Name: Aditya Mahesh Pattar

Roll no: 2401155

Div: B

Practical 4: Implementation of filtering functions, indexes and Join queries. LAB PRACTICE ASSIGNMENT:

Write a query to create a product & Customer table with the given fields Product (product code, product name, price, stock, Quantity and category) Customer (customer ID, customer name, customer location, and customer phone number) Write SQL statements for the following query.

Ans: create database Assignment4;

use Assignment4;

CREATE TABLE Product (product_code INT PRIMARY KEY, product_name VARCHAR(50), price DECIMAL(10, 2), stock INT, quantity INT, category VARCHAR(50));

CREATE TABLE Customer (customer_id INT PRIMARY KEY, customer_name VARCHAR(50), customer_location VARCHAR(50), customer_phone_number VARCHAR(15));

1. Write a query to create an index on the customer table.

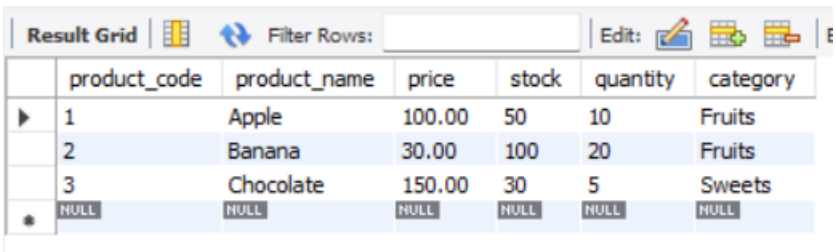
   Ans CREATE INDEX idx_customer_name ON Customer (customer_name);

2. Write a query to insert values into the customer And product tables
   Ans: INSERT INTO Product (product_code, product_name, price, stock, quantity, category)
   VALUES (1, 'Apple', 100.00, 50, 10, 'Fruits'),
   (2, 'Banana', 30.00, 100, 20, 'Fruits'),
   (3, 'Chocolate', 150.00, 30, 5, 'Sweets');

   INSERT INTO Customer (customer_id, customer_name, customer_location, customer_phone_number)
   VALUES (1, 'Alice', 'Pune', '1234567890'),
   (2, 'Bob', 'Mumbai', '0987654321'),
   (3, 'Arjun', 'Delhi', '1122334455');

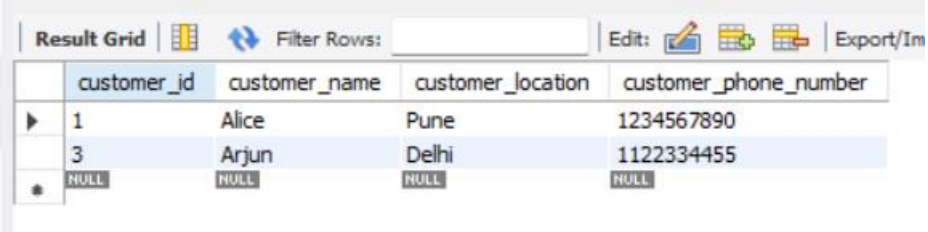
3. Write a query to display the details of the product from the product table where the quantity is greater than 2 and the price is less than 500

Ans: SELECT * FROM Product WHERE quantity > 2 AND price < 500;



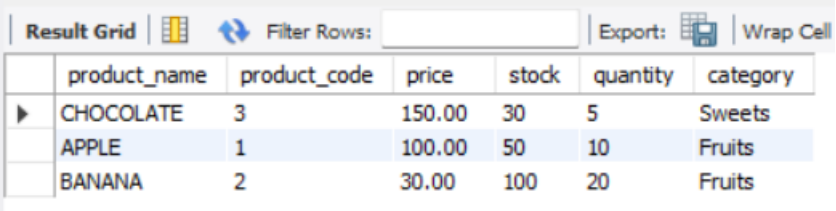
product_code	product_name	price	stock	quantity	category
1	Apple	100.00	50	10	Fruits
2	Banana	30.00	100	20	Fruits
3	Chocolate	150.00	30	5	Sweets
NULL	NULL	NULL	NULL	NULL	NULL

4. Write a query to display every customer whose name Starts with an ‘a’
   Ans: select * from customer where customer_name like ‘A%’



