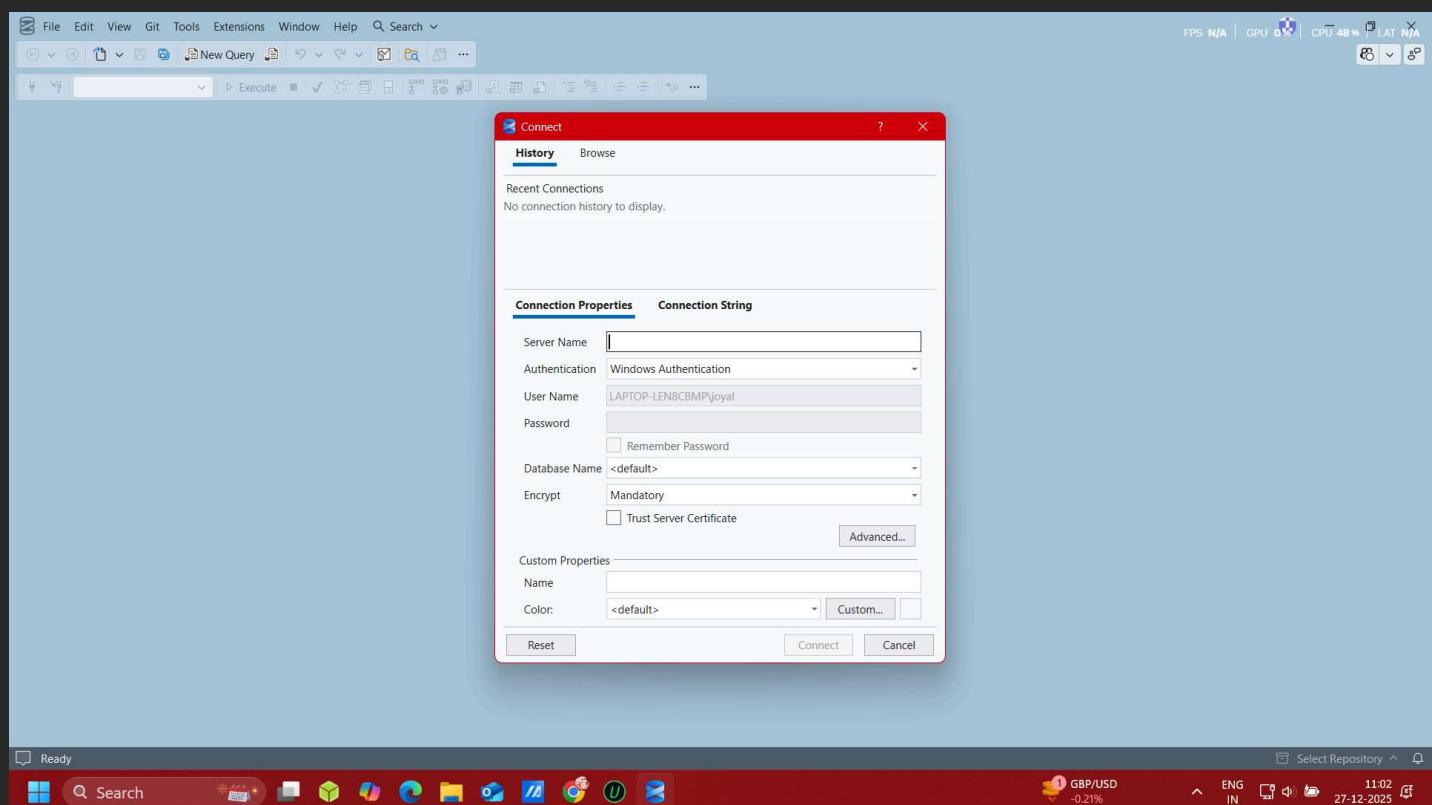
