

**Assignment 2:** Craft a query using an INNER JOIN to combine 'orders' and 'customers' tables for customers in a specified region, and a LEFT JOIN to display all customers including those without orders.

### Tables Schema Assumptions

Let's assume we have the following columns in the customers and orders tables:

**1. customers table:**

- customer\_id
- customer\_name
- email
- city
- region

**2. orders table:**

- order\_id
- order\_date
- customer\_id
- total\_amount

**Step 1:** INNER JOIN to Combine 'orders' and 'customers' for Customers in a Specified Region

To combine orders and customers tables for customers in a specified region, you can use an INNER JOIN. This will return only the rows where there is a match between the two tables.

```
SELECT customers.customer_id, customers.customer_name, customers.email,  
customers.region, orders.order_id, orders.order_date, orders.total_amount  
  
FROM customers  
  
INNER JOIN orders ON customers.customer_id = orders.customer_id  
  
WHERE customers.region = 'SpecifiedRegion';
```

*Replace 'SpecifiedRegion' with the region you are interested in.*

**Step 2:** LEFT JOIN to Display All Customers Including Those Without Orders

To display all customers including those without orders, you can use a LEFT JOIN. This will return all rows from the customers table and the matched rows from the orders table. If there is no match, the result is NULL for columns from the orders table.

```
SELECT customers.customer_id, customers.customer_name, customers.email,  
customers.region, orders.order_id, orders.order_date, orders.total_amount  
  
FROM customers  
  
LEFT JOIN orders ON customers.customer_id = orders.customer_id;
```

## **Full SQL Query Examples**

### **1. INNER JOIN Example**

*Let's assume we want to get the details for customers in the 'West' region:*

```
SELECT customers.customer_id, customers.customer_name, customers.email,  
customers.region, orders.order_id, orders.order_date, orders.total_amount  
  
FROM customers  
  
INNER JOIN orders ON customers.customer_id = orders.customer_id  
  
WHERE customers.region = 'West';
```

### **2. LEFT JOIN Example**

*This query displays all customers and includes their order details if available:*

```
SELECT customers.customer_id, customers.customer_name, customers.email,  
customers.region, orders.order_id, orders.order_date, orders.total_amount  
  
FROM customers  
  
LEFT JOIN orders ON customers.customer_id = orders.customer_id;
```

## **Summary**

### **1. INNER JOIN for Customers in a Specified Region:**

```
SELECT customers.customer_id, customers.customer_name, customers.email,  
customers.region, orders.order_id, orders.order_date, orders.total_amount  
  
FROM customers  
  
INNER JOIN orders ON customers.customer_id = orders.customer_id  
  
WHERE customers.region = 'SpecifiedRegion';
```

*2. LEFT JOIN to Display All Customers Including Those Without Orders:*

```
SELECT customers.customer_id, customers.customer_name, customers.email,  
customers.region, orders.order_id, orders.order_date, orders.total_amount  
  
FROM customers  
  
LEFT JOIN orders ON customers.customer_id = orders.customer_id;
```