**SYEDA FATIMA SHAH**

**28th March 2023**

***Task # 3:***

**Practice following in detail:**

**1 - Joins:**

**• Inner Join**

--Write a query to select all records from the two tables where there is a match in both tables.

SELECT \* FROM Orders INNER JOIN Customers ON Orders.CustomerID = Customers.CustomerID;

--Write a query to select all orders with customer information.

SELECT Orders.OrderID, Customers.ContactName FROM Orders INNER JOIN Customers ON Orders.CustomerID = Customers.CustomerID;

**• Outer Join**

--Write a query to selects all customers and all orders.

SELECT Customers.ContactName, Orders.OrderID FROM Customers FULL OUTER JOIN Orders ON Customers.CustomerID=Orders.CustomerID;

**• Left Join**

SELECT OD.ProductID,O.ShipRegion FROM Orders as O LEFT JOIN [Order Details] as OD on O.OrderID = OD.OrderID

**• Right Join**

SELECT OD.ProductID,O.ShipRegion FROM Orders as O RIGHT JOIN [Order Details] as OD on O.OrderID = OD.OrderID

**• Self Join**

SELECT e1.FirstName + e1.LastName as Employee1, e2.FirstName + e2.LastName as Employee2

FROM Employees e1 JOIN Employees e2 on e1.ReportsTo = e2.ReportsTo WHERE e1.EmployeeID <> e2.EmployeeID

**• Cross Join**

SELECT Customers.ContactName, Orders.OrderID FROM Customers CROSS JOIN Orders;

**• Left anti-Join**

SELECT Customers.ContactName, Orders.OrderID

FROM Customers

LEFT JOIN Orders

ON Customers.CustomerID = Orders.CustomerID

WHERE Orders.OrderID IS NULL;

**• Right anti-Join**

SELECT Orders.OrderID, Employees.LastName, Employees.FirstName

FROM Orders

RIGHT JOIN Employees ON Orders.EmployeeID = Employees.EmployeeID

WHERE Orders.EmployeeID IS NULL;

**At least try two examples of all these joins.**

***Task # 4:***

**Write the following queries using Northwind DB:**

**1 - Write a query to show a list of customers and their corresponding orders.**

SELECT Customers.ContactName, Orders.OrderID,Orders.ShipName

FROM Customers

LEFT JOIN Orders

ON Customers.CustomerID = Orders.CustomerID;

**2 - Write a query to show a list of employees and their corresponding managers:**

SELECT A.FirstName+ ' '+ A.LastName AS "Employee Name", B.ReportsTo

FROM Employees A, Employees B

WHERE A.EmployeeID = B.EmployeeID;

**3 - Write a query to show a list of customers who have not placed any orders.**

SELECT Customers.ContactName, Orders.OrderID,Orders.ShipName

FROM Customers LEFT JOIN Orders

ON Customers.CustomerID = Orders.CustomerID

where Orders.CustomerID is NULL;

**4 - Write a query to show a list of employees and their corresponding territories, including those employees who have no territories assigned.**

select Employees.EmployeeID , EmployeeTerritories.TerritoryID

from Employees

FULL JOIN EmployeeTerritories

ON Employees.EmployeeID = EmployeeTerritories.EmployeeID;