



Instructor:

- Mr. Nazeef Ul Haq and Mr. Nauman Babar

Learning Objectives:

- Understanding of JOINS in SQL Server.

Helping Material:

1. JOINS In SQL Server:

A JOIN clause is used to combine rows from two or more tables, based on a related column between them. SQL server provides the following joins:

- Cross Join
- Natural Join
- Equi Join
- Inner Join
- Left Outer Join
- Right Outer Join
- Full Outer Join

2. JOINS SYNTAX:

SELECT ColumnName(s)

FROM Table_1,Table_2

OR

SELECT ColumnName(s)

FROM Table_1 **CROSS JOIN** Table_2

SELECT column_name(s)

FROM table1 **INNER JOIN/ CROSS JOIN/ NATURAL JOIN/ LEFT JOIN/ RIGHT JOIN/ FULL OUTER JOIN** table2

ON table1.column_name = table2.column_name;

Lab Tasks + Home Tasks:

- Perform all JOIN queries on any table using Northwind Schema.
- Perform self-cross join and see if there is any difference between cross join and self cross join.
- **SELECT** Customers.custid, Customers.companyname, Orders.orderid, Orders.orderdate
FROM Sales.Customers AS C
INNER JOIN Sales.Orders AS O
ON Customers.custid = Orders.custid;

Advanced Tasks:

- Return customers and their orders, including customers who placed no orders (CustomerID, OrderID, OrderDate)
- Report only those customer IDs who never placed any order. (CustomerID, OrderID, OrderDate)
- Report those customers who placed orders on July,1997. (CustomerID, OrderID, OrderDate)
- Report the total orders of each customer. (customerID, totalorders)
- Write a query to generate a five copies of each employee. (EmployeeID, FirstName, LastName)
- Write a query that returns a row for each employee and day in the range 04-07-1996 through 04-08-1997. (EmployeeID, Date)
- Return US customers, and for each customer return the total number of orders and total quantities. (CustomerID, Totalorders, totalquantity)
- Write a query that returns all customers in the output, but matches them with their respective orders only if they were placed on July 04,1997. (CustomerID, CompanyName, OrderID, Orderdate)
- Are there any employees who are older than their managers?
- List that names of those employees and their ages. (EmployeeName, Age, Manager Age)
- List the names of products which were ordered on 8th August 1997. (ProductName, OrderDate)
- List the addresses, cities, countries of all orders which were serviced by Anne and were shipped late. (Address, City, Country)
- List all countries to which beverages have been shipped. (Country)

HackerRank Tasks:

All remaining queries of easy module.

What to Submit:

You are required to submit the following files.

- .SQL file
- Notepad file
- Pdf report.