```sql
create database customer_behavior

use customer_behavior

select * from dbo.customer

--Q1. What is the total revenue generated by male vs. female customers?

select gender, SUM(purchase_amount) as revenue
from dbo.customer
group by gender;

--Q2. Which customers used a discount but still spent more than the average purchase amount?

select customer_id, purchase_amount
from customer
where discount_applied = 'Yes' and purchase_amount >= (select AVG (purchase_amount) from customer)




--Q3. Which are the top 5 products with the highest average review rating?

SELECT TOP 5
    item_purchased,
    ROUND(AVG(CAST(review_rating AS DECIMAL(3, 2))), 2) AS "Average Product Rating"
FROM
    customer
GROUP BY
    item_purchased
ORDER BY
    AVG(CAST(review_rating AS DECIMAL(3, 2))) DESC;


--Q4. Compare the average Purchase Amounts between Standard and Express Shipping.

select shipping_type, ROUND(AVG(purchase_amount),2)
from customer
where shipping_type in ('Standard', 'Express')
group by shipping_type

--Q5. Do subscribed customers spend more? Compare average spend and total revenue --between subscribers and non-subscribers.

select subscription_status,
```

```sql
COUNT(customer_id) as total_customers,
ROUND(AVG(purchase_amount),2) as avg_spend,
ROUND(SUM(purchase_amount),2) as total_revenue
from customer
group by subscription_status
order by total_revenue, avg_spend desc;

--Q6. Which 5 products have the highest percentage of purchases with discounts applied?

SELECT TOP 5
    item_purchased,
    ROUND(
        100.0 * -- Use 100.0 to ensure floating-point division
        SUM(CASE WHEN discount_applied = 'Yes' THEN 1 ELSE 0 END)
        / COUNT(*),
        2
    ) AS discount_rate
FROM
    customer
GROUP BY
    item_purchased
ORDER BY
    discount_rate DESC;

--Q7. Segment customers into New, Returning, and Loyal based on their total --number of previous purchases, and show the count of each segment.

with customer_type as (
select customer_id, previous_purchases,
CASE
WHEN previous_purchases = 1 THEN 'New'
WHEN previous_purchases BETWEEN 2 AND 10 THEN 'Returning'
ELSE 'Loyal'
END AS customer_segment
from customer
)
select customer_segment, count(*) as "Number of Customers"
from customer_type
group by customer_segment


--Q8. What are the top 3 most purchased products within each category?

with item_counts as (
select category,
item_purchased,
COUNT(customer_id) as total_orders,
```

```
91  ROW_NUMBER() over(partition by category order by count(customer_id) DESC)
      as item_rank
92  from customer
93  group by category, item_purchased
94  )
95  select item_rank, category, item_purchased, total_orders
96  from item_counts
97  where item_rank <= 3;
98
99
100 --Q9. Are customers who are repeat buyers (more than 5 previous
      purchases) also likely to subscribe?
101
102 select subscription_status,
103 count(customer_id) as repeat_buyers
104 from customer
105 where previous_purchases > 5
106 group by subscription_status
107
108 --Q10. What is the revenue contribution of each age group?
109
110 select age_group,
111 SUM(purchase_amount) as total_revenue
112 from customer
113 group by age_group
114 order by total_revenue desc;
115
116 --Q11. What are the clothing purchases for peak seasons in Kentucky?
117 SELECT
118     season,
119     COUNT(*) AS TotalClothingPurchases
120 FROM
121     customer
122 WHERE
123     [category] = 'Clothing'
124     AND [location] = 'Kentucky'
125 GROUP BY
126     season
127 ORDER BY
128     TotalClothingPurchases DESC;
129
130 --Q12 Do subscribed customers have a 10% higher average purchase value?
131
132 SELECT [subscription_status], AVG([purchase_amount]) AS AvgPurchaseValue
133 FROM customer
134 GROUP BY [subscription_status];
135
136 -----
137 SELECT
```

```sql
    (AVG(CASE WHEN [subscription_status] = 'Yes' THEN [purchase_amount]
      END) * 1.1) AS TargetAvgForYes,
    AVG(CASE WHEN [subscription_status] = 'No' THEN [purchase_amount]
      END) AS ActualAvgForNo
FROM
    customer;

--Q13. What are the payment method popularity across gender and age group demographics?

SELECT
    CASE
        WHEN [age] BETWEEN 18 AND 25 THEN '18-25 Young Adult'
        WHEN [age] BETWEEN 26 AND 40 THEN '26-40 Adult'
        WHEN [age] BETWEEN 41 AND 60 THEN '41-60 Middle Age'
        ELSE '60+ Senior'
    END AS AgeGroup,
    [Gender],
    [payment_method],
    COUNT(*) AS TotalTransactions
FROM
    customer
GROUP BY
    CASE
        WHEN [age] BETWEEN 18 AND 25 THEN '18-25 Young Adult'
        WHEN [age] BETWEEN 26 AND 40 THEN '26-40 Adult'
        WHEN [age] BETWEEN 41 AND 60 THEN '41-60 Middle Age'
        ELSE '60+ Senior'
    END,
    [gender],
    [payment_method]
ORDER BY
    Count(age_group), TotalTransactions DESC;
```