1. Write a query to select all columns from the Pizza table.

SELECT * FROM Pizza;

ID	Name	Size	Toppings
1	Margherita	Medium	Tomato, Mozzarella
2	Pepperoni	Large	Pepperoni, Cheese
3	Veggie Deluxe	Small	Bell Peppers, Onions, Mushrooms
4	BBQ Chicken	Medium	BBQ Sauce, Chicken, Red Onions
5	Hawaiian	Large	Ham, Pineapple

2. Write a query to find all burgers that are larger than a regular size.

SELECT * FROM Burger
WHERE Size IN ('Medium', 'Large');

ID	Name	Size	Ingredients
2	Bacon Avocado Burger	Large	Beef Patty, Bacon, Avocado, BBQ Sauce
4	Mushroom Swiss Burger	Medium	Beef Patty, Mushrooms, Swiss Cheese
5	BBQ Chicken Burger	Large	Grilled Chicken, BBQ Sauce, Coleslaw

3. Write a query to list all pizzas sorted by size in ascending order.

SELECT * FROM Pizza
ORDER BY
   CASE
      WHEN Size = 'Small' THEN 1
      WHEN Size = 'Medium' THEN 2
      WHEN Size = 'Large' THEN 3
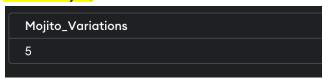   END ASC;

ID	Name	Size	Toppings
3	Veggie Deluxe	Small	Bell Peppers, Onions, Mushrooms
1	Margherita	Medium	Tomato, Mozzarella
4	BBQ Chicken	Medium	BBQ Sauce, Chicken, Red Onions
2	Pepperoni	Large	Pepperoni, Cheese
5	Hawaiian	Large	Ham, Pineapple

4. Write a query to count the number of mojito variations available.
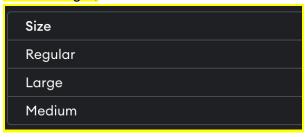
SELECT COUNT(*) AS Mojito_Variations
FROM Mojito;

Mojito_Variations
5

5. Write a query to get all unique sizes of burgers from the Burger table.

SELECT DISTINCT Size
FROM Burger;

Size
Regular
Large
Medium

6. Write a query to find all pizzas that contain the word "Chicken" in the toppings.

SELECT * FROM Pizza
WHERE Toppings LIKE '%Chicken%';

ID	Name	Size	Toppings
4	BBQ Chicken	Medium	BBQ Sauce, Chicken, Red Onions

7. Write a query to count how many burgers are available in each size.
SELECT Size, COUNT(*) AS Burger_Count
FROM Burger
GROUP BY Size;

Size	Burger_Count
Large	2
Medium	1
Regular	2

8. Assuming you have a Orders table that includes Pizza_ID, Burger_ID, and Mojito_ID, write a query to join the Pizza table with the Orders table to show the names of pizzas in each Order.
SELECT Orders.Pizza_ID, Pizza.Name AS Pizza_Name
FROM Orders
JOIN Pizza ON Orders.Pizza_ID = Pizza.ID;

Pizza_ID	Pizza_Name
1	Margherita
3	Veggie Deluxe
5	Hawaiian

9. Write a query to list all burgers and their corresponding orders using an inner join with the Orders table.
SELECT Orders.Burger_ID, Burger.Name AS Burger_Name
FROM Orders
JOIN Burger ON Orders.Burger_ID = Burger.ID;

Burger_ID	Burger_Name
2	Bacon Avocado Burger
4	Mushroom Swiss Burger
1	Classic Cheeseburger
3	Spicy Bean Burger

10. Write a query to find the average number of ingredients in the Burger table.
SELECT AVG(LENGTH(Ingredients) - LENGTH(REPLACE(Ingredients, ',', '')) + 1) AS Avg_Ingredients
FROM Burger;

Avg_Ingredients
3.6

11. Write a query to find all pizzas that have more toppings than the average number of toppings in the Pizza table.

ID	Name	Size	Toppings
3	Veggie Deluxe	Small	Bell Peppers, Onions, Mushrooms
4	BBQ Chicken	Medium	BBQ Sauce, Chicken, Red Onions

12. Write a query to list all mojitos along with their orders, showing mojitos even if there are no corresponding orders.

