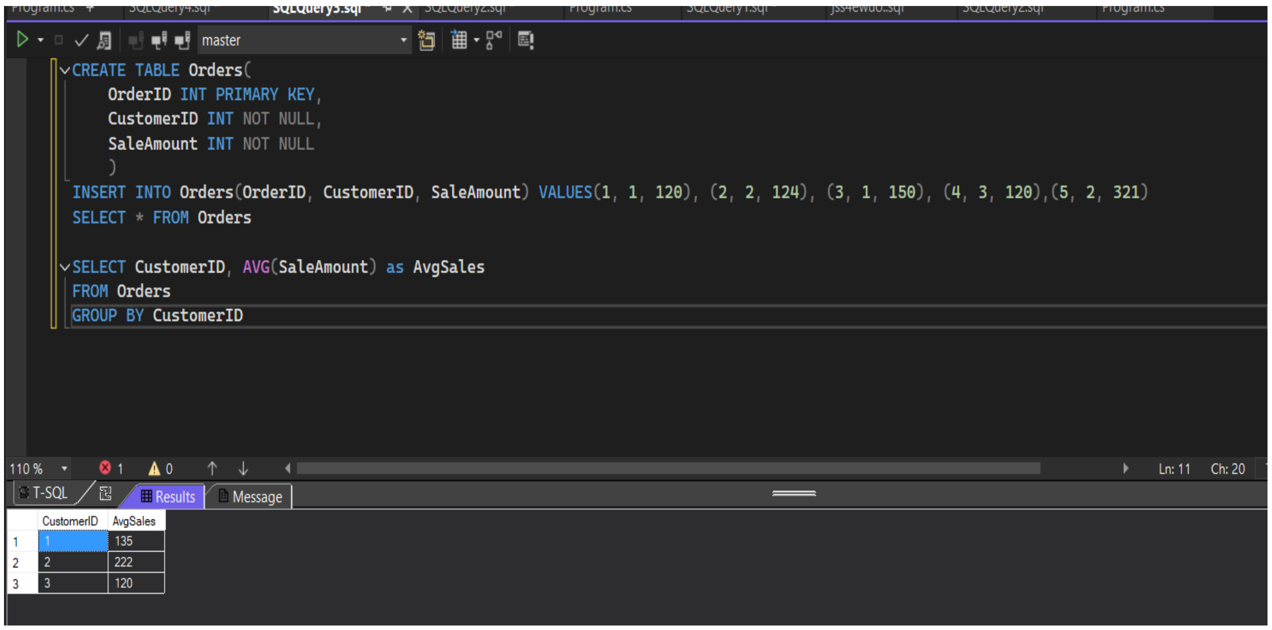
1.Find the Average Sales Per Customer

Problem:

Given an `Orders` table

with columns `OrderID`, `CustomerID`, and `SaleAmount`,

calculate the average sales amount per customer.



```
CREATE TABLE Orders(
    OrderID INT PRIMARY KEY,
    CustomerID INT NOT NULL,
    SaleAmount INT NOT NULL
    )
INSERT INTO Orders(OrderID, CustomerID, SaleAmount) VALUES(1, 1, 120), (2, 2, 124), (3, 1, 150), (4, 3, 120),(5, 2, 321)
SELECT * FROM Orders

SELECT CustomerID, AVG(SaleAmount) as AvgSales
FROM Orders
GROUP BY CustomerID
```

	CustomerID	AvgSales
1	1	135
2	2	222
3	3	120

2.Find Employees with No Manager

Problem:

Given an `Employees` table

with columns `EmployeeID`, `Name`, and `ManagerID`

(which refers to `EmployeeID` of the manager),

find all employees who do not have a manager.

