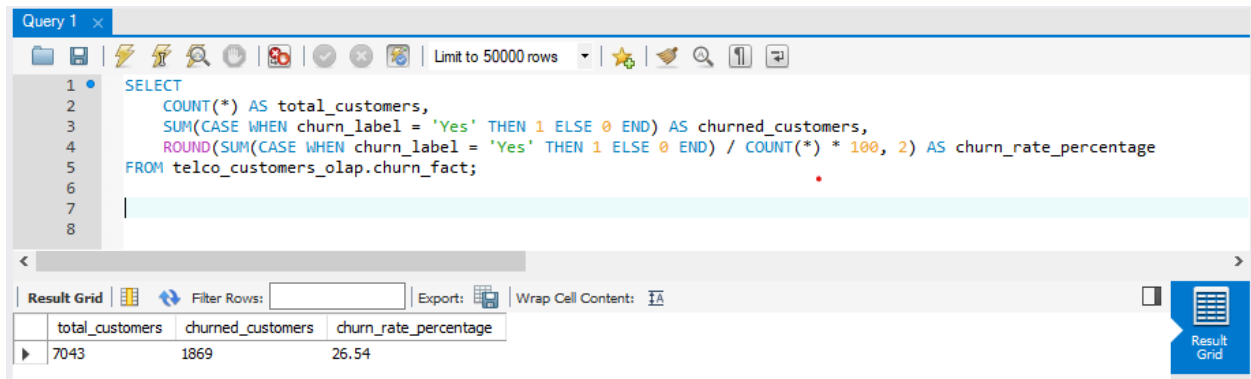


1. Churn Rate

Definition: The percentage of customers who churned out of the total customer base.



The screenshot shows a SQL query editor with a query named 'Query 1'. The query is as follows:

```
SELECT
  COUNT(*) AS total_customers,
  SUM(CASE WHEN churn_label = 'Yes' THEN 1 ELSE 0 END) AS churned_customers,
  ROUND(SUM(CASE WHEN churn_label = 'Yes' THEN 1 ELSE 0 END) / COUNT(*) * 100, 2) AS churn_rate_percentage
FROM telco_customers_olap.churn_fact;
```

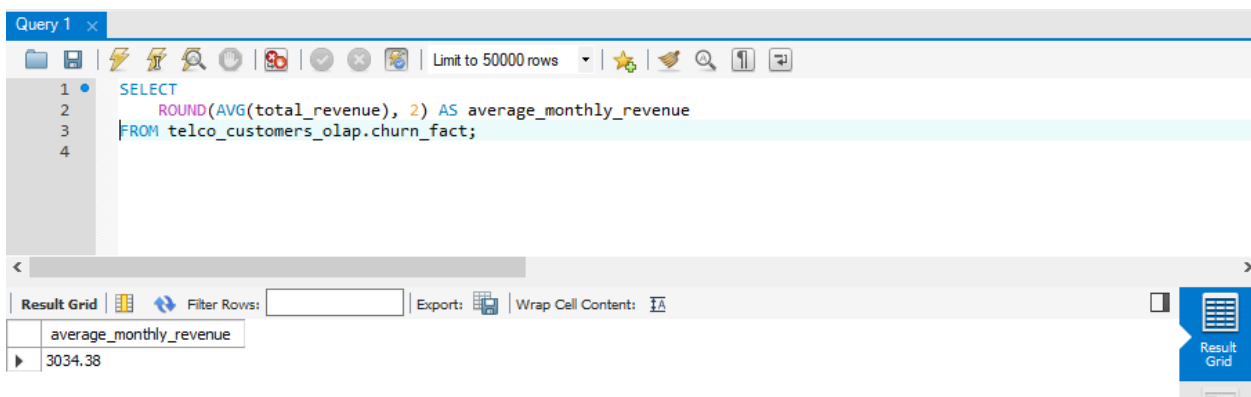
The result grid below the query shows the following data:

total_customers	churned_customers	churn_rate_percentage
7043	1869	26.54

Visualization Idea: A simple gauge chart or pie chart in Power BI showing churn vs. retained customers.

