

```
-- BUSINESS QUERIES
/*OVERALL CHURN RATE*/
SELECT COUNT(*) AS TOTAL_CUSTOMER,
SUM(CASE WHEN CHURN = 'YES' THEN 1 ELSE 0 END) AS CHURNED_CUSTOMERS,
ROUND((SUM(CASE WHEN CHURN = 'YES' THEN 1 ELSE 0 END) * 100.0 / COUNT(*)),1)AS CHURNED_PERCENTAGE
FROM telco_datasets;

-- CHURN BY CONTRACT TYPE
SELECT
COUNT(*) AS total_customers,
SUM(CASE WHEN Contract = 'Month-to-month' AND Churn = 'Yes' THEN 1 ELSE 0 END) AS monthly_churned,
SUM(CASE WHEN Contract = 'One year' AND Churn = 'Yes' THEN 1 ELSE 0 END) AS oneyear_churned,
SUM(CASE WHEN Contract = 'Two year' AND Churn = 'Yes' THEN 1 ELSE 0 END) AS twoyear_churned,
ROUND((SUM(CASE WHEN Contract = 'Month-to-month' AND Churn = 'Yes' THEN 1 ELSE 0 END) * 100.0 /
SUM(CASE WHEN Contract = 'Month-to-month' THEN 1 ELSE 0 END)), 2) AS monthly_churn_rate,
ROUND((SUM(CASE WHEN Contract = 'One year' AND Churn = 'Yes' THEN 1 ELSE 0 END) * 100.0 /
SUM(CASE WHEN Contract = 'One year' THEN 1 ELSE 0 END)), 2) AS oneyear_churn_rate,
-- revenue by churn status
select churn,
count(*) as customers,
round(sum(monthlycharges),2) as monthly_revenue,
round(sum(totalcharges),2) as total_revenue
from telco_datasets
group by churn;

-- revenue by contract typec [cant use total_revenue because of monthly subscribers]
SELECT
Contract,
ROUND(SUM(MonthlyCharges), 2) AS monthly_revenue,
ROUND(SUM(CASE WHEN Churn = 'Yes' THEN MonthlyCharges END), 2) AS monthly_revenue_at_risk
FROM telco_datasets
GROUP BY Contract;
```

```
114 |
115 -- REVEUE BY PAYMENT METHOD
116 • select
117 paymentmethod,
118 round(sum(totalcharges),2) as Total_revenue,
119 round(sum(case when churn = 'yes' then totalcharges else 0 end),2) as revenue_at_risk,
120 count(*) as total_customers,
121 sum(case when churn = 'yes' then 1 else 0 end) as churned_customers,
122 round((sum(case when churn = 'yes' then 1 else 0 end) * 100.0 / count(*)),2) as churn_rate_percent
123 from telco_datasets
124 group by PaymentMethod
125 order by churn_rate_percent desc;
126
127
128 • SELECT * FROM telco_datasets;
129
130 -- monthly recurring revenue -
131 • select
132 count(*) as total_customer_charged_monthly,
133 round(sum(MonthlyCharges),2) as total_monthly_revenue,
134 round((sum(case when churn = 'yes' then monthlycharges else 0 end )),2) as month_month_revenue_at_risk,
135 round((sum(case when  churn = 'no' then monthlycharges else 0 end )),2) as month_month_revenue_not_at_risk
136 from telco_datasets;
137
-- chuned * 100/ total customer [FOR PERCENTAGES]
/*
* CHURN RATE BY SPECIFIC SERVICE COMBINATIONS */
SELECT
    internetservice,
    phoneservice,
    multiplelines,
    OnlineBackup, OnlineSecurity, DeviceProtection, TechSupport, StreamingMovies, StreamingTV,
    COUNT(customerID) AS total_customers,
    ROUND((SUM(CASE WHEN churn = 'Yes' THEN 1 ELSE 0 END) * 100.0 / COUNT(customerID)), 2) AS Churned_percentage
FROM
    telco_datasets
GROUP BY
    phoneservice, multiplelines, internetservice, OnlineBackup, OnlineSecurity, DeviceProtection, TechSupport, StreamingMovies, StreamingTV
ORDER BY
    Churned_percentage DESC;
|
| select* from telco_datasets;
```

```

