

```
USE Northwind
```

```
-- 1
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```
SELECT DISTINCT City FROM Customers  
WHERE City IN (SELECT DISTINCT City FROM Employees);
```

```
-- 2a
```

```
SELECT City FROM Customers c  
WHERE City NOT IN (SELECT DISTINCT City FROM Employees)
```

```
-- 2b
```

```
SELECT c.City FROM Customers c  
INNER JOIN Employees e  
ON NOT c.City = e.City
```

```
-- 3
```

```
SELECT p.ProductID, SUM(od.Quantity) as OrderQuantities  
FROM Products p INNER JOIN [Order Details] od  
ON p.ProductID = od.ProductID  
GROUP BY p.ProductID
```

```
-- 4
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```
SELECT o.ShipCity, SUM(ProductID) as TotalProducts  
FROM [Order Details] od INNER JOIN Orders o  
ON od.OrderID = o.OrderID  
GROUP BY ShipCity
```

```
-- 5
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-- a
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```
SELECT City FROM Customers  
GROUP BY City  
HAVING COUNT(*) >= 2  
UNION  
SELECT o.ShipCity as City  
FROM Orders o  
GROUP BY ShipCity  
HAVING COUNT(o.CustomerID) >= 2
```

```
-- b
```

```
SELECT tb2.City AS City FROM Customers c  
RIGHT JOIN  
(SELECT o.ShipCity as City, o.CustomerID AS CustomerID  
FROM Orders o  
) tb2 ON c.CustomerID = tb2.CustomerID  
GROUP BY tb2.City  
HAVING COUNT(c.CustomerID) >= 2
```

```

-- 6
SELECT c.City AS CustomerCities, COUNT(DISTINCT od.ProductID) as
DiffProdCount
FROM Orders o
JOIN [Order Details] od
ON o.OrderID = od.OrderID
JOIN Customers c
ON o.CustomerID = c.CustomerID
GROUP BY c.City
HAVING COUNT(DISTINCT od.ProductID) >= 2

```

```

-- 7
SELECT DISTINCT c.CompanyName, c.City, o.ShipCity
FROM Customers c
INNER JOIN Orders o
ON o.CustomerID = c.CustomerID
WHERE NOT c.City = o.ShipCity

```

```

-- 8
SELECT TOP 5 p.ProductName, AVG(od.UnitPrice) AS AvgPrice,
c.City AS PopularCity, SUM(od.Quantity) AS TotalQuantity
FROM Products p
INNER JOIN [Order Details] od ON p.ProductID = od.ProductID
INNER JOIN Orders o ON od.OrderID = o.OrderID
INNER JOIN Customers c ON o.CustomerID = c.CustomerID
GROUP BY p.ProductName, c.City
ORDER BY TotalQuantity DESC;

```

```

-- 9
-- a
SELECT City
FROM Employees
WHERE City NOT IN (
    SELECT DISTINCT o.ShipCity
    FROM Orders o
)
GROUP BY City;

```

```

-- b
SELECT DISTINCT e.City
FROM Employees e
LEFT JOIN Orders o
ON e.City = o.ShipCity
WHERE o.ShipCity IS NULL

```

```

-- 10
SELECT TOP 1 tb1.City

```

```

FROM
(SELECT e.City, COUNT(o.OrderID) AS OrderCount
FROM Employees e
JOIN Orders o ON e.EmployeeID = o.EmployeeID
GROUP BY e.City) tb1
INNER JOIN
(SELECT c.City, SUM(od.Quantity) AS TotalQuantity
FROM Customers c
JOIN Orders o ON c.CustomerID = o.CustomerID
JOIN [Order Details] od ON o.OrderID = od.OrderID
GROUP BY c.City) tb2
ON tb1.City = tb2.City
ORDER BY tb1.OrderCount DESC, tb2.TotalQuantity DESC

-- 11
-- Create a new table with unique records
SELECT DISTINCT *
INTO new_table
FROM Orders;

-- Drop the original table
DROP TABLE Orders;

-- Rename the new table to the original table name
EXEC sp_rename 'new_table', 'Orders';

```