2. Average Monthly Revenue Per Customer

Definition: The average revenue generated per customer each month.



The screenshot shows a SQL query editor with a query named 'Query 1'. The query is as follows:

```
SELECT
  ROUND(AVG(total_revenue), 2) AS average_monthly_revenue
FROM telco_customers_olap.churn_fact;
```

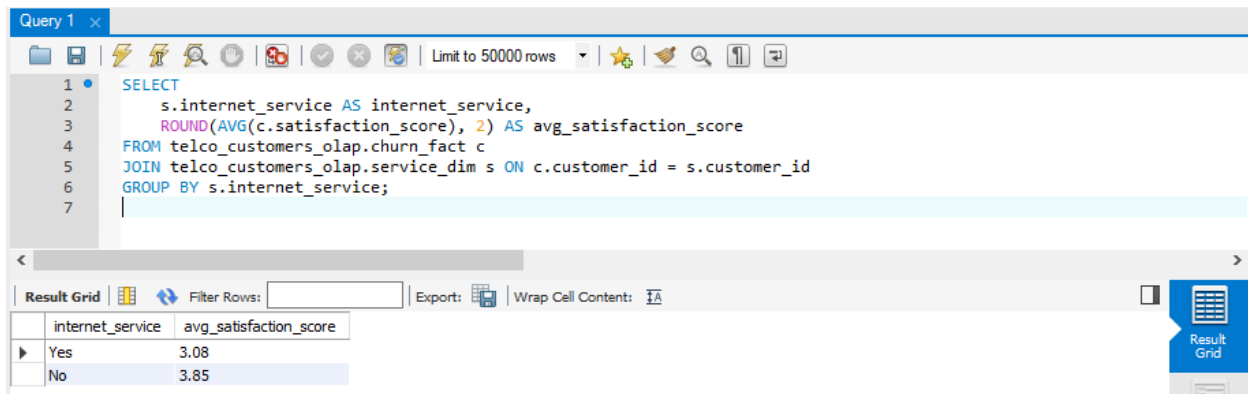
The result grid below the query shows the following data:

average_monthly_revenue
3034.38

Visualization Idea: A card visualization in Power BI displaying the average revenue.

3. Customer Satisfaction by Internet Service

Definition: The average satisfaction score grouped by whether customers have internet service or not.



The screenshot shows a SQL query editor with a query that calculates the average satisfaction score for customers, grouped by whether they have internet service. The query uses a JOIN to combine customer data with service data. The result grid below the query shows two rows: 'Yes' with an average satisfaction score of 3.08, and 'No' with an average satisfaction score of 3.85.

```
1 SELECT
2     s.internet_service AS internet_service,
3     ROUND(AVG(c.satisfaction_score), 2) AS avg_satisfaction_score
4 FROM telco_customers_olap.churn_fact c
5 JOIN telco_customers_olap.service_dim s ON c.customer_id = s.customer_id
6 GROUP BY s.internet_service;
```

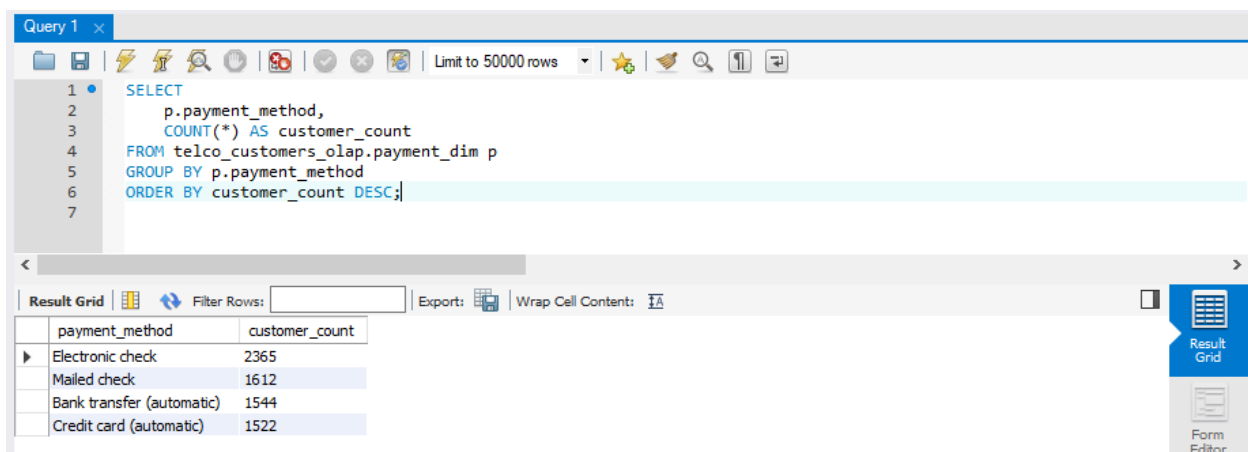
internet_service	avg_satisfaction_score
Yes	3.08
No	3.85

