**SE Introduction To DBMS**

**Task 1: List all countries and customers (using LEFT JOIN)**

We need:

* All countries (even without cities/customers)
* Cities belonging to those countries
* Customers in those cities

SELECT

country.country\_name AS Country,

city.city\_name AS City,

customer.customer\_name AS Customer

FROM country

LEFT JOIN city

ON country.country\_id = city.country\_id

LEFT JOIN customer

ON city.city\_id = customer.city\_id

ORDER BY country.country\_name, city.city\_name, customer.customer\_name;

This ensures:

* Every **country** is listed.
* If a country has no city → City and Customer will be NULL.
* If a city has no customer → Customer will be NULL.

### ****Task 2: Countries with cities (using LEFT + INNER JOIN)****

We need:

* Only countries that have at least one **city** (so exclude Spain & Russia) → requires **INNER JOIN** between country and city.
* Still include cities even if they have no customers → requires **LEFT JOIN** with customer.

SELECT

country.country\_name AS Country,

city.city\_name AS City,

customer.customer\_name AS Customer

FROM country

INNER JOIN city

ON country.country\_id = city.country\_id

LEFT JOIN customer

ON city.city\_id = customer.city\_id

ORDER BY country.country\_name, city.city\_name, customer.customer\_name;

This ensures:

* Only countries with **cities** appear.
* Cities are listed even if **no customers** exist.
* Customers are included when present.