Mojito_ID	Mojito_Name	Order_Mojito_ID
1	Classic Mojito	1
2	Strawberry Mojito	2
3	Mango Mojito	3
4	Virgin Mojito	4
5	Coconut Mojito	

13. Write a query to combine the names of all pizzas and burgers into a single list.
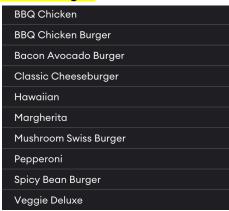
BBQ Chicken
BBQ Chicken Burger
Bacon Avocado Burger
Classic Cheeseburger
Hawaiian
Margherita
Mushroom Swiss Burger
Pepperoni
Spicy Bean Burger
Veggie Deluxe

14. Write a query to categorize mojitos based on size (Small, Medium, Large) using a case Statement.

SELECT Name AS Mojito_Name,
    Size,
    CASE
        WHEN Size = 'Small' THEN 'Small Size'
        WHEN Size = 'Medium' THEN 'Medium Size'
        WHEN Size = 'Large' THEN 'Large Size'
        ELSE 'Unknown Size'
    END AS Size_Category
FROM Mojito;

Mojito_Name	Size	Size_Category
Classic Mojito	Regular	Unknown Size
Strawberry Mojito	Large	Large Size
Mango Mojito	Medium	Medium Size
Virgin Mojito	Regular	Unknown Size
Coconut Mojito	Large	Large Size

15. Write a query to find all pizzas that have the same topping as another pizza using a self-join.

SELECT p1.ID AS Pizza1_ID, p1.Name AS Pizza1_Name, p2.ID AS Pizza2_ID, p2.Name AS Pizza2_Name, p1.Toppings
FROM Pizza p1
JOIN Pizza p2 ON p1.Toppings = p2.Toppings AND p1.ID < p2.ID;

no matching data was found

16. Write a query that retrieves the names of burgers, their corresponding pizzas, and mojitos for a specific order from the Orders table.

SELECT Orders.ID AS Order_ID,
     Burger.Name AS Burger_Name,
     Pizza.Name AS Pizza_Name,
     Mojito.Name AS Mojito_Name
FROM Orders
LEFT JOIN Burger ON Orders.Burger_ID = Burger.ID
LEFT JOIN Pizza ON Orders.Pizza_ID = Pizza.ID
LEFT JOIN Mojito ON Orders.Mojito_ID = Mojito.ID
WHERE Orders.ID = 1;

Order_ID	Burger_Name	Pizza_Name	Mojito_Name
1	Bacon Avocado Burger	Margherita	Virgin Mojito

17. Write a query using a CTE to list all mojitos that are larger than the average size of all mojitos.

WITH AverageSize AS (
    SELECT AVG(
        CASE
            WHEN Size = 'Small' THEN 1
            WHEN Size = 'Medium' THEN 2
            WHEN Size = 'Large' THEN 3
            ELSE 0
        END
) AS Avg_Size
    FROM Mojito
)
SELECT Mojito.Name, Mojito.Size
FROM Mojito
JOIN AverageSize ON
    CASE
        WHEN Mojito.Size = 'Small' THEN 1
        WHEN Mojito.Size = 'Medium' THEN 2
        WHEN Mojito.Size = 'Large' THEN 3
        ELSE 0
    END > AverageSize.Avg_Size;

Name	Size
Strawberry Mojito	Large
Mango Mojito	Medium
Coconut Mojito	Large

18. Write a query to rank pizzas based on the number of toppings they have using a window Function.

SELECT ID, Name, Toppings,
     LENGTH(Toppings) - LENGTH(REPLACE(Toppings, ',', '')) + 1 AS Topping_Count,
     RANK() OVER (ORDER BY LENGTH(Toppings) - LENGTH(REPLACE(Toppings, ',', '')) + 1 DESC) AS Topping_Rank
FROM Pizza;

ID	Name	Toppings	Topping_Count	Topping_Rank
3	Veggie Deluxe	Bell Peppers, Onions, Mushrooms	3	1
4	BBQ Chicken	BBQ Sauce, Chicken, Red Onions	3	1
1	Margherita	Tomato, Mozzarella	2	3
2	Pepperoni	Pepperoni, Cheese	2	3
5	Hawaiian	Ham, Pineapple	2	3