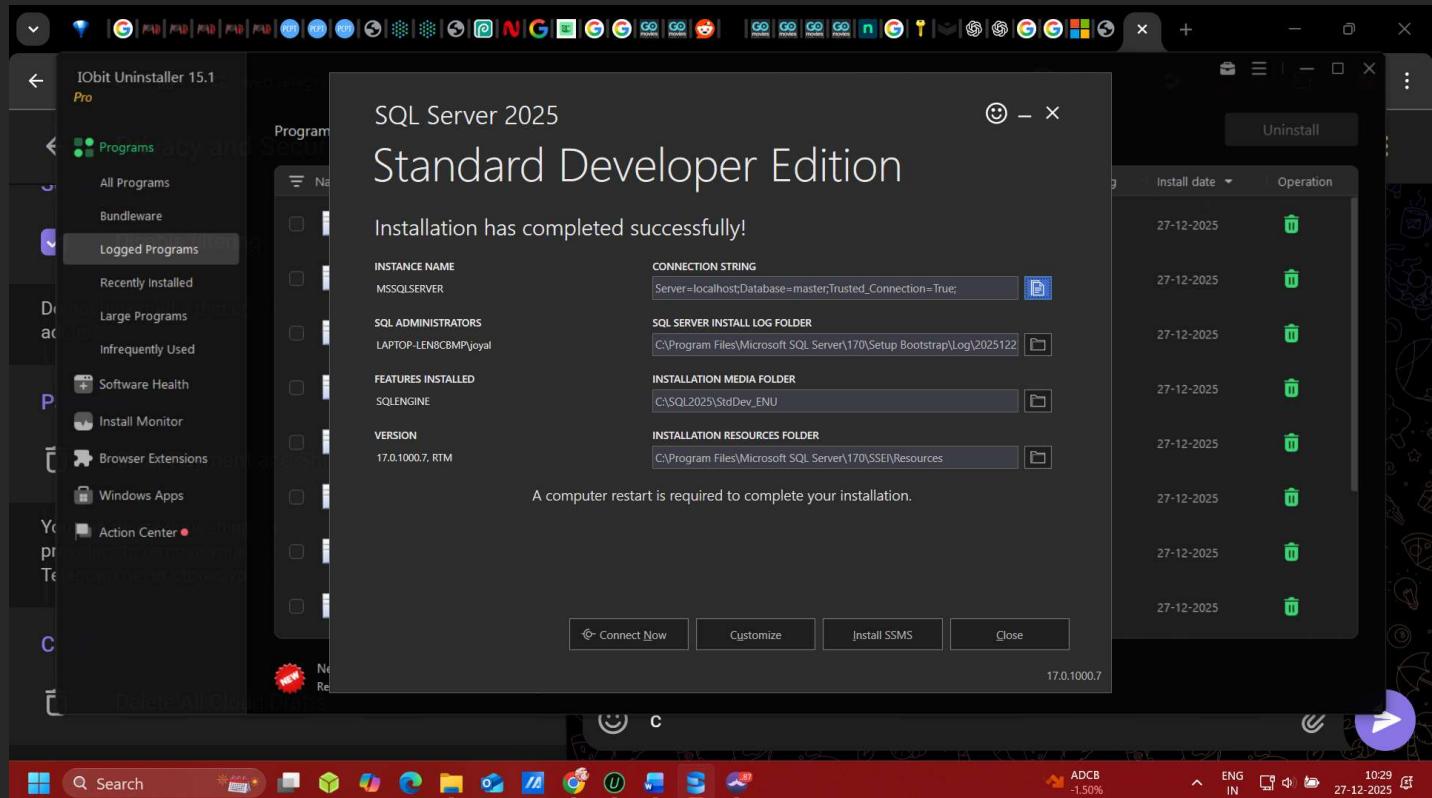
