**2) Customer Churn & Retention Analytics**

**SQL Queries:**

-- RETRIEVE DATA :

SELECT \*

FROM PWC\_DataAnalytics.dbo.ChurnDataset

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-- DATA TRANSFORMATION or DATA CLEANING :

-- 1) COLUMN TENURE FROM VARCHAR TO INT :

ALTER TABLE ChurnDataset

ALTER COLUMN tenure INT;

-- 2) COLUMN SENIOR CITIZEN FROM VARCHAR TO INT :

ALTER TABLE ChurnDataset

ALTER COLUMN SeniorCitizen INT;

-- 3) COLUMN NUM ADMIN TICKETS FROM VARCHAR TO INT :

ALTER TABLE ChurnDataset

ALTER COLUMN numAdminTickets INT;

-- 4) COLUMN NUM TECH TICKETS FROM VARCHAR TO INT :

ALTER TABLE ChurnDataset

ALTER COLUMN numTEchTickets INT;

-- 5) COLUMN MONTHLY CHARGES FROM VARCHAR TO FLOAT :

ALTER TABLE ChurnDataset

ALTER COLUMN MonthlyCharges FLOAT;

-- 6) COLUMN TOTAL CHARGES FROM VARCHAR TO FLOAT :

ALTER TABLE ChurnDataset

ALTER COLUMN TotalCharges FLOAT;

-- B) TRANSFORMING TENURE MONTH TO YEARS IN NEW COLUMN :

ALTER TABLE PWC\_DataAnalytics.dbo.ChurnDataset

ADD tenure\_years VARCHAR(50);

UPDATE PWC\_DataAnalytics.dbo.ChurnDataset

SET tenure\_years = tenure

UPDATE PWC\_DataAnalytics.dbo.ChurnDataset

SET tenure\_years =

CASE WHEN tenure\_years <= 1 THEN 'Within 1 Month'

WHEN tenure\_years > 1 AND tenure\_years <= 12 THEN '0-1 Year'

WHEN tenure\_years > 12 AND tenure\_years <= 24 THEN '1-2 Year'

WHEN tenure\_years > 24 AND tenure\_years <= 36 THEN '2-3 Year'

WHEN tenure\_years > 36 AND tenure\_years <= 48 THEN '3-4 Year'

WHEN tenure\_years > 48 AND tenure\_years <= 60 THEN '4-5 Year'

WHEN tenure\_years > 60 AND tenure\_years <= 72 THEN '5-6 Year'

ELSE 'Greater than 6 Year'

END

SELECT \*

FROM PWC\_DataAnalytics.dbo.ChurnDataset

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-- ANALYSIS :

SELECT \*

FROM PWC\_DataAnalytics.dbo.ChurnDataset;

-- 1) SUMMARY ANALYSIS :

-- 1.1) TOTAL CUSTOMER COUNT :

SELECT COUNT(customerID) AS Total\_Customer\_Count

FROM PWC\_DataAnalytics.dbo.ChurnDataset;

-- 1.1.1) CUSTOMER COUNT BY CHURN :

SELECT COUNT(customerID) AS Churn\_Customer\_Count

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes';

-- 1.1.2) CUSTOMER COUNT BY TENURE :

SELECT tenure\_years, COUNT(customerID) AS Churn\_Customer\_Count

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY tenure\_years;

---------------------------------------------------------------------------

-- 1.2) CHURN RATE :

SELECT

(COUNT(CASE WHEN Churn = 'Yes' THEN customerID ELSE NULL END) \* 100) / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset) AS Churn\_Rate

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes';

-- 1.2.1) CHURN RATE BY TENURE :

SELECT

tenure\_years,

(SUM(CASE WHEN Churn = 'Yes' THEN 1 ELSE 0 END)) \* 100 / COUNT(DISTINCT customerID) AS Churn\_Rate

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY tenure\_years;

---------------------------------------------------------------------------

-- 1.3) TOTAL ADMIN TICKETS :

SELECT

SUM(numAdminTickets) AS Total\_Admin\_Tickets

FROM PWC\_DataAnalytics.dbo.ChurnDataset;

