```sql
SELECT * FROM customer LIMIT 20;


-- Q1. What is total revenue generated by Male vs. Female customers?

SELECT
	gender,
	SUM(purchase_amount) AS Total_revenue
FROM customer
GROUP BY 1;


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

SELECT *
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)::NUMERIC,2) AS "Avg Product Rating"
FROM customer
GROUP BY 1
ORDER BY 2 DESC
LIMIT 5;



-- Q4. Compare the average purchase amount between Standard and Express shipping.

SELECT
	shipping_type,
	ROUND(AVG(purchase_amount)::NUMERIC, 2) AS avg_purchase_amount
FROM customer
WHERE shipping_type IN ('Standard', 'Express')
GROUP BY 1;

-- 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)::NUMERIC,2) AS avg_spend,
	SUM(purchase_amount) AS total_revenue
FROM customer
GROUP BY 1
ORDER BY 3;


-- Q6. Which 5 products have highest percentage of purchases with discount applied?
```

```sql
SELECT
	item_purchased,
	SUM(previous_purchases) AS item_total,
	COUNT(*) AS total_orders,
	ROUND(
		100.0 * SUM(CASE WHEN discount_applied = 'Yes' THEN 1 ELSE 0 END) /
COUNT(*)
		, 2) AS discount_rate
FROM customer
GROUP BY 1
ORDER BY 4 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 1;


-- 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 1, 2
)
SELECT
	item_rank,
	category,
	item_purchased,
	total_orders
FROM item_counts
WHERE item_rank <=3;
```

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

SELECT
	subscription_status,
	COUNT(*) AS Repeat_customers
FROM customer
WHERE previous_purchases > 5
GROUP BY 1;


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

SELECT
	age_group,
	SUM(purchase_amount) AS total_revenue
FROM customer
GROUP BY 1;
```