

**Name: Gaurav Shivaji Tanpure**

**PRN: 123B2B329**

**College: PCCOE**

**Domain: SQL**

## **WEEK 1 TASK**

**1. List of all customers:**

```
SELECT * FROM Sales.Customer;  
GO
```

**2. Customers where company name ends with 'N':**

```
SELECT * FROM Sales.Customer  
WHERE StoreName LIKE '%N';  
GO
```

**3. Customers who live in Berlin or London:**

```
SELECT DISTINCT c.*  
FROM Sales.Customer c  
JOIN Person.Address a ON c.CustomerID = a.AddressID  
WHERE a.City IN ('Berlin', 'London');  
GO
```

**4. Customers who live in UK or USA:**

```
SELECT DISTINCT c.*  
FROM Sales.Customer c  
JOIN Sales.SalesTerritory t ON c.TerritoryID = t.TerritoryID  
WHERE t.Name IN ('United Kingdom', 'United States');  
GO
```

**5. All products sorted by product name:**

```
SELECT * FROM Production.Product ORDER BY Name;  
GO
```

**6. Products where name starts with 'A':**

```
SELECT * FROM Production.Product WHERE Name LIKE 'A%';  
GO
```

**7. Customers who ever placed an order:**

```
SELECT DISTINCT c.*  
FROM Sales.Customer c  
JOIN Sales.SalesOrderHeader o ON c.CustomerID = o.CustomerID;
```

GO

**8. Customers from London who bought Chai:**

```
SELECT DISTINCT c.*
FROM Sales.Customer c
JOIN Sales.SalesOrderHeader o ON c.CustomerID = o.CustomerID
JOIN Sales.SalesOrderDetail od ON o.SalesOrderID = od.SalesOrderID
JOIN Production.Product p ON od.ProductID = p.ProductID
JOIN Person.Address a ON c.CustomerID = a.AddressID
WHERE a.City = 'London' AND p.Name = 'Chai';
GO
```

**9. Customers who never placed an order:**

```
SELECT * FROM Sales.Customer
WHERE CustomerID NOT IN (SELECT DISTINCT CustomerID FROM
Sales.SalesOrderHeader);
GO
```

**10. Customers who ordered Tofu:**

```
SELECT DISTINCT c.*
FROM Sales.Customer c
JOIN Sales.SalesOrderHeader o ON c.CustomerID = o.CustomerID
JOIN Sales.SalesOrderDetail od ON o.SalesOrderID = od.SalesOrderID
JOIN Production.Product p ON od.ProductID = p.ProductID
WHERE p.Name = 'Tofu';
GO
```

**11. Details of first order of the system:**

```
SELECT TOP 1 * FROM Sales.SalesOrderHeader ORDER BY OrderDate;
GO
```

**12. Most expensive order date:**

```
SELECT TOP 1 o.SalesOrderID, o.OrderDate, SUM(od.UnitPrice * od.OrderQty) AS
TotalAmount
FROM Sales.SalesOrderHeader o
JOIN Sales.SalesOrderDetail od ON o.SalesOrderID = od.SalesOrderID
GROUP BY o.SalesOrderID, o.OrderDate
ORDER BY TotalAmount DESC;
GO
```

**13. OrderID and average quantity of items:**

```
SELECT SalesOrderID, AVG(CAST(OrderQty AS FLOAT)) AS AvgQuantity
FROM Sales.SalesOrderDetail
GROUP BY SalesOrderID;
```

GO

**14. OrderID, min and max quantity per order:**

```
SELECT SalesOrderID, MIN(OrderQty) AS MinQty, MAX(OrderQty) AS MaxQty
FROM Sales.SalesOrderDetail
GROUP BY SalesOrderID;
GO
```

**15. Managers and total employees reporting to them:**

```
SELECT
    mgr.FirstName + ' ' + mgr.LastName AS ManagerName,
    COUNT(emp.BusinessEntityID) AS TotalEmployees
FROM HumanResources.Employee emp
JOIN HumanResources.Employee mgr ON emp.ManagerID = mgr.BusinessEntityID
GROUP BY mgr.FirstName, mgr.LastName;
GO
```

**16. Orders with total quantity > 300:**

```
SELECT SalesOrderID, SUM(OrderQty) AS TotalQty
FROM Sales.SalesOrderDetail
GROUP BY SalesOrderID
HAVING SUM(OrderQty) > 300;
GO
```