-- 1.3.1) TOTAL ADMIN TICKETS BY CHURN :

SELECT

Churn,

SUM(CASE WHEN Churn = 'Yes' THEN numAdminTickets

WHEN Churn = 'No' THEN numAdminTickets ELSE NULL END) AS Total\_Admin\_Tickets\_by\_Churn

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes' OR Churn = 'No'

GROUP BY Churn;

-- 1.3.2) TOTAL ADMIN TICKETS BY TENURE :

SELECT

tenure\_years,

SUM(numAdminTickets) AS Total\_Admin\_Tickets\_by\_Tenure

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY tenure\_years;

---------------------------------------------------------------------------

-- 1.4) TOTAL TECH TICKETS :

SELECT

SUM(numTechTickets) AS Total\_Tech\_Tickets

FROM PWC\_DataAnalytics.dbo.ChurnDataset;

-- 1.4.1) TOTAL TECH TICKETS BY CHURN :

SELECT

Churn,

SUM(CASE WHEN Churn = 'Yes' THEN numTechTickets

WHEN Churn = 'No' THEN numTechTickets

ELSE NULL END) AS Total\_Tech\_Tickets\_by\_Churn

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes' OR Churn = 'No'

GROUP BY Churn;

-- 1.4.2) TOTAL TECH TICKETS BY TENURE :

SELECT

tenure\_years,

SUM(numTechTickets) AS Total\_Tech\_Tickets\_by\_Tenure

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY tenure\_years;

---------------------------------------------------------------------------

-- 1.5) AVERAGE MONTHLY CHARGE :

SELECT ROUND(AVG(MonthlyCharges), 1) AS Average\_Monthly\_Charges

FROM PWC\_DataAnalytics.dbo.ChurnDataset;

-- 1.5.1) AVERAGE MONTHLY CHARGE BY CHURN :

SELECT

Churn,

ROUND(AVG(CASE WHEN Churn = 'Yes' THEN MonthlyCharges

WHEN Churn = 'No' THEN MonthlyCharges

ELSE NULL END), 1) AS Average\_Monthly\_Charges\_by\_Churn

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes' OR Churn = 'No'

GROUP BY Churn;

-- 1.5.2) AVERAGE MONTHLY CHARGE BY TENURE :

SELECT

tenure\_years,

ROUND(AVG(MonthlyCharges), 1) AS Average\_Monthly\_Charges\_by\_Tenure

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY tenure\_years;

---------------------------------------------------------------------------

-- 1.6) TOTAL REVENUE :

SELECT

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset;

-- 1.6.1) TOTAL REVENUE BY CHURN :

SELECT

Churn,

SUM(CASE WHEN Churn = 'Yes' THEN TotalCharges

WHEN Churn = 'No' THEN TotalCharges

ELSE NULL END) AS Total\_Revenue\_by\_Churn

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes' OR Churn = 'No'

GROUP BY Churn;

-- 1.6.2) TOTAL REVENUE BY TENURE :

SELECT

tenure\_years,

SUM(TotalCharges) AS Total\_Revenue\_by\_Tenure

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY tenure\_years;

------------------------------------------------------------------------------------------------------------------------------------------------------

-- 2) CUSTOMER DEMOGRAPHIC SEGMENT :

-- CUSTOMER BY GENDER :

SELECT

gender,

COUNT(DISTINCT customerID) AS Total\_Customer\_Id

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY gender;

-- PERCENT :

SELECT

gender,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY gender;

-- CHURN BY CUSTOMER vs GENDER :

SELECT

gender,

COUNT(DISTINCT customerID) AS Total\_Customer\_Id

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY gender;

-- CHURN RATE BY CUSTOMER vs GENDER :

SELECT

gender,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY gender;

-- REVENUE BY GENDER :

SELECT

gender,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY gender;

--PERCENTAGE :

SELECT

gender,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY gender;

-- CHURN BY REVENUE vs GENDER :

SELECT

gender,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY gender;

-- CHURN RATE BY REVENUE vs GENDER :

