**Assignment 9**

**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.**

**Scenario Assumptions**

* The customers table has the following columns: customer\_id, name, email, city, region, etc.
* The orders table has the following columns: order\_id, customer\_id, order\_date, total\_amount, etc.
* Both tables share the customer\_id column, which is used to join them.

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

We will write a query to join the orders and customers tables and retrieve data for customers located in a specific region, for example, 'West'.

**Query**

SELECT customers.customer\_id, customers.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 to Display All Customers Including Those Without Orders**

We will write a query to perform a LEFT JOIN to ensure that we retrieve all customers, including those who have not placed any orders.

**Query**

SELECT customers.customer\_id, customers.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;

**Explanation**

1. **The INNER JOIN query:**

* Joins the customers and orders tables on the customer\_id column.
* Filters the results to include only those customers who are in the 'West' region.
* Retrieves columns from both customers and orders tables.

1. **The LEFT JOIN query:**

* Joins the customers and orders tables on the customer\_id column.
* Ensures all customers are included in the result set, even if they have not placed any orders.
* Retrieves columns from both customers and orders tables, with NULL values for order-related columns where there are no matching orders.

These queries will help in understanding the relationships between customers and their orders, as well as ensuring all customers are accounted for in reports, regardless of their order history.