



DATABASE REPORT

SUBMITTED TO
Prof. Nazeef ul Haq

By
SAMI ULLAH (Reg No. 2022-CS-143)

DEPARTMENT OF COMPUTER SCIENCE (MAIN CAMPUS)
(UNIVERSITY OF ENGINEERING & TECHNOLOGY LAHORE)

February, 2024

TABLE OF CONTENTS

Title	Page No.
TABLE OF CONTENTS	i
0.1 Db Report	1
0.1.1 Home Task	1
0.1.2 Query 1	1
0.1.3 Query2:	1
0.1.4 Query3:	2
0.1.5 Query4:	3
0.1.6 Query5:	4
0.1.7 Query6:	4
0.1.8 Query7:	5
0.1.9 Query8:	6
0.1.10 Query9:	7
0.1.11 Query10:	8
0.1.12 Query11:	9
0.1.13 Query12:	9

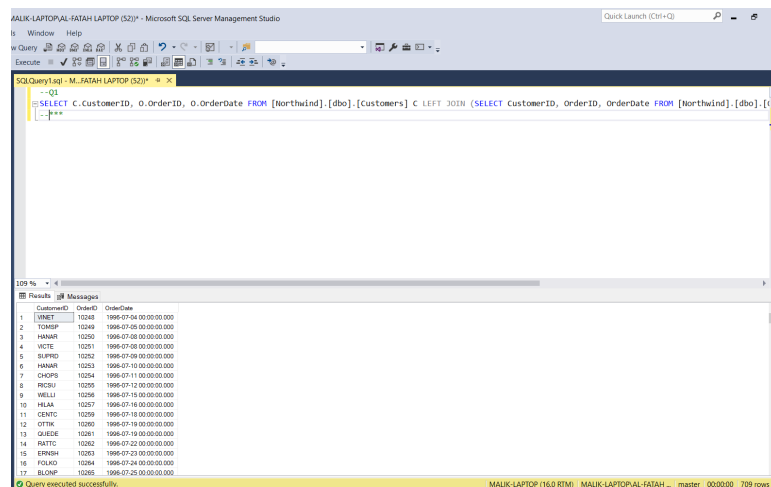
0.1 Db Report

0.1.1 Home Task

0.1.2 Query 1

Return customers and their orders, including customers who placed no orders (CustomerID, OrderID, OrderDate)

```
1 --Q1
2 Q1
3 SELECT C.CustomerID , O.OrderID , O.OrderDate FROM [
    Northwind].[dbo].[Customers] C LEFT JOIN (SELECT
    CustomerID , OrderID , OrderDate FROM [Northwind].[dbo].[
    Orders ]) O ON C.CustomerID = O.CustomerID; --***
4 ***
```



0.1.3 Query2:

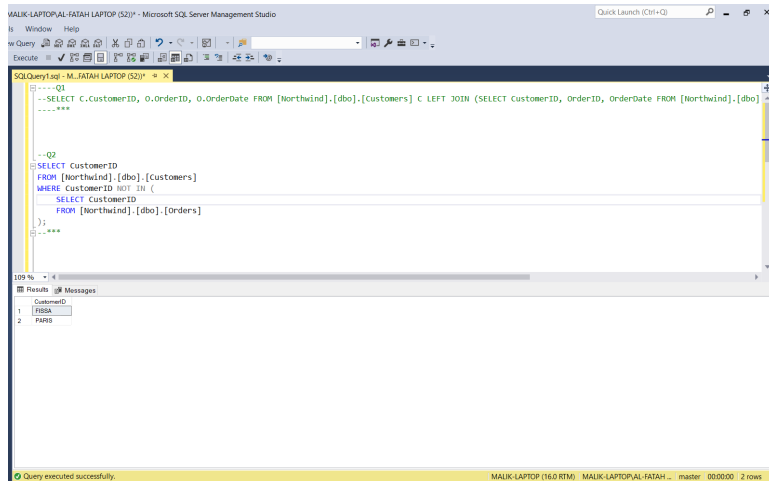
Report only those customer IDs who never placed any order. (CustomerID, OrderID, OrderDate)

```
1 Q2
```

```

2  SELECT CustomerID FROM [Northwind].[dbo].[Customers]
   WHERE CustomerID NOT IN (SELECT CustomerID FROM [
   Northwind].[dbo].[Orders]); --***
3  ***