SELECT

gender,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY gender;

---------------------------------------------------------------------------

-- CUSTOMER BY SENIOR CITIZEN :

SELECT

SeniorCitizen,

COUNT(DISTINCT customerID) AS Total\_Customer\_Id

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY SeniorCitizen;

-- PERCENT :

SELECT

SeniorCitizen,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY SeniorCitizen;

-- CHURN BY CUSTOMER vs SENIOR CITIZEN :

SELECT

SeniorCitizen,

COUNT(DISTINCT customerID) AS Total\_Customer\_Id

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY SeniorCitizen;

-- CHURN RATE BY CUSTOMER vs SENIOR CITIZEN :

SELECT

SeniorCitizen,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY SeniorCitizen;

-- REVENUE BY SENIOR CITIZEN :

SELECT

SeniorCitizen,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY SeniorCitizen;

--PERCENTAGE :

SELECT

SeniorCitizen,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY SeniorCitizen;

-- CHURN BY REVENUE vs SENIOR CITIZEN :

SELECT

SeniorCitizen,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY SeniorCitizen;

-- CHURN RATE BY REVENUE vs SENIOR CITIZEN :

SELECT

SeniorCitizen,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY SeniorCitizen;

---------------------------------------------------------------------------

-- CUSTOMER BY DEPENDENTS :

SELECT

Dependents,

COUNT(DISTINCT customerID) AS Total\_Customer\_Id

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY Dependents;

-- PERCENT :

SELECT

Dependents,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY Dependents;

-- CHURN BY CUSTOMER vs DEPENDENTS :

SELECT

Dependents,

COUNT(DISTINCT customerID) AS Total\_Customer\_Id

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY Dependents;

-- CHURN RATE BY CUSTOMER vs DEPENDENTS :

SELECT

Dependents,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY Dependents;

-- REVENUE BY DEPENDENTS :

SELECT

Dependents,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY Dependents;

--PERCENTAGE :

SELECT

Dependents,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY Dependents;

-- CHURN BY REVENUE vs DEPENDENTS :

SELECT

Dependents,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY Dependents;

-- CHURN RATE BY REVENUE vs DEPENDENTS :

SELECT

Dependents,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY Dependents;

---------------------------------------------------------------------------

-- CUSTOMER BY PARTNER :

SELECT

Partner,

COUNT(DISTINCT customerID) AS Total\_Customer\_Id

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY Partner;

-- PERCENT :

SELECT

Partner,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY Partner;

-- CHURN BY CUSTOMER vs PARTNER :

SELECT

Partner,

COUNT(DISTINCT customerID) AS Total\_Customer\_Id

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY Partner;

-- CHURN RATE BY CUSTOMER vs PARTNERS :

SELECT

Partner,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY Partner;

-- REVENUE BY PARTNER :

SELECT

Partner,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY Partner;

--PERCENTAGE :

SELECT

Partner,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY Partner;

-- CHURN BY REVENUE vs PARTNER :

SELECT

Partner,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY Partner;

-- CHURN RATE BY REVENUE vs PARTNERS

SELECT

Partner,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY Partner;

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-- 3) SERVICE SEGMENT ANALYSIS :

-- CUSTOMER BY PHONE SERVICE :

SELECT

PhoneService,

COUNT(customerID) AS Total\_Customers

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY PhoneService;

-- PERCENT :

SELECT

PhoneService,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY PhoneService;

-- CHURN BY CUSTOMER vs PHONE SERVICE :

SELECT

PhoneService,

COUNT(customerID) AS Total\_Customers

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY PhoneService;

-- CHURN RATE BY CUSTOMER vs PHONE SERVICE :

SELECT

PhoneService,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY PhoneService;

-- REVENUE BY PHONE SERVICE :

SELECT

PhoneService,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY PhoneService;

--PERCENTAGE :

SELECT

PhoneService,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY PhoneService;

-- CHURN BY REVENUE vs PHONE SERVICE :

SELECT

PhoneService,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY PhoneService;

