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**27th March 2023**

***Task # 1:***

**Practice following DQL commands in SSMS:**

**1 - Data Query Language (DQL):**

**• select**

--Selecting table names from northwind database--

SELECT TABLE\_NAME

FROM INFORMATION\_SCHEMA.TABLES

WHERE TABLE\_TYPE = 'BASE TABLE';

--selecting all records from specific tables--

SELECT \* FROM ORDERS;

SELECT \* FROM PRODUCTS;

SELECT \* FROM EMPLOYEES;

SELECT \* FROM CATEGORIES;

**• Where clause**

SELECT \* FROM ORDERS WHERE ORDERID = 10250;

SELECT \* FROM EMPLOYEES WHERE CITY = 'LONDON';

**• Order By Clause**

SELECT ORDERID, CUSTOMERID, EMPLOYEEID FROM ORDERS ORDER BY ORDERID;

SELECT ORDERID, CUSTOMERID, EMPLOYEEID FROM ORDERS ORDER BY EMPLOYEEID;

**• Distinct Keyword**

SELECT DISTINCT ProductID, ProductName FROM PRODUCTS;

SELECT DISTINCT ORDERID, CUSTOMERID FROM ORDERS;

**• Isnull() function**

Select EmployeeID, ReportsTo FROM EMPLOYEES WHERE ReportsTo is null;

SELECT EmployeeID, FirstName, ISNULL(ReportsTo, 0) AS ReportsTo FROM EMPLOYEES;

**• Column aliases**

SELECT FirstName AS Name, Address AS Employee\_Address FROM Employees;

SELECT CategoryID AS ID, CategoryName AS C\_Name FROM Categories;

**• Predicates**

**- Between ... And**

SELECT \* FROM Employees WHERE EmployeeID BETWEEN 7 AND 9;

SELECT \* FROM Orders WHERE OrderID BETWEEN 10254 AND 10299;

**- In**

SELECT \* FROM Customers WHERE Country IN ('USA', 'Canada', 'Mexico');

**- Like**

SELECT \* FROM Orders WHERE ShipCity LIKE 'a%';

SELECT \* FROM Orders WHERE ShipCity LIKE '%a';

SELECT \* FROM Orders WHERE CustomerID LIKE '%a%';

**- Is Null**

SELECT \* FROM Customers WHERE ContactName IS NULL;

**• Top n Clause**

SELECT TOP 10 \* FROM Customers;

**• Set Operators**

**- Union**

SELECT City, Country FROM Customers WHERE Country = 'USA' UNION SELECT City, Country FROM Customers WHERE Country = 'Canada';

**- Intersect**

SELECT City, Country FROM Customers WHERE Country = 'USA'

INTERSECT SELECT City, Country FROM Orders

WHERE OrderDate BETWEEN '1997-01-01' AND '1997-12-31';

**- Except**

SELECT City, Country FROM Customers

WHERE Country = 'USA'

EXCEPT SELECT City, Country FROM Orders

WHERE OrderDate BETWEEN '1997-01-01' AND '1997-12-31';

***Task # 2:***

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

**1 - Retrieve the product name, unit price, and units in stock of all products that cost less than $20, ordered by product name.**

SELECT \* FROM PRODUCTS; /\* checking products Table \*/

SELECT ProductName, UnitPrice, UnitsInStock from products where UnitPrice < $20 order by ProductName;

**2 - Retrieve the order ID, customer ID, and order date of all orders that do not have a customer ID, ordered by order date.**

SELECT \* FROM ORDERS; /\* checking Orders Table \*/

select OrderID, CustomerID, OrderDate from Orders where CustomerID is null order by OrderDate;

**3 - Retrieve the category names of all products, as well as the countries to which orders have been shipped, without any duplicates.**

SELECT \* FROM CATEGORIES; /\* checking Categories Table \*/

SELECT DISTINCT CategoryName FROM Categories;