BANKING TRANSACTIONS ANALYSIS REPORT

1. Introduction

This project focuses on analysing a sample banking transaction dataset using Power BI. The main objective of the report is to understand customer behaviour, transaction patterns, channels used for banking, and overall monetary flow within the dataset.
To prepare the dataset, an XML file was created manually with 20 transaction records, covering details such as Transaction ID, Customer Name, Customer ID, City, Transaction Date, Transaction Type, Channel, and Amount.

Power BI was used to clean the data, build measures, and create an interactive dashboard that helps in identifying trends and insights with ease.

2. Dataset Description

The dataset contains 20 transactions performed by different customers across various Indian cities. Each record includes the following fields:

- **TransactionID** – Unique ID for each transaction
- **CustomerID** – Unique customer code
- **CustomerName** – Name of the customer
- **City** – City from which the transaction was made
- **Date** – Transaction date
- **Type** – Deposit or Withdrawal
- **Channel** – Mode of transaction (Online, Mobile, ATM, Branch)
- **Amount** – Value of transaction

The dataset was created in **XML format**, imported into Power BI using the “Get Data → XML” option, and then cleaned and converted into proper data types inside Power Query.

3. Data Cleaning and Preparation

In Power Query, the following steps were performed:

1. **Changed Data Types**
    - Date column → Date type
    - Amount column → Whole number
    - Other columns → Text
2. **Removed unnecessary fields** and ensured consistency in formatting.
3. **Loaded the cleaned data** into Power BI for visualisation.

4. Measures Created in Power BI

To analyse the dataset, the following DAX measures were created:

a) Total Amount
Total Amount = SUM('Transaction'[Amount])
b) Number of Transactions
NumTransactions = COUNTROWS('Transaction')
c) Average Transaction Amount
AvgAmount = AVERAGE('Transaction'[Amount])

5. Dashboard Overview

The final dashboard includes the following visuals:

1. KPI Cards

- Total Amount – Shows the total monetary value of all transactions
- NumTransactions – Number of transactions (20 in this dataset)
- AvgAmount – Average transaction value

These KPIs give a quick overview of how the bank is performing in terms of transaction count and value.

2. Donut Chart – Transactions by Channel

This visual shows how customers prefer to perform their transactions.
Channels include Online, Mobile, ATM, and Branch.
The donut clearly displays which channel has the highest number of transactions.

3. Column Chart – Total Amount by Customer

This chart ranks customers based on the total amount transacted.
It helps identify high-value customers and the distribution of transaction amounts across the customer base.

4. Line Chart – Total Amount by Year and Month

Although the dataset contains January transactions, the line chart visualises the monthly trend.
This becomes more meaningful when additional months are added later.

5. Detailed Transaction Table

A table listing all 20 transactions with:
Transaction ID, Date, Customer Name, City, Type, Channel, and Amount.
This helps in reviewing individual transactions clearly.

6. Interactive Slicers

To enhance interactivity, slicers were added for:

- **City**
- **Channel**
- **Date**

These allow the user to filter the entire dashboard based on specific criteria.

6. Key Insights

From the dashboard:

- Customers show a strong preference for **Online and ATM** transactions.
- Certain customers consistently perform higher-value transactions.
- Most transactions fall between early January dates since the dataset represents one month.
- The interactive filters help observe how transactions vary across different cities and channels.

7. Conclusion

The Banking Transactions Analysis Dashboard provides a clear and interactive way to understand transaction patterns.
Using Power BI with XML-based data demonstrates how even small datasets can deliver meaningful insights through proper modelling and visualisation.

The project also showcases skills in:

- Data creation
- XML handling
- Power Query transformation
- DAX measure creation
- Dashboard design
- Analytical storytelling