    ROUND((SUM(CASE WHEN Contract = 'Two year' AND Churn = 'Yes' THEN 1 ELSE 0 END) * 100.0 /
          SUM(CASE WHEN Contract = 'Two year' THEN 1 ELSE 0 END)), 2) AS twoyear_churn_rate

FROM telco_datasets;

-- CHURN BY TENURE GROUPS
-- 0-5, 6-11, 12-23, 24-above[new,early,1year,loyal]

• SELECT
    COUNT(*) AS total_customers,

    SUM(CASE WHEN tenure < 6 AND Churn = 'Yes' THEN 1 ELSE 0 END) AS Below_6months_churned,
    SUM(CASE WHEN tenure >= 6 AND tenure < 12 AND Churn = 'Yes' THEN 1 ELSE 0 END) AS Between_6_12months_churned,
    SUM(CASE WHEN tenure >= 12 AND tenure < 24 AND Churn = 'Yes' THEN 1 ELSE 0 END) AS Between_12_24months_churned,
    SUM(CASE WHEN tenure >= 24 AND Churn = 'Yes' THEN 1 ELSE 0 END) AS Above_24months_churned,

    -- Churn rates per group
    ROUND((SUM(CASE WHEN tenure < 6 AND Churn = 'Yes' THEN 1 ELSE 0 END) * 100.0 /
          SUM(CASE WHEN tenure < 6 THEN 1 ELSE 0 END)), 2) AS Below_6months_churn_rate,
    ROUND((SUM(CASE WHEN tenure >= 6 AND tenure < 12 AND Churn = 'Yes' THEN 1 ELSE 0 END) * 100.0 /
          SUM(CASE WHEN tenure >= 6 AND tenure < 12 THEN 1 ELSE 0 END)), 2) AS Between_6_12months_churn_rate,
    ROUND((SUM(CASE WHEN tenure >= 12 AND tenure < 24 AND Churn = 'Yes' THEN 1 ELSE 0 END) * 100.0 /
          SUM(CASE WHEN tenure >= 12 AND tenure < 24 THEN 1 ELSE 0 END)), 2) AS Between_12_24months_churn_rate,
    ROUND((SUM(CASE WHEN tenure >= 24 AND Churn = 'Yes' THEN 1 ELSE 0 END) * 100.0 /
          SUM(CASE WHEN tenure >= 24 THEN 1 ELSE 0 END)), 2) AS Above_24months_churn_rate

FROM telco_datasets;

-- REVENUE ANALYSIS [5 stages]
-- total revenue vs lost revenue
SELECT
    round(sum(totalcharges),2) AS total_revenue,
    round(sum(case when churn = 'yes' then TotalCharges else 0 end),2) AS churned_revenue
FROM telco_datasets;

-- revenue by churn status
SELECT
    churn,
    count(*) AS customers,
    round(sum(monthlycharges),2) AS monthly_revenue,
    round(sum(totalcharges),2) AS total_revenue
FROM telco_datasets;

```

```
23
24 * UPDATE telco_datasets
25   SET
26     multiplelines= 'No'
27   where multiplelines = 'No phone service';
28
29 -- RENAMED COLUMN CAUSED BY BOM
30 * ALTER TABLE telco_datasets -- renamed BOM caused by utf-8 csv import, would use notepad++ OR GOOGLE SHEET to change it to normal csv to avoid BOM
31   RENAME COLUMN `in\customerID` TO `customerID`;
32
33 * SELECT * FROM telco_datasets;
34 * SET SQL_SAFE_UPDATES = 1; -- TO TURN ON PREVENTATIVE UNINTENDED DATA UPDATE
35

1 SELECT * FROM telco_datasets;

-- DATA CLEANING
1 SELECT TRIM(gender), TRIM(MultipleLines), TRIM(InternetService), TRIM(OnlineSecurity), TRIM(OnlineBackup), TRIM(DeviceProtection),
      TRIM(TechSupport), TRIM(StreamingTV), TRIM(StreamingMovies), TRIM(Contract), TRIM(PaymentMethod)
FROM telco_datasets;

1 SET SQL_SAFE_UPDATES = 0; -- TO TURN OFF PREVENTATIVE UNINTENDED DATA UPDATE

-- UPDATED COLUMN VALUES
1 UPDATE telco_datasets
SET
  phoneservice= 'No',
  multiplelines = 'No',
  OnlineSecurity = 'No',
  OnlineBackup = 'No',
  DeviceProtection = 'No',
  TechSupport = 'No',
  StreamingTV = 'No',
  StreamingMovies = 'No'
WHERE OnlineSecurity = 'No internet service';
```