

In **T-SQL (Transact-SQL)**, a **predicate** is an expression that evaluates to **TRUE**, **FALSE**, or **UNKNOWN** and is typically used in:

- WHERE clauses
- JOIN conditions
- HAVING clauses
- IF statements
- CASE expressions

◆ Common Types of Predicates in T-SQL

Here are examples of common predicates:

1. Comparison Predicates

Used to compare values.

```
SELECT * FROM Employees WHERE Salary > 50000;  
-- Predicate: Salary > 50000
```

2. BETWEEN Predicate

Checks if a value falls within a range.

```
SELECT * FROM Orders WHERE OrderDate BETWEEN '2023-01-01' AND '2023-12-31';
```

3. IN Predicate

Checks if a value exists in a list.

```
SELECT * FROM Products WHERE CategoryID IN (1, 2, 3);
```

4. LIKE Predicate

Used for pattern matching.

```
SELECT * FROM Customers WHERE Name LIKE 'J%';
```

5. IS NULL / IS NOT NULL

Checks for null values.

```
SELECT * FROM Employees WHERE ManagerID IS NULL;
```

6. EXISTS Predicate

Checks for the existence of rows in a subquery.

```
SELECT * FROM Customers  
WHERE EXISTS (SELECT 1 FROM Orders WHERE Customers.CustomerID = Orders.CustomerID);
```

7. ANY / ALL Predicates

Compare a value to a set returned by a subquery.

```
SELECT * FROM Products  
WHERE Price > ALL (SELECT Price FROM Products WHERE CategoryID = 1);
```

Summary

Predicate Type	Example
Comparison	Salary > 50000

Predicate Type	Example
BETWEEN	OrderDate BETWEEN '2023-01-01' AND '2023-12-31'
IN	CategoryID IN (1, 2, 3)
LIKE	Name LIKE 'J%'
IS NULL	ManagerID IS NULL
EXISTS	EXISTS (SELECT 1 FROM Orders ...)
ANY / ALL	Price > ALL (...)

Predicates are essential for filtering and controlling logic flow in SQL queries.