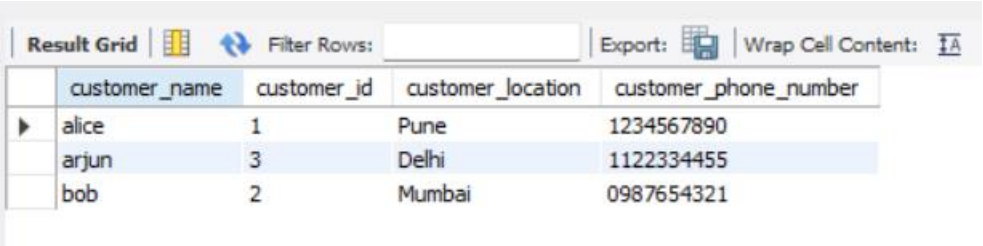
customer_id	customer_name	customer_location	customer_phone_number
1	Alice	Pune	1234567890
3	Arjun	Delhi	1122334455
NULL	NULL	NULL	NULL

5. Write a query to display the column product name in upper case & product details in descending order of price
   Ans: SELECT UPPER(product_name) AS product_name, product_code, price, stock, quantity, category
   FROM Product
   ORDER BY price DESC;



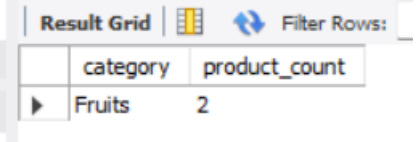
product_name	product_code	price	stock	quantity	category
CHOCOLATE	3	150.00	30	5	Sweets
APPLE	1	100.00	50	10	Fruits
BANANA	2	30.00	100	20	Fruits

6. Write a query to display the customer details in ascending order of Name and return the customer’s name in lowercase
   Ans: SELECT LOWER(customer_name) AS customer_name, customer_id, customer_location, customer_phone_number
   FROM Customer
   ORDER BY customer_name ASC;



customer_name	customer_id	customer_location	customer_phone_number
alice	1	Pune	1234567890
arjun	3	Delhi	1122334455
bob	2	Mumbai	0987654321

7. Write a query to display the product code and category from categories that have two or more products
   Ans : SELECT category, COUNT(product_code) AS product_count
   FROM Product
   GROUP BY category
   HAVING COUNT(product_code) >= 2;



category	product_count
Fruits	2

8. Write a SQL query to find those Products that do not belong to the Category Icecream. Return complete information about the Product.
   Ans : SELECT * FROM Product
   WHERE category <> 'Icecream';

product_code	product_name	price	stock	quantity	category
1	Apple	100.00	50	10	Fruits
2	Banana	30.00	100	20	Fruits
3	Chocolate	150.00	30	5	Sweets
NULL	NULL	NULL	NULL	NULL	NULL

9. Write a query to display the unique category from the product table

Ans: SELECT DISTINCT category

FROM Product;

Result Grid

category
Fruits
Sweets

10. Write a SQL query to find product categories who are in the fruits product code 2 or 5. Return complete information about the product.
    Ans: SELECT * FROM Product
    WHERE category = 'Fruits' AND product_code IN (2, 5);

product_code	product_name	price	stock	quantity	category
2	Banana	30.00	100	20	Fruits
NULL	NULL	NULL	NULL	NULL	NULL

11. Write a query to apply inner join on the product and customer table and display customer ID, customer name, product name, and price

Ans: SELECT Customer.customer_id, Customer.customer_name, Product.product_name, Product.price

FROM Customer

INNER JOIN Product

ON Customer.customer_id = Product.product_code;

Result Grid | Filter Rows: | Export:

customer_id	customer_name	product_name	price
1	Alice	Apple	100.00
3	Arjun	Chocolate	150.00
2	Bob	Banana	30.00

12. Write a query to apply left join on the product and customer table and display customer ID, customer name, Product code, product name, and price.

Ans: SELECT Customer.customer_id, Customer.customer_name, Product.product_code, Product.product_name, Product.price

FROM Customer

LEFT JOIN Product

ON Customer.customer_id = Product.product_code;

Result Grid | Filter Rows: | Export: | Wrap Cell

customer_id	customer_name	product_code	product_name	price
1	Alice	1	Apple	100.00
3	Arjun	3	Chocolate	150.00
2	Bob	2	Banana	30.00

13. Write a query to apply right join on the product and customer table and display customer ID, customer name, Product code, product name, and price.
    Ans: SELECT Customer.customer_id, Customer.customer_name, Product.product_code, Product.product_name, Product.price
    FROM Customer
    RIGHT JOIN Product
    ON Customer.customer_id = Product.product_code;

Result Grid | Filter Rows: | Export: | Wrap Cell C

customer_id	customer_name	product_code	product_name	price
1	Alice	1	Apple	100.00
2	Bob	2	Banana	30.00
3	Arjun	3	Chocolate	150.00