-- CHURN RATE BY REVENUE vs PHONE SERVICE :

SELECT

PhoneService,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY PhoneService;

---------------------------------------------------------------------------

-- CUSTOMER BY INTERNET SERVICE :

SELECT

InternetService,

COUNT(customerID) AS Total\_Customers

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY InternetService;

-- PERCENT :

SELECT

InternetService,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY InternetService;

-- CHURN BY CUSTOMER vs INTERNET SERVICE :

SELECT

InternetService,

COUNT(customerID) AS Total\_Customers

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY InternetService;

-- CHURN RATE BY CUSTOMER vs INTERNET SERVICE :

SELECT

InternetService,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY InternetService;

-- REVENUE BY INTERNET SERVICE :

SELECT

InternetService,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY InternetService;

--PERCENTAGE :

SELECT

InternetService,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY InternetService;

-- CHURN BY REVENUE vs INTERNET SERVICE :

SELECT

InternetService,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY InternetService;

-- CHURN RATE BY REVENUE vs INTERNET SERVICE :

SELECT

InternetService,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY InternetService;

---------------------------------------------------------------------------

-- CUSTOMER BY MULTIPLE LINES :

SELECT

MultipleLines,

COUNT(customerID) AS Total\_Customers

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY MultipleLines;

-- PERCENT :

SELECT

MultipleLines,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY MultipleLines;

-- CHURN BY CUSTOMER vs MULTIPLE LINES :

SELECT

MultipleLines,

COUNT(customerID) AS Total\_Customers

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY MultipleLines;

-- CHURN RATE BY CUSTOMERS vs MULTIPLE LINES :

SELECT

MultipleLines,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY MultipleLines;

-- REVENUE BY MULTIPLE LINES :

SELECT

MultipleLines,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY MultipleLines;

--PERCENTAGE :

SELECT

MultipleLines,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY MultipleLines;

-- CHURN BY REVENUE vs MULTIPLE LINES :

SELECT

MultipleLines,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY MultipleLines;

-- CHURN RATE BY REVENUE vs MULTIPLE LINES :

SELECT

MultipleLines,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY MultipleLines;

---------------------------------------------------------------------------

-- CUSTOMER BY STREAMING TVs :

SELECT

StreamingTV,

COUNT(customerID) AS Total\_Customers

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY StreamingTV;

-- PERCENT :

SELECT

StreamingTV,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY StreamingTV;

-- CHURN BY CUSTOMER vs STREAMING TVs :

SELECT

StreamingTV,

COUNT(customerID) AS Total\_Customers

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY StreamingTV;

-- CHURN RATE BY CUSTOMERS vs STREAMING TVs :

SELECT

StreamingTV,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY StreamingTV;

-- REVENUE BY STREAMING TVs :

SELECT

StreamingTV,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY StreamingTV;

--PERCENTAGE :

SELECT

StreamingTV,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY StreamingTV;

-- CHURN BY REVENUE vs STREAMING TVs :

SELECT

StreamingTV,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY StreamingTV;

-- CHURN RATE BY REVENUE vs STREAMING TVs :

SELECT

StreamingTV,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY StreamingTV;

---------------------------------------------------------------------------

-- CUSTOMER BY STREAMING MOVIES :

SELECT

StreamingMovies,

COUNT(customerID) AS Total\_Customers

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY StreamingMovies;

-- PERCENT :

SELECT

StreamingMovies,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY StreamingMovies;

-- CHURN BY CUSTOMER vs STREAMING MOVIES :

SELECT

StreamingMovies,

COUNT(customerID) AS Total\_Customers

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY StreamingMovies;

-- CHURN RATE BY CUSTOMERS vs STREAMING MOVIES :

SELECT

StreamingMovies,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY StreamingMovies;

-- REVENUE BY STREAMING MOVIES :

SELECT

StreamingMovies,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY StreamingMovies;

--PERCENTAGE :

SELECT

StreamingMovies,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY StreamingMovies;