19. Write a transaction that inserts a new burger, updates the price of a pizza, and commits the Changes.

INSERT INTO Burger (ID, Name, Size, Ingredients) VALUES (6, 'Double Cheeseburger', 'Large', 'Beef Patty, Double Cheese, Lettuce, Tomato, Pickles');

| 6 | Double Cheeseburger | Large | Beef Patty, Double Cheese, Lettuce, Tomato, Pickles |

UPDATE Pizza SET Price = 10.99 WHERE Name = 'Margherita';

ID	Name	Size	Toppings	Price
1	Margherita	Medium	Tomato, Mozzarella	10.99

20. Write a query to retrieve all pizzas, burgers, and mojitos, including those without corresponding entries in the other tables.

SELECT 'Pizza' AS Item_Type, ID, Name, Size, Toppings AS Details
FROM Pizza

UNION ALL

SELECT 'Burger' AS Item_Type, ID, Name, Size, Ingredients AS Details
FROM Burger

UNION ALL

SELECT 'Mojito' AS Item_Type, ID, Name, Size, Ingredients AS Details
FROM Mojito;

Item_Type	ID	Name	Size	Details
Pizza	1	Margherita	Medium	Tomato, Mozzarella
Pizza	2	Pepperoni	Large	Pepperoni, Cheese
Pizza	3	Veggie Deluxe	Small	Bell Peppers, Onions, Mushrooms
Pizza	4	BBQ Chicken	Medium	BBQ Sauce, Chicken, Red Onions
Pizza	5	Hawaiian	Large	Ham, Pineapple
Burger	1	Classic Cheeseburger	Regular	Beef Patty, Cheese, Lettuce, Tomato
Burger	2	Bacon Avocado Burger	Large	Beef Patty, Bacon, Avocado, BBQ Sauce
Burger	3	Spicy Bean Burger	Regular	Black Beans, Spices, Lettuce, Salsa
Burger	4	Mushroom Swiss Burger	Medium	Beef Patty, Mushrooms, Swiss Cheese
Burger	5	BBQ Chicken Burger	Large	Grilled Chicken, BBQ Sauce, Coleslaw
Burger	6	Double Cheeseburger	Large	Beef Patty, Double Cheese, Lettuce, Tomato, Pickles
Mojito	1	Classic Mojito	Regular	Rum, Mint, Sugar, Lime, Soda
Mojito	2	Strawberry Mojito	Large	Rum, Mint, Strawberries, Lime, Soda
Mojito	3	Mango Mojito	Medium	Rum, Mint, Mango Puree, Lime, Soda
Mojito	4	Virgin Mojito	Regular	Mint, Sugar, Lime, Soda
Mojito	5	Coconut Mojito	Large	Rum, Mint, Coconut Water, Lime, Soda

21. Add a column Halal to the Pizza, Burger Mojito (boolean) table to indicate whether food is halal. Same way, create a column in the Each table called HaramIngredients (suppose: Bacon, Ham, Rum).

ALTER TABLE Pizza
ADD COLUMN Halal BOOLEAN;
ALTER TABLE Pizza
ADD COLUMN HaramIngredients TEXT;
ALTER TABLE Burger
ADD COLUMN Halal BOOLEAN;
ALTER TABLE Burger
ADD COLUMN HaramIngredients TEXT;
ALTER TABLE Mojito
ADD COLUMN Halal BOOLEAN;
ALTER TABLE Mojito
ADD COLUMN HaramIngredients TEXT;

Pizza

Name	Size	Toppings	Halal	HaramIngredients
Margherita	Medium	Tomato, Mozzarella	1	
Pepperoni	Large	Pepperoni, Cheese	0	Pepperoni
Veggie Deluxe	Small	Bell Peppers, Onions, Mushrooms	1	
BBQ Chicken	Medium	BBQ Sauce, Chicken, Red Onions	1	
Hawaiian	Large	Ham, Pineapple	0	Ham

Burger

ID	Name	Size	Ingredients	Halal	HaramIngredients
1	Classic Cheeseburger	Regular	Beef Patty, Cheese, Lettuce, Tomato	1	
2	Bacon Avocado Burger	Large	Beef Patty, Bacon, Avocado, BBQ Sauce	0	Bacon
3	Spicy Bean Burger	Regular	Black Beans, Spices, Lettuce, Salsa	1	
4	Mushroom Swiss Burger	Medium	Beef Patty, Mushrooms, Swiss Cheese	1	
5	BBQ Chicken Burger	Large	Grilled Chicken, BBQ Sauce, Coleslaw	1	
6	Double Cheeseburger	Large	Beef Patty, Double Cheese, Lettuce, Tomato, Pickles		

