**Data Exploration – Check Distinct Values**

**-- Gender Distribution Analysis**

SELECT Gender,

COUNT(Gender) AS TotalCount,

COUNT(Gender) \* 100 / (SELECT COUNT(\*) FROM customer\_data) AS Percentage

FROM customer\_data

GROUP BY Gender;

**-- Contract Type Distribution**

SELECT Contract,

COUNT(Contract) AS TotalCount,

COUNT(Contract) \* 100 / (SELECT COUNT(\*) FROM customer\_data) AS Percentage

FROM customer\_data

GROUP BY Contract;

**-- Customer Status & Revenue Contribution**

SELECT Customer\_Status,

COUNT(Customer\_Status) AS TotalCount,

SUM(IFNULL(Total\_Revenue, 0)) AS Total\_Rev,

SUM(IFNULL(Total\_Revenue, 0)) / (SELECT SUM(IFNULL(Total\_Revenue, 0)) FROM customer\_data) \* 100 AS Rev\_Percentage

FROM customer\_data

GROUP BY Customer\_Status;

**-- State-Wise Customer Distribution**

SELECT State,

COUNT(State) AS TotalCount,

COUNT(State) \* 100 / (SELECT COUNT(\*) FROM customer\_data) AS Percentage

FROM customer\_data

GROUP BY State;

**-- List of Unique Internet Types**

SELECT DISTINCT Internet\_Type

FROM customer\_data;

**Data Exploration – Check Nulls**

SELECT

SUM(CASE WHEN Customer\_ID IS NULL THEN 1 ELSE 0 END) AS Customer\_ID\_Null\_Count,

SUM(CASE WHEN Gender IS NULL THEN 1 ELSE 0 END) AS Gender\_Null\_Count,

SUM(CASE WHEN Age IS NULL THEN 1 ELSE 0 END) AS Age\_Null\_Count,

SUM(CASE WHEN Married IS NULL THEN 1 ELSE 0 END) AS Married\_Null\_Count,

SUM(CASE WHEN State IS NULL THEN 1 ELSE 0 END) AS State\_Null\_Count,

SUM(CASE WHEN Number\_of\_Referrals IS NULL THEN 1 ELSE 0 END) AS Number\_of\_Referrals\_Null\_Count,

SUM(CASE WHEN Tenure\_in\_Months IS NULL THEN 1 ELSE 0 END) AS Tenure\_in\_Months\_Null\_Count,

SUM(CASE WHEN Value\_Deal IS NULL THEN 1 ELSE 0 END) AS Value\_Deal\_Null\_Count,

SUM(CASE WHEN Phone\_Service IS NULL THEN 1 ELSE 0 END) AS Phone\_Service\_Null\_Count,

SUM(CASE WHEN Multiple\_Lines IS NULL THEN 1 ELSE 0 END) AS Multiple\_Lines\_Null\_Count,

SUM(CASE WHEN Internet\_Service IS NULL THEN 1 ELSE 0 END) AS Internet\_Service\_Null\_Count,

SUM(CASE WHEN Internet\_Type IS NULL THEN 1 ELSE 0 END) AS Internet\_Type\_Null\_Count,

SUM(CASE WHEN Online\_Security IS NULL THEN 1 ELSE 0 END) AS Online\_Security\_Null\_Count,

SUM(CASE WHEN Online\_Backup IS NULL THEN 1 ELSE 0 END) AS Online\_Backup\_Null\_Count,

SUM(CASE WHEN Device\_Protection\_Plan IS NULL THEN 1 ELSE 0 END) AS Device\_Protection\_Plan\_Null\_Count,

SUM(CASE WHEN Premium\_Support IS NULL THEN 1 ELSE 0 END) AS Premium\_Support\_Null\_Count,

SUM(CASE WHEN Streaming\_TV IS NULL THEN 1 ELSE 0 END) AS Streaming\_TV\_Null\_Count,

SUM(CASE WHEN Streaming\_Movies IS NULL THEN 1 ELSE 0 END) AS Streaming\_Movies\_Null\_Count,