-- CHURN BY REVENUE vs STREAMING MOVIES :

SELECT

StreamingMovies,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY StreamingMovies;

-- CHURN RATE BY REVENUE vs STREAMING MOVIES :

SELECT

StreamingMovies,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY StreamingMovies;

---------------------------------------------------------------------------

-- CUSTOMER BY ONLINE SECURITY :

SELECT

OnlineSecurity,

COUNT(customerID) AS Total\_Customers

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY OnlineSecurity;

-- PERCENT :

SELECT

OnlineSecurity,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY OnlineSecurity;

-- CHURN BY CUSTOMER vs ONLINE SECURITY :

SELECT

OnlineSecurity,

COUNT(customerID) AS Total\_Customers

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY OnlineSecurity;

-- CHURN RATE BY CUSTOMERS vs ONLINE SECURITY :

SELECT

OnlineSecurity,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY OnlineSecurity;

-- REVENUE BY ONLINE SECURITY :

SELECT

OnlineSecurity,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY OnlineSecurity;

--PERCENTAGE :

SELECT

OnlineSecurity,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY OnlineSecurity;

-- CHURN BY REVENUE vs ONLINE SECURITY :

SELECT

OnlineSecurity,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY OnlineSecurity;

-- CHURN RATE BY REVENUE vs ONLINE SECURITY :

SELECT

OnlineSecurity,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY OnlineSecurity;

---------------------------------------------------------------------------

-- CUSTOMER BY ONLINE BACKUP :

SELECT

OnlineBackup,

COUNT(customerID) AS Total\_Customers

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY OnlineBackup;

-- PERCENT :

SELECT

OnlineBackup,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY OnlineBackup;

-- CHURN BY CUSTOMER vs ONLINE BACKUP :

SELECT

OnlineBackup,

COUNT(customerID) AS Total\_Customers

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY OnlineBackup;

-- CHURN RATE BY CUSTOMERS vs ONLINE BACKUP :

SELECT

OnlineBackup,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY OnlineBackup;

-- REVENUE BY ONLINE SECURITY :

SELECT

OnlineBackup,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY OnlineBackup;

--PERCENTAGE :

SELECT

OnlineBackup,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY OnlineBackup;

-- CHURN BY REVENUE vs ONLINE BACKUP :

SELECT

OnlineBackup,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY OnlineBackup;

-- CHURN RATE BY REVENUE vs ONLINE BACKUP :

SELECT

OnlineBackup,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY OnlineBackup;

---------------------------------------------------------------------------

-- CUSTOMER BY DEVICE PROTECTION :

SELECT

DeviceProtection,

COUNT(customerID) AS Total\_Customers

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY DeviceProtection;

-- PERCENT :

SELECT

DeviceProtection,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY DeviceProtection;

-- CHURN BY CUSTOMER vs DEVICE PROTECTION :

SELECT

DeviceProtection,

COUNT(customerID) AS Total\_Customers

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY DeviceProtection;

-- CHURN RATE BY CUSTOMERS vs DEVICE PROTECTION :

SELECT

DeviceProtection,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY DeviceProtection;

-- REVENUE BY DEVICE PROTECTION :

SELECT

DeviceProtection,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY DeviceProtection;

--PERCENTAGE :

SELECT

DeviceProtection,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY DeviceProtection;

-- CHURN BY REVENUE vs DEVICE PROTECTION :

SELECT

DeviceProtection,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY DeviceProtection;

-- CHURN RATE BY REVENUE vs DEVICE PROTECTION :

SELECT

DeviceProtection,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY DeviceProtection;

---------------------------------------------------------------------------

-- CUSTOMER BY TECH SUPPORT :

SELECT

TechSupport,

COUNT(customerID) AS Total\_Customers

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY TechSupport;

-- PERCENT :

SELECT

TechSupport,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY TechSupport;

-- CHURN BY CUSTOMER vs TECH SUPPORT :

SELECT

TechSupport,

COUNT(customerID) AS Total\_Customers

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY TechSupport;

