CUSTOMER BEHAVIOR ANALYSIS - MYSQL

BUSINESS QUESTIONS

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

```
select  gender, SUM(purchase_amount) as revenue from 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 item_purchased, ROUND(avg(review_rating),2) as "Average Product Rating"
 from customer
 group by item_purchased
 order by avg(review_rating) desc limit 5;
```

-- 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,
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 item_purchased,
```

```
   ROUND(100 * 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
   limit 5;
```

-- 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,
     row_number() over(partition by category order by count(customer_id) desc) as item_rank
     from customer
          group by category, item_purchased
 )

 select item_rank, category, item_purchased, total_orders
 from item_counts
 where item_rank <=3;
```

-- Q9. Are customers who are repeat buyers (more than 5 previous purchases) also likely to subscribe?

```
select subscription_status,
count(customer_id) as repeat_buyers
from customer where previous_purchases > 5
group by subscription_status;
```

-- Q10. What is the revenue contribution of each age group?

```
select age_group,
sum(purchase_amount) as total_revenue
from customer
group by age_group
order by total_revenue desc;
```