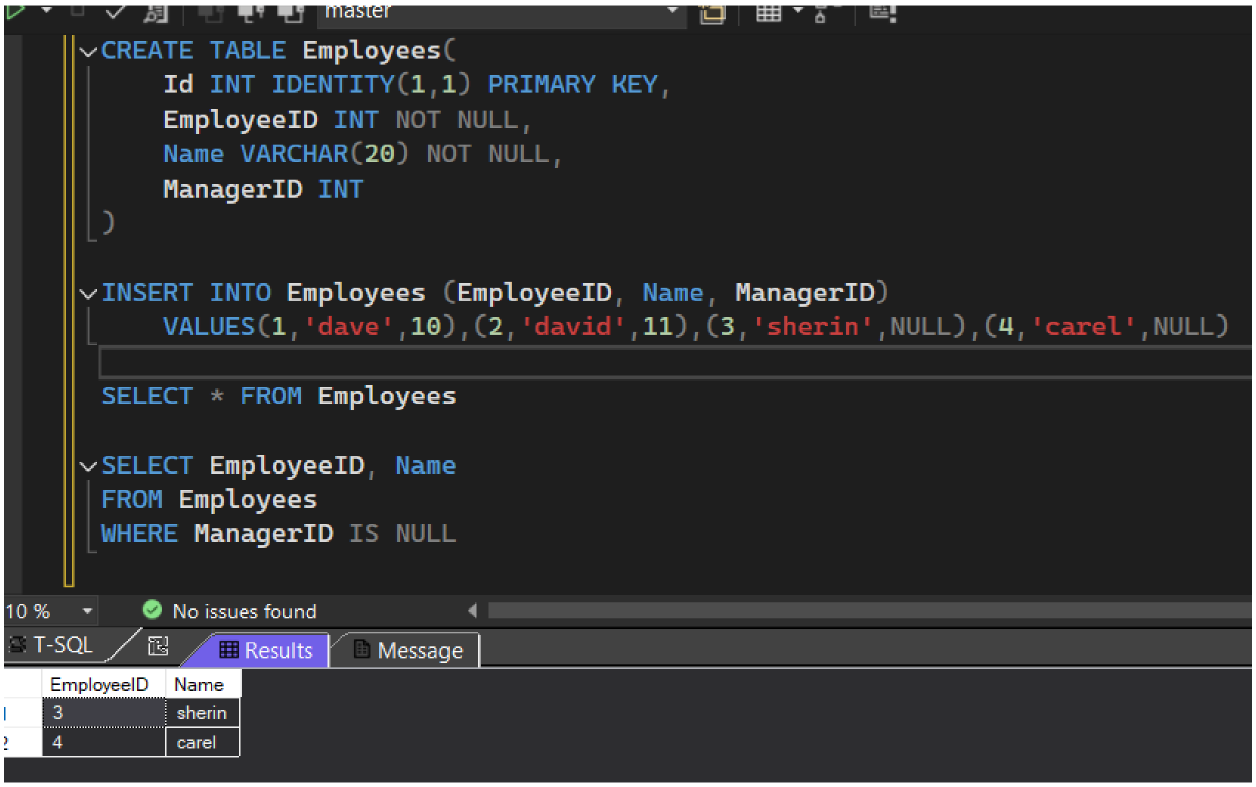
Table Structure:

```

CREATE TABLE Employees (

EmployeeID INT,
```

Name VARCHAR(100),

ManagerID INT

);



```
CREATE TABLE Employees(
     Id INT IDENTITY(1,1) PRIMARY KEY,
     EmployeeID INT NOT NULL,
     Name VARCHAR(20) NOT NULL,
     ManagerID INT
)

INSERT INTO Employees (EmployeeID, Name, ManagerID)
     VALUES(1,'dave',10),(2,'david',11),(3,'sherin',NULL),(4,'carel',NULL)

SELECT * FROM Employees

SELECT EmployeeID, Name
FROM Employees
WHERE ManagerID IS NULL
```