-- CHURN RATE BY CUSTOMERS vs TECH SUPPORT :

SELECT

TechSupport,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY TechSupport;

-- REVENUE BY TECH SUPPORT :

SELECT

TechSupport,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY TechSupport;

--PERCENTAGE :

SELECT

TechSupport,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY TechSupport;

-- CHURN BY REVENUE vs TECH SUPPORT :

SELECT

TechSupport,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY TechSupport;

-- CHURN RATE BY REVENUE vs TECH SUPPORT :

SELECT

TechSupport,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY TechSupport;

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-- 4) ACCOUNT TYPE SEGMENT :

-- CUSTOMER BY PAPERLESS BILLING

SELECT

PaperlessBilling,

COUNT(DISTINCT customerID) AS Total\_Customers

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY PaperlessBilling;

-- PERCENT :

SELECT

PaperlessBilling,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY PaperlessBilling;

-- CUSTOMER BY PAPERLESS BILLING vs CHURN

SELECT

PaperlessBilling,

COUNT(DISTINCT customerID) AS Total\_Customers

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY PaperlessBilling;

-- CHURN RATE BY CUSTOMERS vs PAPERLESS BILLING :

SELECT

PaperlessBilling,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY PaperlessBilling;

-- REVENUE BY PAPERLESS BILLING :

SELECT

PaperlessBilling,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY PaperlessBilling;

--PERCENTAGE :

SELECT

PaperlessBilling,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY PaperlessBilling;

-- REVENUE BY PAPERLESS BILLING vs CHURN:

SELECT

PaperlessBilling,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY PaperlessBilling;

-- CHURN RATE BY REVENUE vs PAPERLESS BILLING :

SELECT

PaperlessBilling,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY PaperlessBilling;

---------------------------------------------------------------------------

-- CUSTOMER BY CONTRACT

SELECT

Contract,

COUNT(DISTINCT customerID) AS Total\_Customers

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY Contract;

-- PERCENT :

SELECT

Contract,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY Contract;

-- CUSTOMER BY CONTRACT vs CHURN

SELECT

Contract,

COUNT(DISTINCT customerID) AS Total\_Customers

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY Contract;

-- CHURN RATE BY CUSTOMERS vs CONTRACT :

SELECT

Contract,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY Contract;

-- REVENUE BY CONTRACT :

SELECT

Contract,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY Contract;

--PERCENTAGE :

SELECT

Contract,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY Contract;

-- REVENUE BY CONTRACT vs CHURN:

SELECT

Contract,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY Contract;

-- CHURN RATE BY REVENUE vs CONTRACT :

SELECT

Contract,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY Contract;

---------------------------------------------------------------------------

-- CUSTOMER BY PAYMENT METHOD :

SELECT

PaymentMethod,

COUNT(DISTINCT customerID) AS Total\_Customers

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY PaymentMethod;

-- PERCENT :

SELECT

PaymentMethod,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY PaymentMethod;

-- CUSTOMER BY PAYMENT METHOD vs CHURN

SELECT

PaymentMethod,

COUNT(DISTINCT customerID) AS Total\_Customers

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY PaymentMethod;

-- CHURN RATE BY CUSTOMERS vs PAYMENT METHOD :

SELECT

PaymentMethod,

CEILING(COUNT(DISTINCT customerID) \* 100 / (SELECT COUNT(DISTINCT customerID) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Customer

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY PaymentMethod;

-- REVENUE BY PAYMENT METHOD :

SELECT

PaymentMethod,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY PaymentMethod;

--PERCENTAGE :

SELECT

PaymentMethod,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset)) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

GROUP BY PaymentMethod;

-- REVENUE BY PAYMENT METHOD vs CHURN:

SELECT

PaymentMethod,

SUM(TotalCharges) AS Total\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY PaymentMethod;

-- CHURN RATE BY REVENUE vs PAYMENT METHOD :

SELECT

PaymentMethod,

CEILING(SUM(TotalCharges) \* 100 / (SELECT SUM(TotalCharges) FROM PWC\_DataAnalytics.dbo.ChurnDataset WHERE Churn = 'Yes')) AS Rate\_by\_Revenue