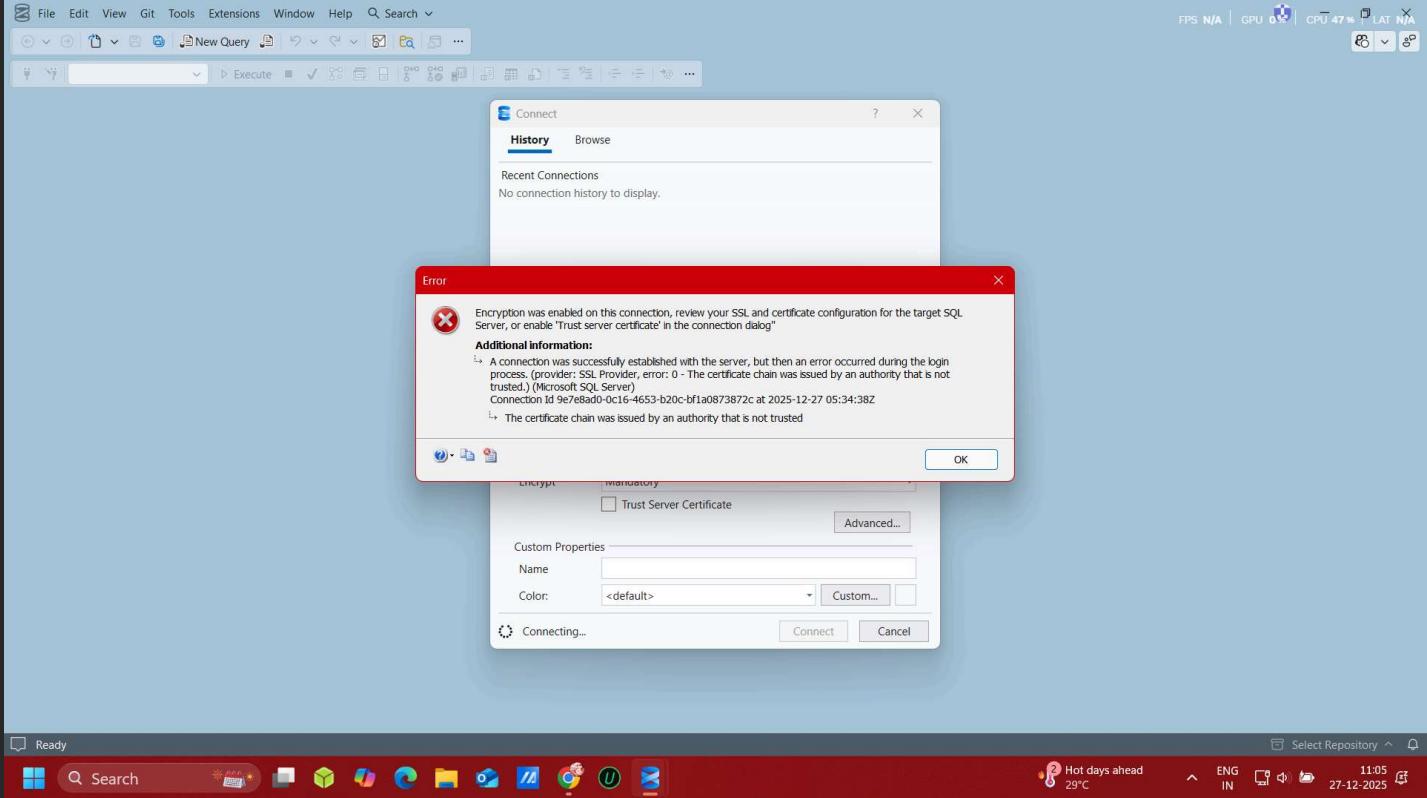