```



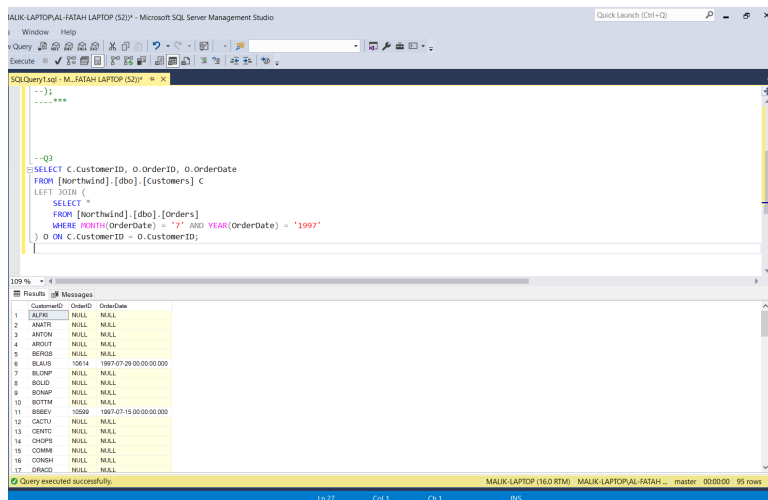
0.1.4 Query3:

Report the total orders of each customer. (customerID, totalorders)

```

1  Q3
2  SELECT C.CustomerID , O.OrderID , O.OrderDate FROM [
   Northwind].[dbo].[Customers] C LEFT JOIN (SELECT * FROM
   [Northwind].[dbo].[Orders] WHERE MONTH(OrderDate) = '7
   ' AND YEAR(OrderDate) = '1997') O ON C.CustomerID = O.
   CustomerID ;
3  ***

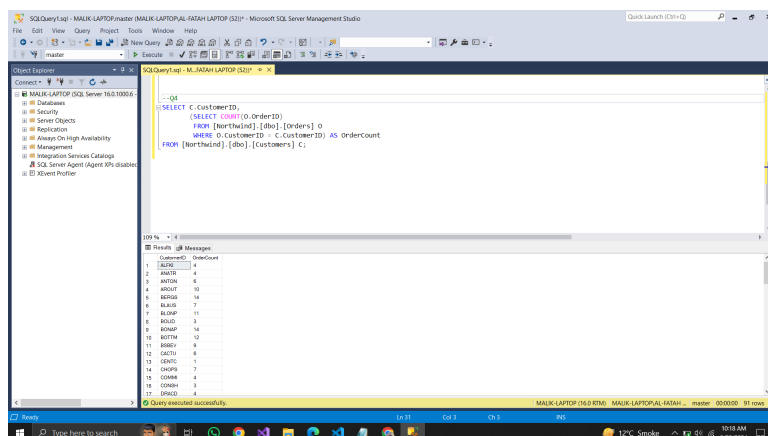
```



0.1.5 Query4:

Report the total orders of each customer. (customerID, totalorders)

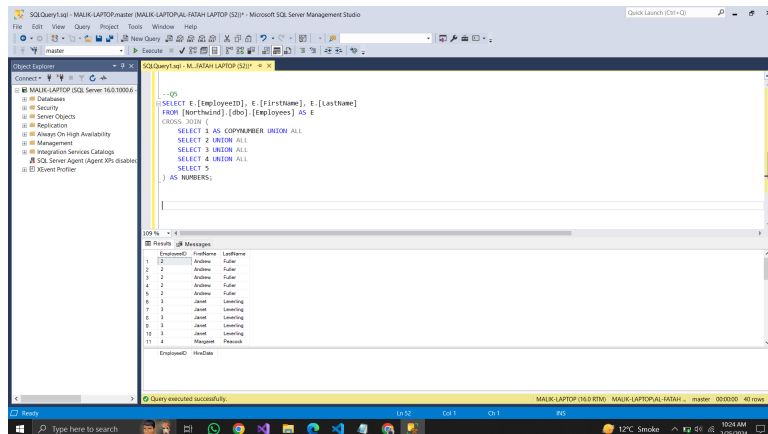
- 1 Q4
- 2 **SELECT C.CustomerID , (SELECT COUNT(O.OrderID) FROM [Northwind].[dbo].[Orders] O WHERE O.CustomerID = C.CustomerID) AS OrderCount FROM [Northwind].[dbo].[Customers] C; --*****
- 3 ***



