

SQL: Using JOIN with INSERT

The **INSERT INTO ... SELECT** statement allows you to insert data into a table by **selecting rows from one or more tables using JOINS**. This is useful when you want to copy or transform data from related tables into another table.

Syntax

```
INSERT INTO target_table (column1, column2, ...)  
SELECT source_column1, source_column2, ...  
FROM source_table1  
JOIN source_table2  
ON source_table1.key = source_table2.key  
WHERE condition;
```

- **target_table** → The table where data will be inserted
- **source_table1, source_table2** → Tables from which data is selected
- **JOIN** → Can be INNER JOIN, LEFT JOIN, etc.
- **WHERE** → Optional filter for selecting specific rows

Example : Simple INSERT with JOIN

Suppose we have two tables:

Table: Employees

EmpID	Name	DeptID
1	John	101
2	Jane	102

Table: Departments

DeptID	DeptName
101	HR
102	IT

We want to insert all employee names with their department names into a new table EmployeeDept.

Step 1: Create the target table

```
CREATE TABLE EmployeeDept (
  EmpName VARCHAR(50),
  DeptName VARCHAR(50)
);
```

Step 2: Insert using JOIN

```
INSERT INTO EmployeeDept (EmpName, DeptName)
SELECT e.Name, d.DeptName
FROM Employees e
JOIN Departments d
ON e.DeptID = d.DeptID;
Result in EmployeeDept
```

EmpName	DeptName
John	HR
Jane	IT