# SQL Revision

## Day 1

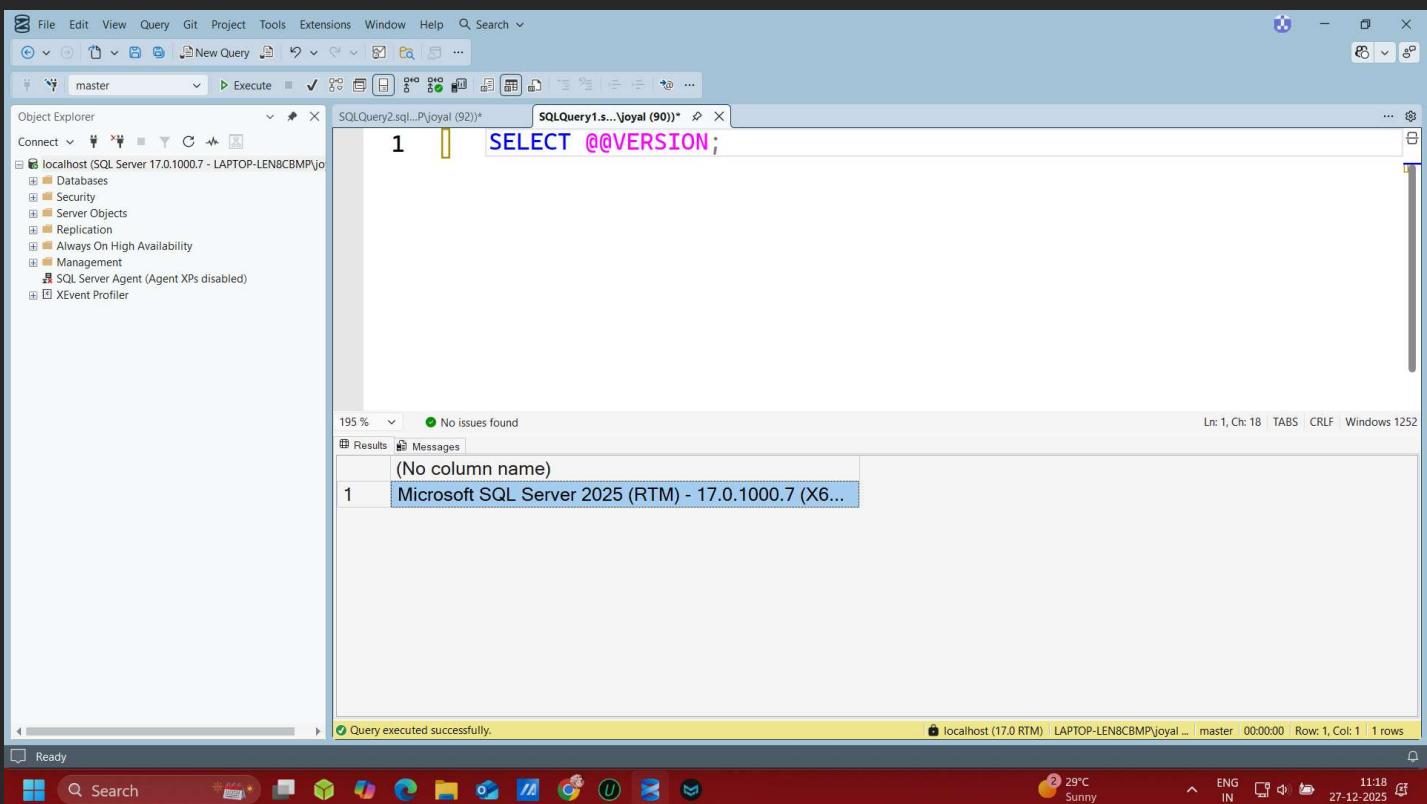
### Installing SQL Standard developers edition and SSMS





Clicked trust server certificate and started.

Confirm if it is connected to sql server



then click on new query

**QUERY 1)**

```
CREATE DATABASE Day1_SQL;
```

```
GO
```

```
USE Day1_SQL;
```

```
GO
```

The screenshot shows the SQL Server Management Studio (SSMS) interface. In the Object Explorer on the left, a connection to 'localhost (SQL Server 17.0.1000.7 - LAPTOP-LEN8CBMP\joyal)' is selected. The 'Day1\_SQL' database is listed under 'Databases'. In the center pane, two queries are run:

```
1 CREATE DATABASE Day1_SQL;
2 GO
3
4 USE Day1_SQL;
5 GO
```

The output window at the bottom shows the results of the execution:

```
Commands completed successfully.
```

Completion time: 2025-12-27T11:10:15.1478906+05:30

At the bottom of the screen, the taskbar shows the system status: 'localhost (17.0 RTM) | LAPTOP-LEN8CBMP\joyal ... | Day1\_SQL | 00:00:00 | Row: 0, Col: 0 | 0 rows' and the date/time '27-12-2025 11:19'.