Visualization Idea: A bar chart in Power BI comparing satisfaction scores for customers with and without internet service.

4. Payment Method Preferences

Definition: The distribution of customers across different payment methods.

Visualization Idea: A pie chart or stacked bar chart showing payment method preferences.



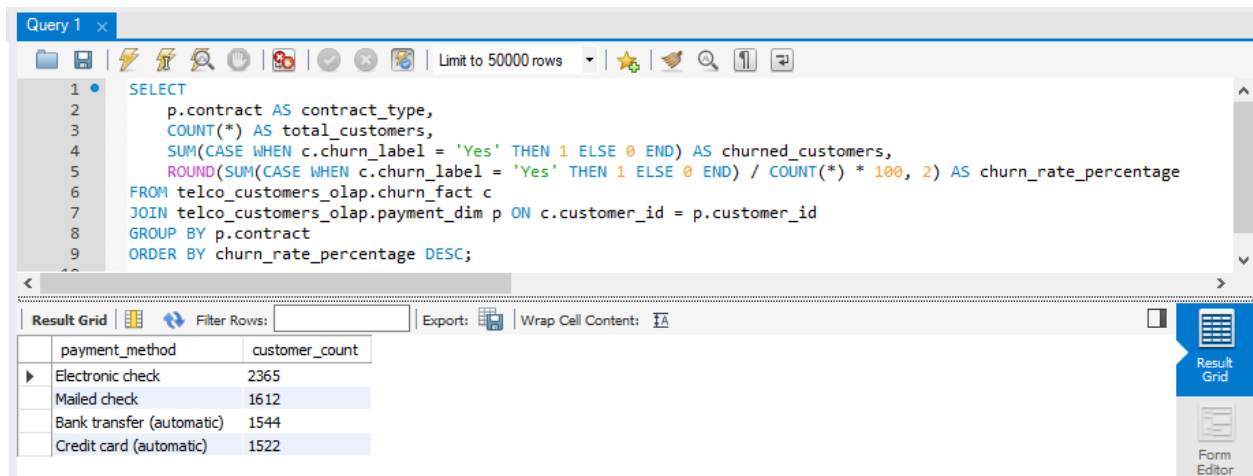
The screenshot shows a SQL query editor with a query that counts the number of customers for each payment method. The query uses a GROUP BY clause to aggregate the data. The result grid below the query shows four rows: 'Electronic check' with 2365 customers, 'Mailed check' with 1612 customers, 'Bank transfer (automatic)' with 1544 customers, and 'Credit card (automatic)' with 1522 customers.

```
1 SELECT
2     p.payment_method,
3     COUNT(*) AS customer_count
4 FROM telco_customers_olap.payment_dim p
5 GROUP BY p.payment_method
6 ORDER BY customer_count DESC;
```

payment_method	customer_count
Electronic check	2365
Mailed check	1612
Bank transfer (automatic)	1544
Credit card (automatic)	1522

5. Contract Type vs. Churn Rate

Definition: Churn rates segmented by contract type.