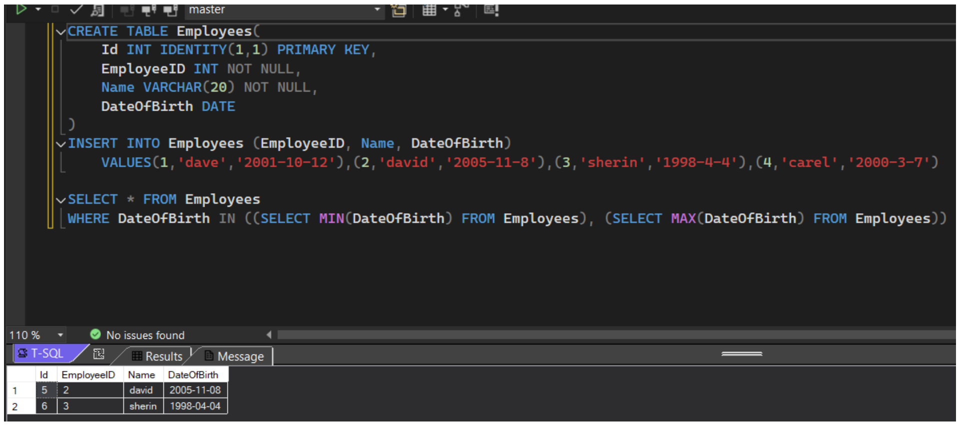
	EmployeeID	Name
1	3	sherin
2	4	carel

3.Find the Oldest and Youngest Employees

Problem: Given an `Employees` table

with columns `EmployeeID`, `Name`, and `DateOfBirth`,

find the oldest and youngest employees.



```sql
CREATE TABLE Employees(
    Id INT IDENTITY(1,1) PRIMARY KEY,
    EmployeeID INT NOT NULL,
    Name VARCHAR(20) NOT NULL,
    DateOfBirth DATE
)
INSERT INTO Employees (EmployeeID, Name, DateOfBirth)
    VALUES(1,'dave','2001-10-12'),(2,'david','2005-11-8'),(3,'sherin','1998-4-4'),(4,'carel','2000-3-7')

SELECT * FROM Employees
WHERE DateOfBirth IN ((SELECT MIN(DateOfBirth) FROM Employees), (SELECT MAX(DateOfBirth) FROM Employees))
```

	Id	EmployeeID	Name	DateOfBirth
1	5	2	david	2005-11-08
2	6	3	sherin	1998-04-04

4.Find the Most Recent Order for Each Customer

Problem: Given an `Orders` table

with columns `OrderID`, `CustomerID`, and `OrderDate`,

find the most recent order date for each customer.

Table Structure:

` ` `

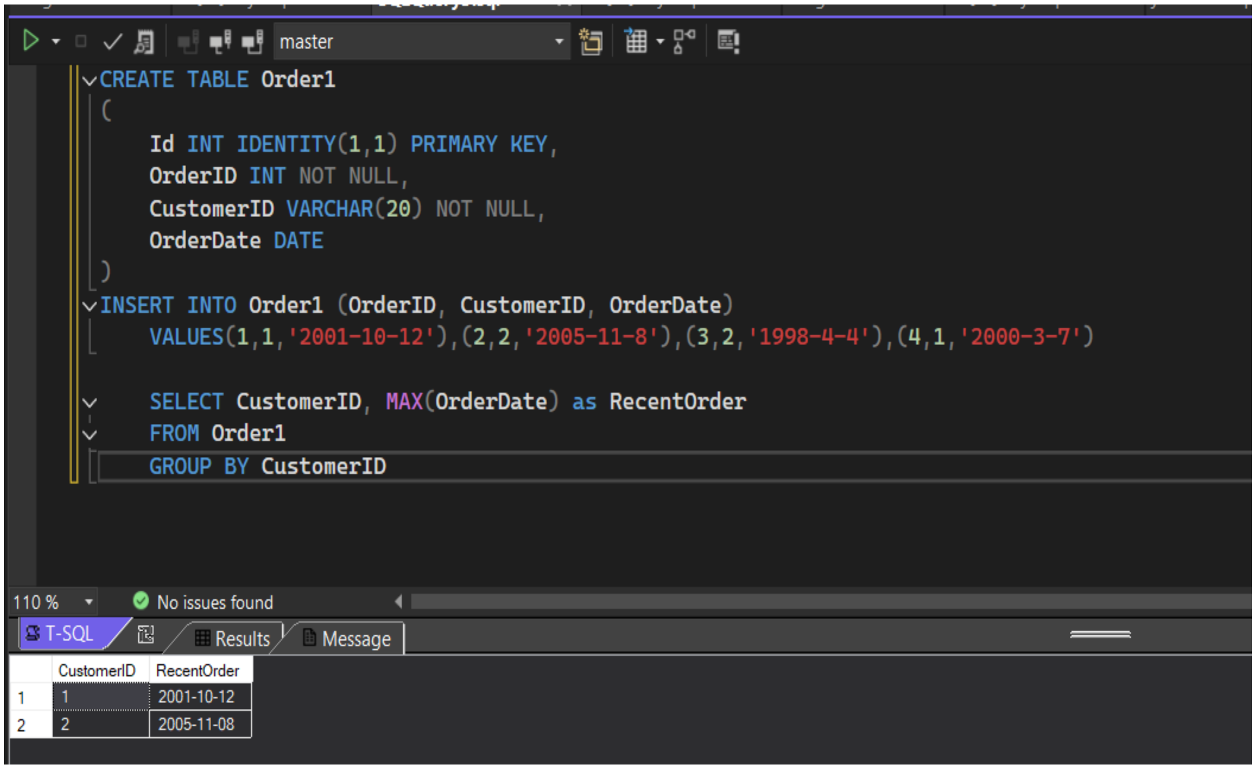
CREATE TABLE Orders (

OrderID INT,

CustomerID INT,

OrderDate DATE

);



```sql
CREATE TABLE Order1
(
    Id INT IDENTITY(1,1) PRIMARY KEY,
    OrderID INT NOT NULL,
    CustomerID VARCHAR(20) NOT NULL,
    OrderDate DATE
)
INSERT INTO Order1 (OrderID, CustomerID, OrderDate)
    VALUES(1,1,'2001-10-12'),(2,2,'2005-11-8'),(3,2,'1998-4-4'),(4,1,'2000-3-7')

    SELECT CustomerID, MAX(OrderDate) as RecentOrder
    FROM Order1
    GROUP BY CustomerID
```

110 % No issues found

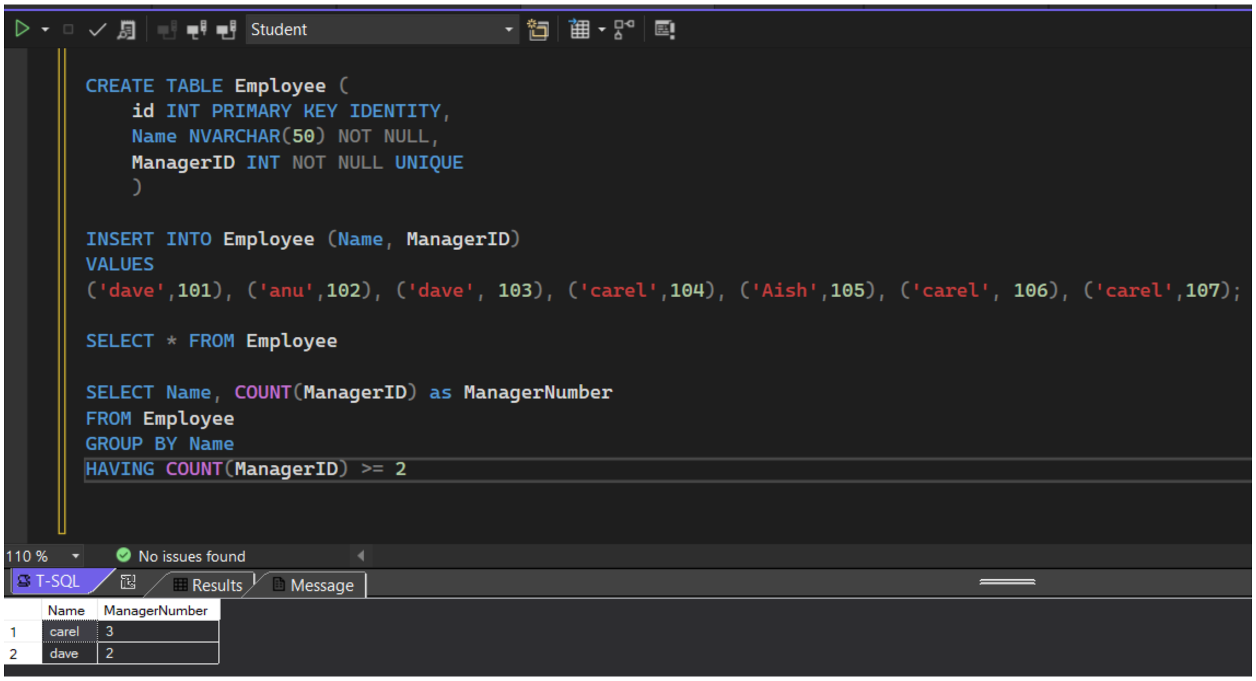
	CustomerID	RecentOrder
1	1	2001-10-12
2	2	2005-11-08

5.Find Employees Who Report to More Than One Manager

Problem: Given an `Employees` table

with columns `EmployeeID`, `Name`, and `ManagerID`,

find employees who report to more than one manager.



```
CREATE TABLE Employee (
    id INT PRIMARY KEY IDENTITY,
    Name NVARCHAR(50) NOT NULL,
    ManagerID INT NOT NULL UNIQUE
    )

INSERT INTO Employee (Name, ManagerID)
VALUES
('dave',101), ('anu',102), ('dave', 103), ('carel',104), ('Aish',105), ('carel', 106), ('carel',107);

SELECT * FROM Employee

SELECT Name, COUNT(ManagerID) as ManagerNumber
FROM Employee
GROUP BY Name
HAVING COUNT(ManagerID) >= 2
```

	Name	ManagerNumber
1	carel	3
2	dave	2