0.1.6 Query5:

Write a query to generate a five copies of each employee. (EmployeeID, First-Name, LastName)

- 1 Q5
- 2 **SELECT** E.[EmployeeID], E.[FirstName], E.[LastName] **FROM** [Northwind].[dbo].[Employees] **AS** E **CROSS JOIN** (SELECT 1 **AS** COPYNUMBER **UNION ALL** SELECT 2 **UNION ALL** SELECT 3 **UNION ALL** SELECT 4 **UNION ALL** SELECT 5) **AS** NUMBERS;
- 3 ***

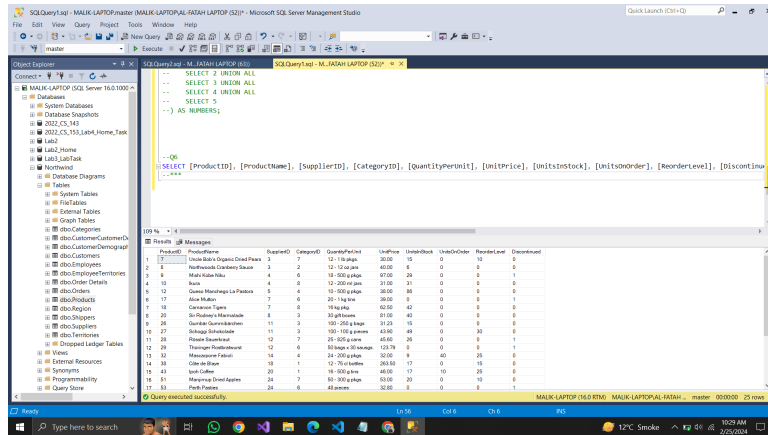


0.1.7 Query6:

Write a query that returns a row for each employee and day in the range 04-07-1996 through 04-08-1997. (EmployeeID, Date)

- 1 Q6
- 2 **SELECT** [ProductID], [ProductName], [SupplierID], [CategoryID], [QuantityPerUnit], [UnitPrice], [UnitsInStock], [UnitsOnOrder], [ReorderLevel], [Discontinued] **FROM** [Northwind].[dbo].[Products] **WHERE** [UnitPrice] > (SELECT AVG([UnitPrice]) **FROM** [Northwind].[dbo].[Products]); --***

3 ***



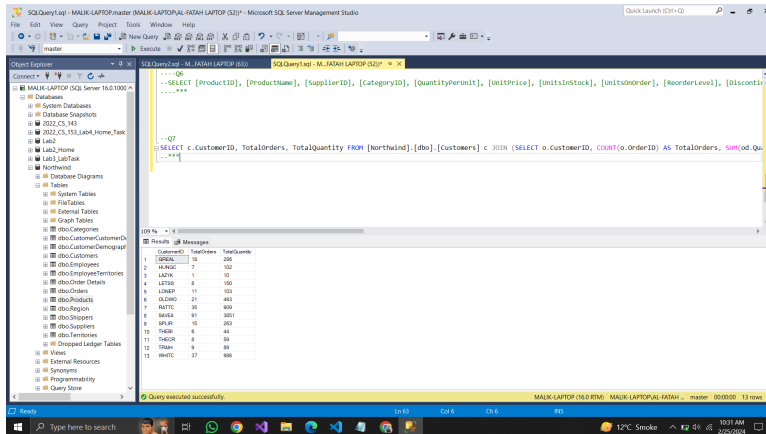
0.1.8 Query7:

Return US customers, and for each customer return the total number of orders and total quantities. (CustomerID, Totalorders, totalquantity)