The screenshot shows a SQL query editor window titled 'Query 1' with a toolbar at the top. The query is as follows:

```
1 SELECT
2     p.contract AS contract_type,
3     COUNT(*) AS total_customers,
4     SUM(CASE WHEN c.churn_label = 'Yes' THEN 1 ELSE 0 END) AS churned_customers,
5     ROUND(SUM(CASE WHEN c.churn_label = 'Yes' THEN 1 ELSE 0 END) / COUNT(*) * 100, 2) AS churn_rate_percentage
6 FROM telco_customers_olap.churn_fact c
7 JOIN telco_customers_olap.payment_dim p ON c.customer_id = p.customer_id
8 GROUP BY p.contract
9 ORDER BY churn_rate_percentage DESC;
```

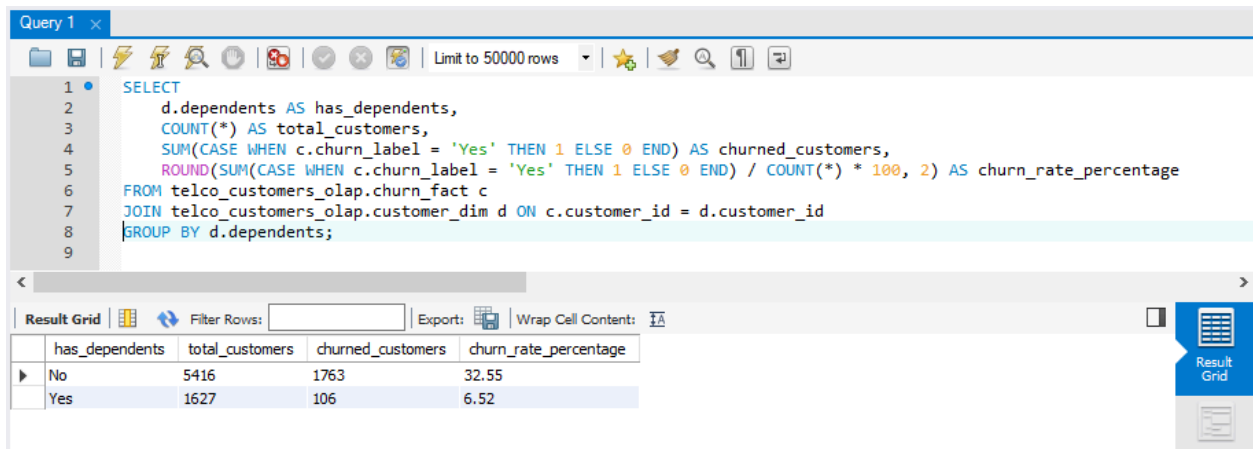
Below the query editor is the 'Result Grid' tab, which displays the following data:

payment_method	customer_count
Electronic check	2365
Mailed check	1612
Bank transfer (automatic)	1544
Credit card (automatic)	1522

Visualization Idea: A bar chart in Power BI comparing churn rates across contract types.

6. Dependents' Impact on Churn

Definition: Churn rate comparison between customers with and without dependents.



The screenshot shows a SQL query editor window titled 'Query 1' with a toolbar at the top. The query is as follows:

```
1 SELECT
2     d.dependents AS has_dependents,
3     COUNT(*) AS total_customers,
4     SUM(CASE WHEN c.churn_label = 'Yes' THEN 1 ELSE 0 END) AS churned_customers,
5     ROUND(SUM(CASE WHEN c.churn_label = 'Yes' THEN 1 ELSE 0 END) / COUNT(*) * 100, 2) AS churn_rate_percentage
6 FROM telco_customers_olap.churn_fact c
7 JOIN telco_customers_olap.customer_dim d ON c.customer_id = d.customer_id
8 GROUP BY d.dependents;
```

Below the query editor is the 'Result Grid' tab, which displays the following data:

has_dependents	total_customers	churned_customers	churn_rate_percentage
No	5416	1763	32.55
Yes	1627	106	6.52

Visualization Idea: A clustered bar chart in Power BI showing churn rates for customers with and without dependents.