## QUERY 2)

```
CREATE TABLE Employees (
    EmployeeID INT PRIMARY KEY,
    FullName VARCHAR(100),
    Department VARCHAR(50),
    Salary INT,
    JoinDate DATE
);
```

The screenshot shows the Microsoft SQL Server Management Studio (SSMS) interface. In the Object Explorer on the left, a connection to 'localhost (SQL Server 17.0.1000.7 - LAPTOP-LEN8CBMP\joyal)' is selected. Under the 'Tables' node, there is a 'dbo.Employees' table. The central pane displays the following SQL code:

```
CREATE TABLE Employees (
    EmployeeID INT PRIMARY KEY,
    FullName VARCHAR(100),
    Department VARCHAR(50),
    Salary INT,
    JoinDate DATE
);
```

The status bar at the bottom indicates 'Commands completed successfully.' and 'Completion time: 2025-12-27T11:25:38.5653349+05:30'. The bottom taskbar shows the system tray with icons for weather (30°C, Sunny), language (ENG IN), date (27-12-2025), and time (11:27).

## QUERY 3)

```
INSERT INTO Employees VALUES
(1,'Anil Kumar','IT',60000,'2021-03-15'),
(2,'Rahul Menon','HR',40000,'2020-06-10'),
(3,'Sneha Nair','Finance',55000,'2019-11-01'),
(4,'Vijay Das','IT',70000,'2018-01-25'),
(5,'Neethu Joseph','HR',45000,'2022-07-12'),
(6,'Arjun Pillai','Finance',50000,'2021-09-30'),
(7,'Manoj Varma','IT',80000,'2017-05-18');
```

The screenshot shows the SSMS interface with the following details:

- Object Explorer:** Shows the database structure for "localhost (SQL Server 17.0.1000.7 - LAPTOP-LEN8CBMP\joyal)".
- SQLQuery2.s...\\joyal (92)\*:** The active query window contains the following SQL code:

```
1 | INSERT INTO Employees VALUES
2 | (1, 'Anil Kumar', 'IT', 60000, '2021-03-15'),
3 | (2, 'Rahul Menon', 'HR', 40000, '2020-06-10'),
4 | (3, 'Sneha Nair', 'Finance', 55000, '2019-11-01'),
5 | (4, 'Vijay Das', 'IT', 70000, '2018-01-25'),
6 | (5, 'Neethu Joseph', 'HR', 45000, '2022-07-12'),
7 | (6, 'Arjun Pillai', 'Finance', 50000, '2021-09-30'),
8 | (7, 'Manoj Varma', 'IT', 80000, '2017-05-18');
```
- Messages:** The message pane shows "(7 rows affected)" and "Completion time: 2025-12-27T11:35:46.3134956+05:30".
- Status Bar:** Shows "Ln: 8, Ch: 43 TABS CRLF Windows 1252".
- Taskbar:** Shows the system tray with weather (30°C, Sunny), language (ENG IN), date (27-12-2025), and time (11:35).

and then verify with

The screenshot shows the SSMS interface with the following details:

- Object Explorer:** Shows the database structure for "localhost (SQL Server 17.0.1000.7 - LAPTOP-LEN8CBMP\joyal)".
- SQLQuery2.s...\\joyal (92)\*:** The active query window contains the following SQL code:

```
1 | SELECT * FROM Employees;
```
- Results:** The results pane displays the data from the Employees table in a grid format:

EmployeeID	FullName	Department	Salary	JoinDate
1	Anil Kumar	IT	60000	2021-03-15
2	Rahul Menon	HR	40000	2020-06-10
3	Sneha Nair	Finance	55000	2019-11-01
4	Vijay Das	IT	70000	2018-01-25
5	Neethu Joseph	HR	45000	2022-07-12
6	Arjun Pillai	Finance	50000	2021-09-30
7	Manoj Varma	IT	80000	2017-05-18
- Messages:** The message pane shows "Query executed successfully."
- Status Bar:** Shows "Ln: 1, Ch: 25 TABS CRLF Windows 1252".
- Taskbar:** Shows the system tray with weather (30°C, Sunny), language (ENG IN), date (27-12-2025), and time (11:37).