Pizza

Name	Size	Toppings	Halal	HaramIngredients
Margherita	Medium	Tomato, Mozzarella	1	
Pepperoni	Large	Pepperoni, Cheese	0	Pepperoni
Veggie Deluxe	Small	Bell Peppers, Onions, Mushrooms	1	
BBQ Chicken	Medium	BBQ Sauce, Chicken, Red Onions	1	
Hawaiian	Large	Ham, Pineapple	0	Ham

22. Retrieve all halal pizzas from the Pizza table.
SELECT *
FROM Pizza
WHERE Halal = TRUE;

ID	Name	Size	Toppings	Halal	HaramIngredients	Price
1	Margherita	Medium	Tomato, Mozzarella	1		10.99
3	Veggie Deluxe	Small	Bell Peppers, Onions, Mushrooms	1		
4	BBQ Chicken	Medium	BBQ Sauce, Chicken, Red Onions	1		

23. Count the number of halal burgers available in the Burger table.
SELECT COUNT(*) AS Halal_Burger_Count
FROM Burger
WHERE Halal = TRUE;

Halal_Burger_Count
4

24. Write a query to find all burgers that contain haram ingredients.
SELECT *
FROM Burger
WHERE HaramIngredients IS NOT NULL;

ID	Name	Size	Ingredients	Halal	HaramIngredients
2	Bacon Avocado Burger	Large	Beef Patty, Bacon, Avocado, BBQ Sauce	0	Bacon

25. Retrieve all mojitos that are halal.
SELECT *
FROM Mojito
WHERE Halal = TRUE;

ID	Name	Size	Ingredients	Halal	HaramIngredients
4	Virgin Mojito	Regular	Mint, Sugar, Lime, Soda	1	

26. Get the count of halal and haram items from the Pizza table.
SELECT
    SUM(CASE WHEN Halal = TRUE THEN 1 ELSE 0 END) AS Halal_Count,
    SUM(CASE WHEN Halal = FALSE THEN 1 ELSE 0 END) AS Haram_Count
FROM Pizza;

Halal_Count	Haram_Count
3	2

27. Join the Pizza and Burger tables to find all halal pizzas that can be paired with halal burgers.
SELECT Pizza.Name AS Halal_Pizza, Burger.Name AS Halal_Burger
FROM Pizza
JOIN Burger ON Pizza.Halal = TRUE AND Burger.Halal = TRUE;

Halal_Pizza	Halal_Burger
Margherita	BBQ Chicken Burger
Margherita	Classic Cheeseburger
Margherita	Mushroom Swiss Burger
Margherita	Spicy Bean Burger
Veggie Deluxe	BBQ Chicken Burger
Veggie Deluxe	Classic Cheeseburger
Veggie Deluxe	Mushroom Swiss Burger
Veggie Deluxe	Spicy Bean Burger
BBQ Chicken	BBQ Chicken Burger
BBQ Chicken	Classic Cheeseburger

28. Create a query to list all halal pizzas that do not contain specific haram ingredients.
SELECT *
FROM Pizza
WHERE Halal = TRUE
AND (HaramIngredients IS NULL OR HaramIngredients NOT IN ('Bacon', 'Ham'));

ID	Name	Size	Toppings	Halal	HaramIngredients	Price
1	Margherita	Medium	Tomato, Mozzarella	1		10.99
3	Veggie Deluxe	Small	Bell Peppers, Onions, Mushrooms	1		
4	BBQ Chicken	Medium	BBQ Sauce, Chicken, Red Onions	1		

29. Write a query that checks if a specific burger is halal or not: Bacon Avocado Burger
SELECT Name, Halal
FROM Burger
WHERE Name = 'Bacon Avocado Burger';

Name	Halal
Bacon Avocado Burger	0

30. Get the percentage of halal items in the Burger table.
SELECT
    (SUM(CASE WHEN Halal = TRUE THEN 1 ELSE 0 END) * 100.0 / COUNT(*)) AS Halal_Percentage
FROM Burger;

Halal_Percentage

66.66666666666667