fraudulent txn
3.58M

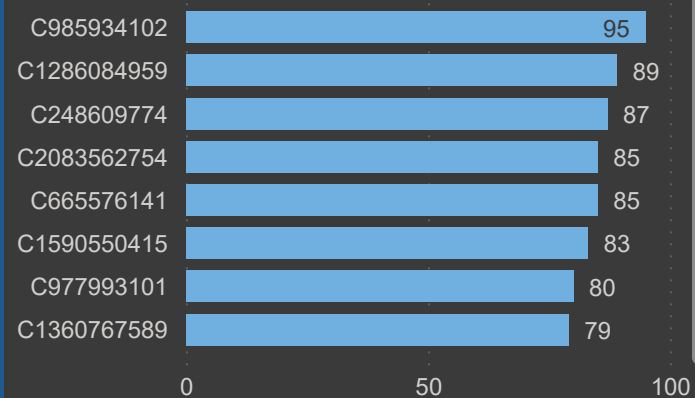## Distribution of transaction amounts

Type	Amount
CASH_OUT	41bn
TRANSFER	35bn
CASH_IN	23bn
PAYMENT	2bn
DEBIT	0bn

(x-axis: 0bn, 20bn, 40bn)

OldbalanceOrg VS amount columns

isFraud ● 0 ● 1

amount (y-axis: 0M, 5M, 10M) vs oldbalanceOrg (x-axis: 0M, 10M, 20M, 30M, 40M)

Percentage of fraudulent transactions
6.07%

Merchants with a high occurrence of fraudulent txn

nameDest	Count of amount
C185805228	2
C200064275	2
C410033330	2
Total	**6**

Merchants with highest number of transactions

Merchant	Count
C985934102	95
C1286084959	89
C248609774	87
C2083562754	85
C665576141	85
C1590550415	83
C977993101	80
C1360767589	79

(x-axis: 0, 50, 100)

Transaction amount over time

type ● CASH_IN ● CASH_OUT ● DEBIT ● PAYMENT ● TRANSFER

Sum of amount (y-axis: 0bn, 1bn, 2bn, 3bn) vs step (x-axis: 0, 10, 20, 30)
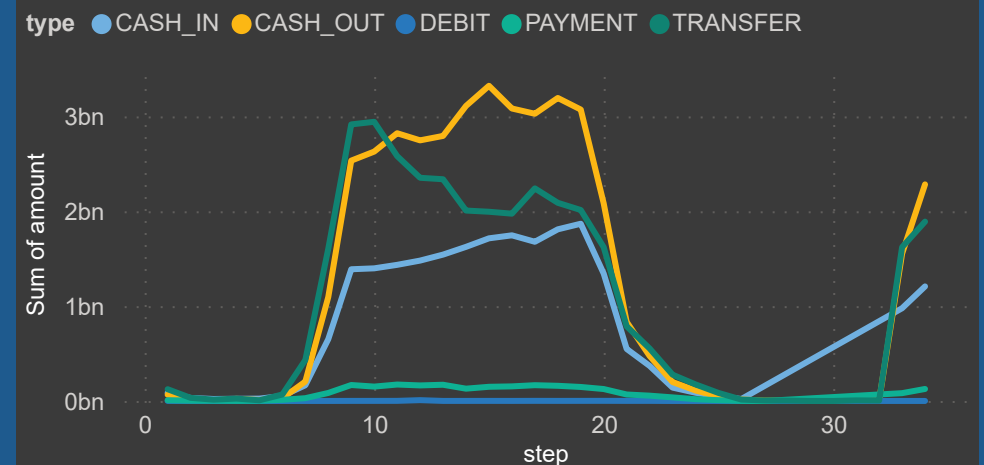
SUMMARY AND CONCLUSION

After completion of the project, following points can be inferred:-

- The average transaction amount for normal transaction is $161500.50 whereas for fraudulent it is $881588.20
- Total number of credit card transaction in the dataset is 630894among which fraudulent credit transactions are 383
- The highest fraud transaction amount recorded was $10000000
- Difference between maximum transaction amount for normal transactions compared to fraudulent transactions is $3580164.73
- CASH_OUT transactions are done most compared to other types
- Merchant C985934102 has the highest number of transaction
- Some outliers can be seen in the scatter plot between oldbalanceOrg and amount
- Spikes can be observed on plotting line chat between amount and step
- Merchants C185805228, C200064275, C41003330 have high occurrence of fraudulent transactions
- The charts used in the visualizations are best to visualize the problem as these charts helps us get a better understanding of the dataset and the trends