1 Q7

```
2 SELECT c.CustomerID , TotalOrders , TotalQuantity FROM [
    Northwind].[dbo].[Customers] c JOIN (SELECT o.
    CustomerID , COUNT(o.OrderID) AS TotalOrders , SUM(od.
    Quantity) AS TotalQuantity FROM [Northwind].[dbo].[
    Orders] o JOIN [Northwind].[dbo].[Order Details] od ON
    o.OrderID = od.OrderID WHERE o.CustomerID IN (SELECT
    CustomerID FROM [Northwind].[dbo].[Customers] WHERE
    Country = 'USA')) GROUP BY o.CustomerID) subquery ON c.
    CustomerID = subquery.CustomerID; --***
```

3 ***



0.1.9 Query8:

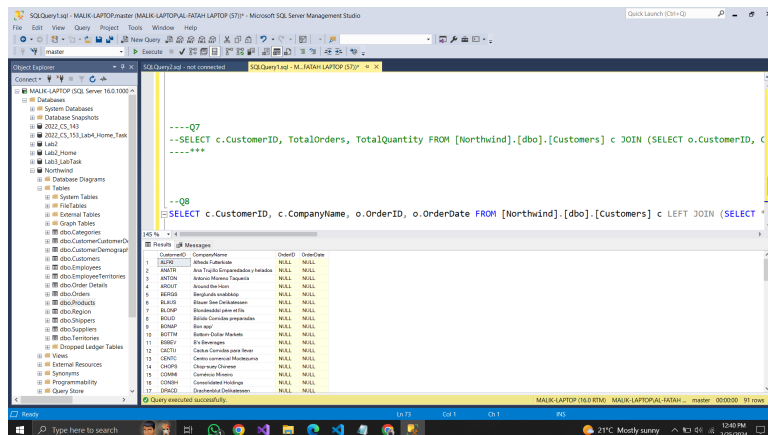
Write a query that returns all customers in the output, but matches them with their respective orders only if they were placed on July 04,1997. (CustomerID, CompanyName, OrderID, Orderdate)

1 Q8

```
2 SELECT c.CustomerID , c.CompanyName , o.OrderID , o.
   OrderDate FROM [Northwind].[dbo].[Customers] c LEFT
   JOIN (SELECT * FROM [Northwind].[dbo].[Orders] WHERE
   OrderID IS NULL OR (OrderDate = '1997-07-04' AND
   OrderID IS NOT NULL)) o ON c.CustomerID = o.CustomerID ;
```

-- ***

3 ***



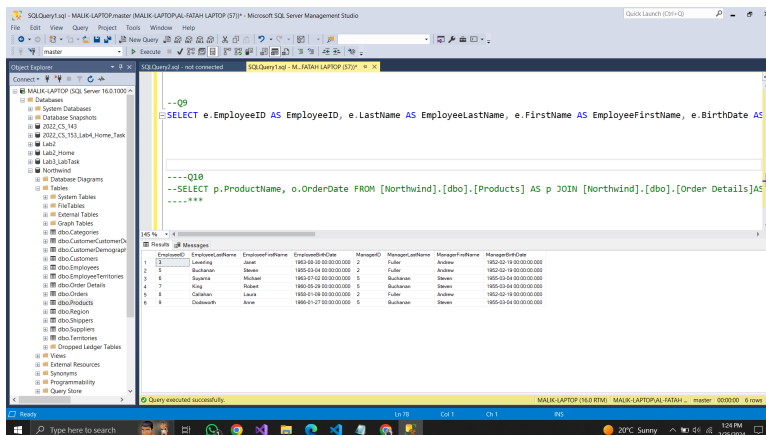
0.1.10 Query9:

Are there any employees who are older than their managers?