## 1)SELECT specific columns

```
SELECT FullName,Salary  
FROM Employees;
```

The screenshot shows the SSMS interface with the following details:

- Object Explorer:** Shows the database structure for "Day1\_SQL". It includes the "Databases" node, which contains "System Databases", "Database Snapshots", and "Day1\_SQL". Under "Day1\_SQL", there are "Tables" (containing "System Tables", "FileTables", "External Tables", "Graph Tables", "dbo.Employees", and "Dropped Ledger Tables"), "Views", "External Resources", "Synonyms", "Programmability", "Query Store", "Service Broker", "Storage", and "Security".
- SQL Query Editor:** Contains the following T-SQL code:

```
1  SELECT FullName,Salary  
2  FROM Employees;
```
- Results Grid:** Displays the results of the query, showing 7 rows of employee data:

	FullName	Salary
1	Anil Kumar	60000
2	Rahul Menon	40000
3	Sneha Nair	55000
4	Vijay Das	70000
5	Neethu Joseph	45000
6	Arjun Pillai	50000
7	Manoj Varma	80000
- Status Bar:** Shows "Query executed successfully." and other system information like "localhost (17.0 RTM)", "LAPTOP-LEN8CBMP\joyal ... Day1\_SQL 00:00:00", "Row: 1, Col: 1 | 7 rows", and the current date and time.

## 2)WHERE (filter rows)

```
SELECT *  
FROM Employees  
WHERE Department = 'IT';
```

Object Explorer

Day1\_SQL

SQLQuery3.s...Pjoyal (51)\* SQLQuery2.sql...Pjoyal (92)\* SQLQuery1.sql...Pjoyal (90)\*

```
1 | SELECT *
2 | FROM Employees
3 | WHERE Department = 'IT';
```

161 % No issues found

Ln: 3, Ch: 25 TABS CRLF Windows 1252

Results Messages

	EmployeeID	FullName	Department	Salary	JoinDate
1	1	Anil Kumar	IT	60000	2021-03-15
2	4	Vijay Das	IT	70000	2018-01-25
3	7	Manoj Varma	IT	80000	2017-05-18

Query executed successfully.

localhost (17.0 RTM) LAPTOP-LEN8CBMP\joyal ... Day1\_SQL 00:00:00 Row: 1, Col: 1 | 3 rows

Ready

Search

30°C Sunny

ENG IN 11:47 27-12-2025

```
SELECT *
FROM Employees
WHERE Salary > 50000 ;
```

Object Explorer

Day1\_SQL

SQLQuery3.s...Pjoyal (51)\* SQLQuery2.sql...Pjoyal (92)\* SQLQuery1.sql...Pjoyal (90)\*

```
1 | SELECT *
2 | FROM Employees
3 | WHERE Salary > 50000 ;
```

161 % No issues found

Ln: 3, Ch: 21 TABS CRLF Windows 1252

Results Messages

	EmployeeID	FullName	Department	Salary	JoinDate
1	1	Anil Kumar	IT	60000	2021-03-15
2	3	Sneha Nair	Finance	55000	2019-11-01
3	4	Vijay Das	IT	70000	2018-01-25
4	7	Manoj Varma	IT	80000	2017-05-18

Query executed successfully.

localhost (17.0 RTM) LAPTOP-LEN8CBMP\joyal ... Day1\_SQL 00:00:00 Row: 1, Col: 1 | 4 rows

Ready

Search

30°C Sunny

ENG IN 11:54 27-12-2025

### 3) AND/OR

```
SELECT *
FROM Employees
WHERE Department = 'IT'
AND Salary > 60000 ;
```

The screenshot shows the SQL Server Management Studio (SSMS) interface. On the left, the Object Explorer pane displays the database structure for 'Day1\_SQL'. In the center, the 'SQLQuery3.s...\\joyal (51)\*' tab contains the following SQL code:

```
1  SELECT *
2  FROM Employees
3  WHERE Department = 'IT'
4  AND Salary > 60000 ;
```

The 'Results' tab shows the query results in a table:

	EmployeeID	FullName	Department	Salary	JoinDate
1	4	Vijay Das	IT	70000	2018-01-25
2	7	Manoj Varma	IT	80000	2017-05-18

The status bar at the bottom indicates 'Query executed successfully.' and provides system information like 'localhost (17.0 RTM)', 'Day1\_SQL', and 'Row: 1, Col: 1 | 2 rows'.

```
SELECT *
FROM Employees
WHERE Department = 'HR'
OR Department = 'Finance' ;
```

```
1 SELECT *
2 FROM Employees
3 WHERE Department = 'HR'
4 OR Department = 'Finance';
```

	EmployeeID	FullName	Department	Salary	JoinDate
1	2	Rahul Menon	HR	40000	2020-06-10
2	3	Sneha Nair	Finance	55000	2019-11-01
3	5	Neethu Joseph	HR	45000	2022-07-12
4	6	Arjun Pillai	Finance	50000	2021-09-30

Query executed successfully.

