**Project:** Credit card transaction and customer expense report for a Banking/financial client.

**Objective:** To create an interactive dashboard to get insight of the weekly trend on the factors affecting the revenue generation using different Key performance Indicators (KPI) and charts enabling stakeholders to monitor and analyse credit card operations effectively.

**Task performed:**

1. Created a database using MySQL to import the credit card and customer data into SQL server using CSV file.
2. Passing data from SQL server to PowerBI to get and auto update the data.
3. Data preparation and cleaning using DAX formula to avoid any kind of redundancy and error in report.
4. Created a dashboard to get the meaningful insight.
5. Report publishing.

**Insights:**

1. Total revenue generated in the financial year is **$55M**
2. Total transaction during this period is $**656k** which created a transaction of close to **$45M** and interest earned is close to **$8M** with a Customer satisfaction rating of **3.19/5**.
3. Transaction through blue card generated around **$4.6M** revenue which is **83%** of total revenue.
4. We also find that how different factors like education, expenditure type and use of card has affected the revenue.
5. Top 5 states that contributed in revenue generation are Texas, New York, New Jersey, Florida and Canada.
6. In customer analysis we can see the contribution of different genders in revenue generation as well.

**Conclusion:** This report indicates the weekly trend of revenue generation and expense pattern of customer based on different factors. That will help the client to identify their potential customers and will help to promote offer and benefits as per the trend.

**-- SQL Query to create and import data from csv files:**

-- 0. **Create a database**

CREATE DATABASE ccdb;

-- 1. **Create cc\_detail table**

CREATE TABLE cc\_detail (

Client\_Num INT,

Card\_Category VARCHAR(20),

Annual\_Fees INT,

Activation\_30\_Days INT,

Customer\_Acq\_Cost INT,

Week\_Start\_Date DATE,

Week\_Num VARCHAR(20),

Qtr VARCHAR(10),

current\_year INT,

Credit\_Limit DECIMAL(10,2),

Total\_Revolving\_Bal INT,

Total\_Trans\_Amt INT,

Total\_Trans\_Ct INT,

Avg\_Utilization\_Ratio DECIMAL(10,3),

Use\_Chip VARCHAR(10),

Exp\_Type VARCHAR(50),

Interest\_Earned DECIMAL(10,3),

Delinquent\_Acc VARCHAR(5)

);

-- 2. **Create cc\_detail table**

CREATE TABLE cust\_detail (

Client\_Num INT,

Customer\_Age INT,

Gender VARCHAR(5),

Dependent\_Count INT,

Education\_Level VARCHAR(50),

Marital\_Status VARCHAR(20),

State\_cd VARCHAR(50),

Zipcode VARCHAR(20),

Car\_Owner VARCHAR(5),

House\_Owner VARCHAR(5),

Personal\_Loan VARCHAR(5),

Contact VARCHAR(50),

Customer\_Job VARCHAR(50),

Income INT,

Cust\_Satisfaction\_Score INT

);

* **DAX Queries:**
* **TO CREATE AGE GROUP**

AgeGroup = SWITCH(

TRUE(),

'public cust\_detail'[customer\_age] < 30, "20-30",

'public cust\_detail'[customer\_age] >= 30 && 'public cust\_detail'[customer\_age] < 40, "30-40",

'public cust\_detail'[customer\_age] >= 40 && 'public cust\_detail'[customer\_age] < 50, "40-50",

'public cust\_detail'[customer\_age] >= 50 && 'public cust\_detail'[customer\_age] < 60, "50-60",

'public cust\_detail'[customer\_age] >= 60, "60+",

"unknown"

)

* **TO CREATE INCOME GROUP**

IncomeGroup = SWITCH(

TRUE(),

'public cust\_detail'[income] < 35000, "Low",

'public cust\_detail'[income] >= 35000 && 'public cust\_detail'[income] <70000, "Med",

'public cust\_detail'[income] >= 70000, "High",

"unknown"

)

* **CREATING WEEK NUMER**

week\_num2 = WEEKNUM('public cc\_detail'[week\_start\_date])

* **TO GET TOTAL REVENUE**

Revenue = 'public cc\_detail'[annual\_fees] + 'public cc\_detail'[total\_trans\_amt] + 'public cc\_detail'[interest\_earned]

* **FOR CURRENT WEEK REVENUE**

Current\_week\_Reveneue = CALCULATE(SUM('public cc\_detail'[Revenue]),

FILTER(

ALL('public cc\_detail'),

'public cc\_detail'[week\_num2] = MAX('public cc\_detail'[week\_num2])))

* **FOR PREVIOS WEEK REVENUE**

Previous\_week\_Reveneue = CALCULATE(SUM('public cc\_detail'[Revenue]),

FILTER(

ALL('public cc\_detail'),

'public cc\_detail'[week\_num2] = MAX('public cc\_detail'[week\_num2])-1))