1 Q9

2 **SELECT** e.EmployeeID **AS** EmployeeID , e.LastName **AS** EmployeeLastName , e.FirstName **AS** EmployeeFirstName , e.BirthDate **AS** EmployeeBirthDate , e.ReportsTo **AS** ManagerID , m.LastName **AS** ManagerLastName , m.FirstName **AS** ManagerFirstName , m.BirthDate **AS** ManagerBirthDate **FROM** (SELECT * **FROM** [Northwind].[dbo].[Employees]) e **INNER JOIN** (SELECT * **FROM** [Northwind].[dbo].[Employees]) m **ON** e.ReportsTo = m.EmployeeID **WHERE** e.BirthDate > m.BirthDate ; --***

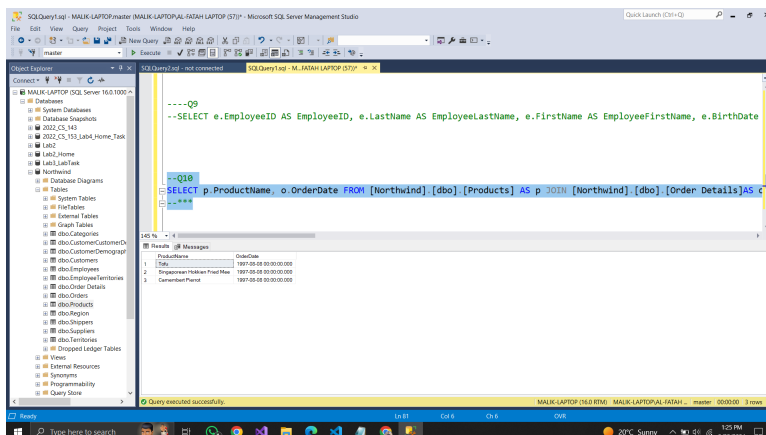
3 ***



0.1.11 Query10:

List that names of those employees and their ages. (EmployeeName, Age, Manager Age)

- 1 Q10
- 2 **SELECT** p.ProductName , o.OrderDate **FROM** [Northwind].[dbo].[Products] **AS** p **JOIN** [Northwind].[dbo].[Order Details]**AS** od **ON** p.ProductID = od.ProductID **JOIN** [Northwind].[dbo].[Orders] **AS** o **ON** od.OrderID = o.OrderID **WHERE** **CONVERT**(DATE, o.OrderDate) = '1997-08-08'; --***
- 3 ***



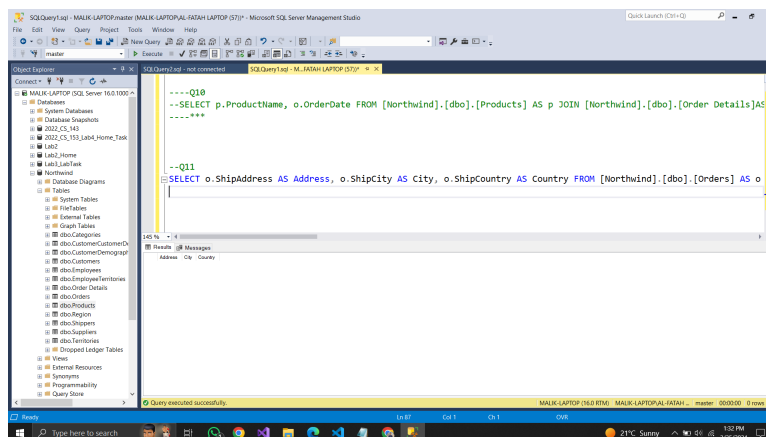
0.1.12 Query11:

Are there any employees who are older than their managers?

1 Q11

```
2 SELECT o.ShipAddress AS Address, o.ShipCity AS City, o.  
   ShipCountry AS Country FROM [Northwind].[dbo].[Orders]  
   AS o JOIN (SELECT ShipperID FROM [Northwind].[dbo].[  
   Shippers] WHERE CompanyName = 'Anne') AS sh ON o.  
   ShipVia = sh.ShipperID WHERE o.ShippedDate > o.  
   RequiredDate;
```

3 ***



0.1.13 Query12:

Are there any employees who are older than their managers?

1

2 Q12

```
3 SELECT DISTINCT o.ShipCountry AS Country FROM [Northwind]  
   ].[dbo].[Orders] AS o JOIN [Northwind].[dbo].[Order  
   Details] AS od ON o.OrderID = od.OrderID JOIN (SELECT  
   ProductID FROM [Northwind].[dbo].Products WHERE  
   CategoryID = (SELECT CategoryID FROM [Northwind].[dbo]
```

].[Categories] WHERE CategoryName = 'Beverages')) AS p
ON od.ProductID = p.ProductID; --***

4 ***