FROM PWC\_DataAnalytics.dbo.ChurnDataset

WHERE Churn = 'Yes'

GROUP BY PaymentMethod;

---------------------------------------------------------------------------

SELECT \* FROM PWC\_DataAnalytics.dbo.ChurnDataset

**Power Bi DAX:**

1. Total Customer = DISTINCTCOUNT(CustomerChurnDatset[customerID])
2. Churn Rate = COUNTROWS(FILTER(CustomerChurnDatset, CustomerChurnDatset[Churn] = "Yes")) / COUNTROWS(CustomerChurnDatset)
3. Average Monthly Charges = AVERAGE(CustomerChurnDatset[MonthlyCharges])
4. Total Revenue = SUM(CustomerChurnDatset[TotalCharges])
5. Male\_Count = COUNTROWS(FILTER(CustomerChurnDatset, CustomerChurnDatset[gender] = "Male"))
6. Male\_Revenue\_Rate = DIVIDE(SUMX(FILTER(CustomerChurnDatset, CustomerChurnDatset[gender] = "Male"), CustomerChurnDatset[TotalCharges]), SUM(CustomerChurnDatset[TotalCharges]))
7. Female\_Count = COUNTROWS(FILTER(CustomerChurnDatset, CustomerChurnDatset[gender] = "Female"))
8. Female\_Revenue\_Rate = DIVIDE(SUMX(FILTER(CustomerChurnDatset, CustomerChurnDatset[gender] = "Female"), CustomerChurnDatset[TotalCharges]), SUM(CustomerChurnDatset[TotalCharges]))
9. SeniorCitizen\_Count = COUNTROWS(FILTER(CustomerChurnDatset, CustomerChurnDatset[SeniorCitizen] = "Yes"))
10. SeniorCitizen\_Revenue\_Rate = DIVIDE(SUMX(FILTER(CustomerChurnDatset, CustomerChurnDatset[SeniorCitizen] = "Yes"), CustomerChurnDatset[TotalCharges]), SUM(CustomerChurnDatset[TotalCharges]))
11. Dependents\_Count = COUNTROWS(FILTER(CustomerChurnDatset, CustomerChurnDatset[Dependents] = "Yes"))
12. Dependents\_Revenue\_Rate = DIVIDE(SUMX(FILTER(CustomerChurnDatset, CustomerChurnDatset[Dependents] = "Yes"), CustomerChurnDatset[TotalCharges]), SUM(CustomerChurnDatset[TotalCharges]))
13. DSL Customer Rate = DIVIDE(COUNTROWS(FILTER(CustomerChurnDatset, CustomerChurnDatset[InternetService] = "DSL")), COUNTROWS(CustomerChurnDatset))
14. DSL Revenue Rate = DIVIDE(SUMX(FILTER(CustomerChurnDatset, CustomerChurnDatset[InternetService] = "DSL"), CustomerChurnDatset[TotalCharges]), SUM(CustomerChurnDatset[TotalCharges]))
15. Fiber Optic Customer Rate = DIVIDE(COUNTROWS(FILTER(CustomerChurnDatset, CustomerChurnDatset[InternetService] = "Fiber optic")), COUNTROWS(CustomerChurnDatset))
16. Fiber Optics Revenue Rate = DIVIDE(SUMX(FILTER(CustomerChurnDatset, CustomerChurnDatset[InternetService] = "Fiber optic"), CustomerChurnDatset[TotalCharges]), SUM(CustomerChurnDatset[TotalCharges]))
17. Device Protection Customer Rate = DIVIDE(COUNTROWS(FILTER(CustomerChurnDatset, CustomerChurnDatset[DeviceProtection] = "Yes")), COUNTROWS(CustomerChurnDatset))
18. Device Protection Revenue Rate = DIVIDE(SUMX(FILTER(CustomerChurnDatset, CustomerChurnDatset[DeviceProtection] = "Yes"), CustomerChurnDatset[TotalCharges]), SUM(CustomerChurnDatset[TotalCharges]))
