1- Calculate Total Sales Revenue by Year

SELECT YEAR(OrderDate) AS OrderYear,

SUM(Sales Amount) AS Total Sales Revenue

FROM Sales.SalesOrderHeader

**GROUP BY YEAR(OrderDate)** 

**ORDER BY OrderYear;** 

2- Find the Most Popular Products by Quantity Sold

**SELECT ProductID,** 

ProductName,

SUM(OrderQty) AS TotalQuantitySold

FROM Sales.SalesOrderDetail

**GROUP BY ProductID, ProductName** 

**ORDER BY TotalQuantitySold DESC** 

LIMIT 10; -- Get top 10 most popular products

3- Identify the Top Selling Product Categories

SELECT ProductCategoryName,

SUM(OrderQty) AS TotalQuantitySold

FROM Sales. Sales Order Detail sod

JOIN Production.Product prod ON sod.ProductID = prod.ProductID

JOIN Production.ProductSubcategory subcat ON prod.ProductSubcategoryID = subcat.ProductSubcategoryID

JOIN Production.ProductCategory cat ON subcat.ProductCategoryID = cat.ProductCategoryID

**GROUP BY ProductCategoryName** 

**ORDER BY TotalQuantitySold DESC;** 

4- Find Customers with High Total Sales

```
SELECT CustomerID,
      FirstName,
      LastName,
      (SELECT SUM(TotalDue)
      FROM Sales.SalesOrderHeader
      WHERE CustomerID = c.CustomerID) AS TotalSales
      FROM Sales. Customer c
      ORDER BY TotalSales DESC
      LIMIT 10; -- Top 10 customers with highest total sales
5- Identify Customers who Have Not Made Purchases
SELECT CustomerID,
      FirstName,
      LastName
      FROM Sales. Customer
      WHERE CustomerID NOT IN (SELECT DISTINCT CustomerID FROM
      Sales.SalesOrderHeader);
6- List Products with Quantity Sold Greater Than Average
SELECT ProductID,
      Name,
      ListPrice,
       Color
      FROM Production. Product
      WHERE ProductID IN (SELECT ProductID
              FROM Sales.SalesOrderDetail
              GROUP BY ProductID
```

## HAVING SUM(OrderQty) > (SELECT AVG(OrderQty) FROM Sales.SalesOrderDetail));

7- Calculate Running Total Sales Amount

**SELECT OrderDate**,

SalesOrderID,

SalesAmount,

SUM(SalesAmount) OVER (ORDER BY OrderDate) AS RunningTotal

FROM Sales. Sales Order Header;

8- Calculate Moving Average Sales Amount

**SELECT OrderDate**,

SalesOrderID,

SalesAmount,

AVG(SalesAmount) OVER (ORDER BY OrderDate ROWS BETWEEN 2 PRECEDING AND CURRENT ROW) AS MovingAverage

FROM Sales. Sales Order Header;

9- Calculate Percentile Rank of Sales Amount

SELECT Sales OrderID,

TotalDue,

PERCENT\_RANK() OVER (ORDER BY TotalDue) AS PercentileRank

FROM Sales. Sales Order Header;

10- Find Employees with No Sales Orders

**SELECT BusinessEntityID,** 

FirstName,

LastName

FROM HumanResources. Employee

WHERE BusinessEntityID NOT IN (SELECT DISTINCT SalesPersonID FROM Sales.SalesOrderHeader);