

# SQL Server CASE Statement (Multiple Conditions)

## Introduction to CASE Statement

CASE is used to perform conditional logic in SQL.

Types:

1. Simple CASE (compares one expression to values)
2. Searched CASE (uses multiple conditions)

You can use CASE in SELECT, ORDER BY, UPDATE, etc.

## Examples of CASE with Multiple Conditions

### Simple CASE: Assign Grade Based on GPA

```
SELECT StudentID, Name, GPA,
       CASE
         WHEN GPA >= 3.7 THEN 'A'
         WHEN GPA >= 3.0 THEN 'B'
         WHEN GPA >= 2.0 THEN 'C'
         ELSE 'F'
       END AS Grade
FROM Students;
```

### Searched CASE: Categorize Enrollment Age

```
SELECT StudentID, Name, EnrollmentDate,
       CASE
         WHEN DATEDIFF(DAY, EnrollmentDate, GETDATE()) < 30 THEN 'New'
         WHEN DATEDIFF(DAY, EnrollmentDate, GETDATE()) < 180 THEN 'Recent'
         ELSE 'Old'
       END AS EnrollmentCategory
FROM Students;
```

### CASE in ORDER BY Clause

```
SELECT StudentID, Name, GPA
FROM Students
ORDER BY
  CASE
    WHEN GPA >= 3.5 THEN 1
    WHEN GPA >= 2.5 THEN 2
    ELSE 3
  END;
```

# SQL Server CASE Statement (Multiple Conditions)

## CASE in UPDATE Statement

```
UPDATE Students
SET GPA =
    CASE
        WHEN GPA < 2.0 THEN GPA + 0.5
        WHEN GPA BETWEEN 2.0 AND 3.0 THEN GPA + 0.2
        ELSE GPA
    END;
```

## Nested CASE Example

```
SELECT StudentID, Name, GPA,
    CASE
        WHEN GPA >= 3.5 THEN
            CASE
                WHEN GPA >= 3.9 THEN 'Excellent'
                ELSE 'Very Good'
            END
        WHEN GPA >= 2.5 THEN 'Average'
        ELSE 'Needs Improvement'
    END AS Performance
FROM Students;
```