**17. Orders on or after 1996-12-31:**

```
SELECT * FROM Sales.SalesOrderHeader WHERE OrderDate >= '1996-12-31';
GO
```

**18. Orders shipped to Canada:**

```
SELECT * FROM Sales.SalesOrderHeader WHERE ShipToCountry = 'Canada';
GO
```

**19. Orders with total > 200:**

```
SELECT SalesOrderID, SUM(UnitPrice * OrderQty) AS Total
FROM Sales.SalesOrderDetail
GROUP BY SalesOrderID
HAVING SUM(UnitPrice * OrderQty) > 200;
GO
```

**20. Countries and sales made:**

```
SELECT o.ShipToCountry, SUM(od.UnitPrice * od.OrderQty) AS TotalSales
FROM Sales.SalesOrderHeader o
JOIN Sales.SalesOrderDetail od ON o.SalesOrderID = od.SalesOrderID
GROUP BY o.ShipToCountry;
```

GO

**21. Customer contact name and number of orders:**

```
SELECT c.CustomerID, COUNT(o.SalesOrderID) AS OrderCount
FROM Sales.Customer c
JOIN Sales.SalesOrderHeader o ON c.CustomerID = o.CustomerID
GROUP BY c.CustomerID;
GO
```

**22. Customers with more than 3 orders:**

```
SELECT c.CustomerID, COUNT(o.SalesOrderID) AS OrderCount
FROM Sales.Customer c
JOIN Sales.SalesOrderHeader o ON c.CustomerID = o.CustomerID
GROUP BY c.CustomerID
HAVING COUNT(o.SalesOrderID) > 3;
GO
```

**23. Products ordered between 1997-01-01 and 1998-01-01:**

```
SELECT DISTINCT p.Name
FROM Sales.SalesOrderHeader o
JOIN Sales.SalesOrderDetail od ON o.SalesOrderID = od.SalesOrderID
JOIN Production.Product p ON od.ProductID = p.ProductID
WHERE o.OrderDate BETWEEN '1997-01-01' AND '1998-01-01';
GO
```

**24. Employee first name, last name, supervisor name:**

```
SELECT e.FirstName AS EmployeeFirstName, e.LastName AS EmployeeLastName,
       m.FirstName AS SupervisorFirstName, m.LastName AS SupervisorLastName
FROM HumanResources.Employee e
LEFT JOIN HumanResources.Employee m ON e.ManagerID = m.BusinessEntityID;
GO
```

**25. List of Employees id and total sale conducted by employee:**

```
SELECT e.EmployeeID, SUM(od.LineTotal) AS TotalSales
FROM Sales.SalesPerson sp
JOIN Sales.SalesOrderHeader soh ON sp.BusinessEntityID = soh.SalesPersonID
JOIN Sales.SalesOrderDetail od ON soh.SalesOrderID = od.SalesOrderID
JOIN HumanResources.Employee e ON sp.BusinessEntityID = e.BusinessEntityID
GROUP BY e.EmployeeID;
GO
```

**26. List of employees whose FirstName contains character 'a':**

```
SELECT e.BusinessEntityID, p.FirstName, p.LastName
FROM HumanResources.Employee e
```

```
JOIN Person.Person p ON e.BusinessEntityID = p.BusinessEntityID
WHERE p.FirstName LIKE '%a%';
GO
```

**27. List of managers who have more than four people reporting to them:**

```
SELECT m.BusinessEntityID AS ManagerID, p.FirstName + ' ' + p.LastName AS
ManagerName, COUNT(e.BusinessEntityID) AS ReportCount
FROM HumanResources.Employee e
JOIN HumanResources.Employee m ON e.ManagerID = m.BusinessEntityID
JOIN Person.Person p ON m.BusinessEntityID = p.BusinessEntityID
GROUP BY m.BusinessEntityID, p.FirstName, p.LastName
HAVING COUNT(e.BusinessEntityID) > 4;
GO
```

**28. List of Orders and ProductNames:**

```
SELECT soh.SalesOrderID, p.Name AS ProductName
FROM Sales.SalesOrderHeader soh
JOIN Sales.SalesOrderDetail sod ON soh.SalesOrderID = sod.SalesOrderID
JOIN Production.Product p ON sod.ProductID = p.ProductID;
GO
```

**29. List of orders placed by the best customer (customer with highest total sales):**

```
DECLARE @BestCustomerID INT;
SELECT TOP 1 @BestCustomerID = CustomerID
FROM Sales.SalesOrderHeader
GROUP BY CustomerID
ORDER BY SUM(TotalDue) DESC;
```

```
SELECT *
FROM Sales.SalesOrderHeader
WHERE CustomerID = @BestCustomerID;
GO
```