#### 4) ORDER BY(default ASC)

```
SELECT *
FROM Employees
ORDER BY Salary DESC;
```

```
1 SELECT *
2 FROM Employees
3 ORDER BY Salary DESC;
```

	EmployeeID	FullName	Department	Salary	JoinDate
1	7	Manoj Varma	IT	80000	2017-05-18
2	4	Vijay Das	IT	70000	2018-01-25
3	1	Anil Kumar	IT	60000	2021-03-15
4	3	Sneha Nair	Finance	55000	2019-11-01
5	6	Arjun Pillai	Finance	50000	2021-09-30
6	5	Neethu Joseph	HR	45000	2022-07-12
7	2	Rahul Menon	HR	40000	2020-06-10

Query executed successfully.

```

SELECT *
FROM Employees
ORDER BY Department,Salary;

```

The screenshot shows the SSMS interface with the following details:

- Object Explorer:** Shows the database structure, including 'Day1\_SQL' which contains 'Tables' (System Tables, FileTables, External Tables, Graph Tables, dbo.Employees), 'Views', 'Synonyms', 'Programmability', 'Query Store', 'Service Broker', 'Storage', and 'Security'.
- SQL Query Editor:** Contains the query:
 

```

1  SELECT *
2   FROM Employees
3   ORDER BY Department,Salary;
      
```
- Results Grid:** Displays the output of the query:
 

	EmployeeID	FullName	Department	Salary	JoinDate
1	6	Arjun Pillai	Finance	50000	2021-09-30
2	3	Sneha Nair	Finance	55000	2019-11-01
3	2	Rahul Menon	HR	40000	2020-06-10
4	5	Neethu Joseph	HR	45000	2022-07-12
5	1	Anil Kumar	IT	60000	2021-03-15
6	4	Vijay Das	IT	70000	2018-01-25
7	7	Manoj Varma	IT	80000	2017-05-18
- Status Bar:** Shows 'Query executed successfully.' and other system information like 'localhost (17.0 RTM)', 'LAPTOP-LEN8CBMP\joyal ...', 'Day1\_SQL', '00:00:00', 'Row: 1, Col: 1 | 7 rows'.

## ASK YOURSELF(Very Important)

---

Ask yourself for **every query**:

- What rows am I filtering?
- What columns am I returning?
- Why is this useful to a business?

If you can't explain it in words, you don't understand it yet.

## PRACTICE TASKS

---

Write and run queries for:

1. Employees who joined **after** 2020

--Employees who joined after 2020

```
SELECT *
FROM Employees
WHERE YEAR(JoinDate) > 2020 ;
```

```
--Employees who joined after 2020
SELECT *
FROM Employees
WHERE YEAR(JoinDate) > 2020 ;
```

EmployeeID	FullName	Department	Salary	JoinDate
1	Anil Kumar	IT	60000	2021-03-15
2	Neethu Joseph	HR	45000	2022-07-12
3	Arjun Pillai	Finance	50000	2021-09-30

## 2. Employees earning less than 50,000

--Employees earning less than 50000

```
SELECT *
FROM Employees
WHERE Salary < 50000;
```

```
--Employees earning less than 50000
SELECT *
FROM Employees
WHERE Salary < 50000;
```

EmployeeID	FullName	Department	Salary	JoinDate
1	Rahul Menon	HR	40000	2020-06-10
2	Neethu Joseph	HR	45000	2022-07-12

Query executed successfully.

### 3. IT employees ordered by highest salary first

```
--IT employees ordered by highest salary first
SELECT *
FROM Employees
WHERE Department = 'IT'
ORDER BY Salary DESC;
```

```
--IT employees ordered by highest salary first
SELECT *
FROM Employees
WHERE Department = 'IT'
ORDER BY Salary DESC;
```

EmployeeID	FullName	Department	Salary	JoinDate
1	Anil Kumar	IT	60000	2021-03-15
2	Vijay Das	IT	70000	2018-01-25
7	Manoj Varma	IT	80000	2017-05-18

Query executed successfully.