19. Multiplie Lines Customer Rate = DIVIDE(COUNTROWS(FILTER(CustomerChurnDatset, CustomerChurnDatset[MultipleLines] = "Yes")), COUNTROWS(CustomerChurnDatset))
20. Multiplie Lines Revenue Rate = DIVIDE(SUMX(FILTER(CustomerChurnDatset, CustomerChurnDatset[MultipleLines] = "Yes"), CustomerChurnDatset[TotalCharges]), SUM(CustomerChurnDatset[TotalCharges]))
21. Online Backup Customer Rate = DIVIDE(COUNTROWS(FILTER(CustomerChurnDatset, CustomerChurnDatset[OnlineBackup] = "Yes")), COUNTROWS(CustomerChurnDatset))
22. Online Backup Revenue Rate = DIVIDE(SUMX(FILTER(CustomerChurnDatset, CustomerChurnDatset[OnlineBackup] = "Yes"), CustomerChurnDatset[TotalCharges]), SUM(CustomerChurnDatset[TotalCharges]))
23. Online Security Customer Rate = DIVIDE(COUNTROWS(FILTER(CustomerChurnDatset, CustomerChurnDatset[OnlineSecurity] = "Yes")), COUNTROWS(CustomerChurnDatset))
24. Online Security Revenue Rate = DIVIDE(SUMX(FILTER(CustomerChurnDatset, CustomerChurnDatset[OnlineSecurity] = "Yes"), CustomerChurnDatset[TotalCharges]), SUM(CustomerChurnDatset[TotalCharges]))
25. Partners\_Count = COUNTROWS(FILTER(CustomerChurnDatset, CustomerChurnDatset[Partner] = "Yes"))
26. Partners\_Revenue\_Rate = DIVIDE(SUMX(FILTER(CustomerChurnDatset, CustomerChurnDatset[Partner] = "Yes"), CustomerChurnDatset[TotalCharges]), SUM(CustomerChurnDatset[TotalCharges]))
27. PhoneService Customer Rate = DIVIDE(COUNTROWS(FILTER(CustomerChurnDatset, CustomerChurnDatset[PhoneService] = "Yes")), COUNTROWS(CustomerChurnDatset))
28. PhoneService Revenue Rate = DIVIDE(SUMX(FILTER(CustomerChurnDatset, CustomerChurnDatset[PhoneService] = "Yes"), CustomerChurnDatset[TotalCharges]), SUM(CustomerChurnDatset[TotalCharges]))
29. Streaming Movies Customer Rate = DIVIDE(COUNTROWS(FILTER(CustomerChurnDatset, CustomerChurnDatset[StreamingMovies] = "Yes")), COUNTROWS(CustomerChurnDatset))
30. Streaming Movies Revenue Rate = DIVIDE(SUMX(FILTER(CustomerChurnDatset, CustomerChurnDatset[StreamingMovies] = "Yes"), CustomerChurnDatset[TotalCharges]), SUM(CustomerChurnDatset[TotalCharges]))
31. Streaming TVs Customer Rate = DIVIDE(COUNTROWS(FILTER(CustomerChurnDatset, CustomerChurnDatset[StreamingTV] = "Yes")), COUNTROWS(CustomerChurnDatset))
32. Streaming TVs Revenue Rate = DIVIDE(SUMX(FILTER(CustomerChurnDatset, CustomerChurnDatset[StreamingTV] = "Yes"), CustomerChurnDatset[TotalCharges]), SUM(CustomerChurnDatset[TotalCharges]))
33. Tech Support Customer Rate = DIVIDE(COUNTROWS(FILTER(CustomerChurnDatset, CustomerChurnDatset[TechSupport] = "Yes")), COUNTROWS(CustomerChurnDatset))
34. Tech Support Revenue Rate = DIVIDE(SUMX(FILTER(CustomerChurnDatset, CustomerChurnDatset[TechSupport] = "Yes"), CustomerChurnDatset[TotalCharges]), SUM(CustomerChurnDatset[TotalCharges]))