**30. List of orders placed by customers who do not have a Fax number:**

```
SELECT soh.*
FROM Sales.SalesOrderHeader soh
JOIN Sales.Customer c ON soh.CustomerID = c.CustomerID
WHERE c.Fax IS NULL OR c.Fax = '';
GO
```

**31. List of Postal codes where the product Tofu was shipped:**

```
SELECT DISTINCT soh.ShipPostalCode
FROM Sales.SalesOrderHeader soh
JOIN Sales.SalesOrderDetail sod ON soh.SalesOrderID = sod.SalesOrderID
```

```
JOIN Production.Product p ON sod.ProductID = p.ProductID
WHERE p.Name = 'Tofu';
GO
```

**32. List of product Names that were shipped to France:**

```
SELECT DISTINCT p.Name
FROM Sales.SalesOrderHeader soh
JOIN Sales.SalesOrderDetail sod ON soh.SalesOrderID = sod.SalesOrderID
JOIN Production.Product p ON sod.ProductID = p.ProductID
WHERE soh.ShipCountry = 'France';
GO
```

**33. List of ProductNames and Categories for the supplier 'Specialty Biscuits, Ltd.':**

```
SELECT p.Name AS ProductName, pc.Name AS CategoryName
FROM Production.Product p
JOIN Production.ProductCategory pc ON p.ProductCategoryID = pc.ProductCategoryID
JOIN Purchasing.ProductVendor pv ON p.ProductID = pv.ProductID
JOIN Purchasing.Vendor v ON pv.BusinessEntityID = v.BusinessEntityID
WHERE v.Name = 'Specialty Biscuits, Ltd.';
GO
```

**34. List of products that were never ordered:**

```
SELECT p.Name
FROM Production.Product p
LEFT JOIN Sales.SalesOrderDetail sod ON p.ProductID = sod.ProductID
WHERE sod.ProductID IS NULL;
GO
```

**35. List of products where units in stock is less than 10 and units on order are 0:**

```
SELECT Name, QuantityInStock, ReorderPoint
FROM Production.Product
WHERE QuantityInStock < 10 AND ReorderPoint = 0;
GO
```

**36. List of top 10 countries by sales:**

```
SELECT TOP 10 soh.ShipCountry, SUM(sod.LineTotal) AS TotalSales
FROM Sales.SalesOrderHeader soh
JOIN Sales.SalesOrderDetail sod ON soh.SalesOrderID = sod.SalesOrderID
GROUP BY soh.ShipCountry
ORDER BY TotalSales DESC;
GO
```

**37. Number of orders each employee has taken for customers with CustomerIDs between 'A' and 'AO':**

```
SELECT soh.SalesPersonID, COUNT(soh.SalesOrderID) AS OrderCount
FROM Sales.SalesOrderHeader soh
JOIN Sales.Customer c ON soh.CustomerID = c.CustomerID
WHERE c.CustomerID BETWEEN 'A' AND 'AO'
GROUP BY soh.SalesPersonID;
GO
```

**38. Orderdate of most expensive order:**

```
SELECT TOP 1 soh.OrderDate, soh.SalesOrderID, SUM(sod.LineTotal) AS TotalAmount
FROM Sales.SalesOrderHeader soh
JOIN Sales.SalesOrderDetail sod ON soh.SalesOrderID = sod.SalesOrderID
GROUP BY soh.OrderDate, soh.SalesOrderID
ORDER BY TotalAmount DESC;
GO
```

**39. Product name and total revenue from that product:**

```
SELECT p.Name AS ProductName, SUM(sod.LineTotal) AS TotalRevenue
FROM Production.Product p
JOIN Sales.SalesOrderDetail sod ON p.ProductID = sod.ProductID
GROUP BY p.Name
ORDER BY TotalRevenue DESC;
GO
```

**40. Supplierid and number of products offered:**

```
SELECT pv.BusinessEntityID AS SupplierID, COUNT(pv.ProductID) AS ProductCount
FROM Purchasing.ProductVendor pv
GROUP BY pv.BusinessEntityID;
GO
```

**41. Top ten customers based on their business (total order amount):**

```
SELECT TOP 10 c.CustomerID, SUM(soh.TotalDue) AS TotalBusiness
FROM Sales.Customer c
JOIN Sales.SalesOrderHeader soh ON c.CustomerID = soh.CustomerID
GROUP BY c.CustomerID
ORDER BY TotalBusiness DESC;
GO
```

**42. What is the total revenue of the company:**

```
SELECT SUM(TotalDue) AS TotalRevenue
FROM Sales.SalesOrderHeader;
GO
```