### 4. Show only names and departments

--Show only names and departments

```
SELECT FullName , Department  
FROM Employees;
```

The screenshot shows the SSMS interface with the following details:

- Object Explorer:** Shows the database structure for "Day1\_SQL". It includes the following objects:
  - Databases: System Databases, Database Snapshots, Day1\_SQL (selected), Database Diagrams.
  - Tables: EmployeeID (PK, int, not null), FullName (varchar(100), null), Department (varchar(50), null), Salary (int, null), JoinDate (date, null).
  - Keys, Constraints, Triggers, Indexes, Statistics.
  - Dropped Ledger Tables.
  - Views, External Resources, Synonyms, Programmability, Query Store, Service Broker, Storage, Security.
  - Security, Server Objects, Replication.
- SQL Query Editor:** Contains the following T-SQL code:

```
--Show only names and departments  
SELECT FullName , Department  
FROM Employees;
```
- Results Grid:** Displays the output of the query, showing 7 rows of employee data:

	FullName	Department
1	Anil Kumar	IT
2	Rahul Menon	HR
3	Sneha Nair	Finance
4	Vijay Das	IT
5	Neethu Joseph	HR
6	Arjun Pillai	Finance
7	Manoj Varma	IT
- Status Bar:** Shows "Query executed successfully." and other system information like "localhost (17.0 RTM) LAPTOP-LEN8CBMP\joyal ... | Day1\_SQL | 00:00:00 | Row: 1, Col: 1 | 7 rows".
- Taskbar:** Shows the Windows taskbar with various pinned icons and the system clock indicating "14:41 27-12-2025".

## 5. Finance employees earning 50,000 or more

--Finance Employees earning 50000 or more

```
SELECT *  
FROM Employees  
WHERE Department = 'Finance'  
AND Salary >= 50000;
```

```
--Finance Employees earning 50000 or more
SELECT *
FROM Employees
WHERE Department = 'Finance'
AND Salary >= 50000;
```

EmployeeID	FullName	Department	Salary	JoinDate	
1	3	Sneha Nair	Finance	55000	2019-11-01
2	6	Arjun Pillai	Finance	50000	2021-09-30

## SUGGESTIONS AND CORRECTIONS

### ✓ EVALUATION OF YOUR QUERIES (HONEST REVIEW)

#### 1 Employees who joined after 2020

```
WHERE YEAR(JoinDate) > 2020;
```

✓ Logically correct

✗ Professionally weak

Why?

Using `YEAR()` on a column:

- Breaks index usage
- Slows queries on large tables

🔥 Correct professional version:

```
WHERE JoinDate >= '2021-01-01';
```

👉 This is **sargable** (index-friendly).

Remember this — interviewers look for it.

## 2 Employees earning less than 50,000

- ✓ Correct
- ✓ Clean
- ✓ No issues

Good.

---

## 3 IT employees ordered by highest salary

- ✓ Correct
- ✓ Proper ORDER BY DESC

Good.

---

## 4 Only names and departments

- ✓ Correct
- ✓ Clean projection

Good.

---

## 5 Finance employees earning 50,000 or more

- ✓ Correct
- ✓ Correct use of AND

Good.

---

## ⚠ ONE IMPORTANT HABIT FIX (START NOW)

---

- ✗ Don't rely on screenshots
- ✗ Don't rely on visual confirmation
- ✓ Trust query logic and row counts

Professionals don't paste screenshots.

They paste **queries and reasoning**.

You did the right thing by pasting SQL.

---

## 💡 KEY LESSON FROM DAY 1 (LOCK THIS IN)

---

SQL is not just “getting results”

SQL is **how efficiently** you get results

From Day 2 onward:

- Avoid functions on columns in `WHERE`
  - Think: *“Would this work on 10 million rows?”*
- 

## ✓ STATUS

---

- Discipline: **Good**
- Execution: **Good**
- Thinking: **Needs sharpening (normal)**

You're on track.

---