SUM(CASE WHEN Streaming\_Music IS NULL THEN 1 ELSE 0 END) AS Streaming\_Music\_Null\_Count,

SUM(CASE WHEN Unlimited\_Data IS NULL THEN 1 ELSE 0 END) AS Unlimited\_Data\_Null\_Count,

SUM(CASE WHEN Contract IS NULL THEN 1 ELSE 0 END) AS Contract\_Null\_Count,

SUM(CASE WHEN Paperless\_Billing IS NULL THEN 1 ELSE 0 END) AS Paperless\_Billing\_Null\_Count,

SUM(CASE WHEN Payment\_Method IS NULL THEN 1 ELSE 0 END) AS Payment\_Method\_Null\_Count,

SUM(CASE WHEN Monthly\_Charge IS NULL THEN 1 ELSE 0 END) AS Monthly\_Charge\_Null\_Count,

SUM(CASE WHEN Total\_Charges IS NULL THEN 1 ELSE 0 END) AS Total\_Charges\_Null\_Count,

SUM(CASE WHEN Total\_Refunds IS NULL THEN 1 ELSE 0 END) AS Total\_Refunds\_Null\_Count,

SUM(CASE WHEN Total\_Extra\_Data\_Charges IS NULL THEN 1 ELSE 0 END) AS Total\_Extra\_Data\_Charges\_Null\_Count,

SUM(CASE WHEN Total\_Long\_Distance\_Charges IS NULL THEN 1 ELSE 0 END) AS Total\_Long\_Distance\_Charges\_Null\_Count,

SUM(CASE WHEN Total\_Revenue IS NULL THEN 1 ELSE 0 END) AS Total\_Revenue\_Null\_Count,

SUM(CASE WHEN Customer\_Status IS NULL THEN 1 ELSE 0 END) AS Customer\_Status\_Null\_Count,

SUM(CASE WHEN Churn\_Category IS NULL THEN 1 ELSE 0 END) AS Churn\_Category\_Null\_Count,

SUM(CASE WHEN Churn\_Reason IS NULL THEN 1 ELSE 0 END) AS Churn\_Reason\_Null\_Count

FROM data;

**Remove null and insert the new data into Prod table**

CREATE TABLE IF NOT EXISTS Churn AS

SELECT

Customer\_ID,

Gender,

Age,

Married,

State,

Number\_of\_Referrals,

Tenure\_in\_Months,

IFNULL(Value\_Deal, 'None') AS Value\_Deal,

Phone\_Service,

IFNULL(Multiple\_Lines, 'No') AS Multiple\_Lines,

Internet\_Service,

IFNULL(Internet\_Type, 'None') AS Internet\_Type,

IFNULL(Online\_Security, 'No') AS Online\_Security,

IFNULL(Online\_Backup, 'No') AS Online\_Backup,

IFNULL(Device\_Protection\_Plan, 'No') AS Device\_Protection\_Plan,

IFNULL(Premium\_Support, 'No') AS Premium\_Support,

IFNULL(Streaming\_TV, 'No') AS Streaming\_TV,

IFNULL(Streaming\_Movies, 'No') AS Streaming\_Movies,

IFNULL(Streaming\_Music, 'No') AS Streaming\_Music,

IFNULL(Unlimited\_Data, 'No') AS Unlimited\_Data,

Contract,

Paperless\_Billing,

Payment\_Method,

Monthly\_Charge,

Total\_Charges,

Total\_Refunds,

Total\_Extra\_Data\_Charges,

Total\_Long\_Distance\_Charges,

Total\_Revenue,

Customer\_Status,

IFNULL(Churn\_Category, 'Others') AS Churn\_Category,

IFNULL(Churn\_Reason, 'Others') AS Churn\_Reason

FROM data;

**Create View for Power BI**

Create View vw\_ChurnData as

select \* from churn where Customer\_Status In ('Churned', 'Stayed')

Create View vw\_JoinData as

select \* from churn where Customer\_Status = 'Joined'