/\* **This SQL query retrieves the top 10 countries with the highest number of customers.**

**It performs joins across multiple tables (county, city, address, and customer) to count customers for each country. The results are grouped by 'country' and sorted in descending order by 'customer\_count.'**

\*/

SELECT c.country, COUNT(cust.customer\_id) AS customer\_count

FROM public.county c

JOIN public.city ct ON c.country\_id = ct.country\_id

JOIN public.address addr ON ct.city\_id = addr.city\_id

JOIN public.customer cust ON addr.address\_id = cust.address\_id

GROUP BY c.country

ORDER BY customer\_count DESC

LIMIT 10;

/\*

**This complex SQL query retrieves and ranks the top 10 cities with the highest number of customers by country.It combines multiple joins across customer, address, city, and country tables. The query first identifies the top 10 countries with the most customers using a subquery, then filters cities within those countries.The results are grouped by 'city\_id,' 'city,' and 'country' and sorted in descending order by 'customer\_count.’**

\*/

SELECT ci.city\_id, ci.city, co.country, COUNT(c.customer\_id) AS customer\_count

FROM customer c

INNER JOIN address a ON c.address\_id = a.address\_id

INNER JOIN city ci ON a.city\_id = ci.city\_id

INNER JOIN country co ON ci.country\_id = co.county\_id

WHERE co.country\_id IN (

-- Subquery for top countries

SELECT co.country\_id

FROM customer c

INNER JOIN address a ON c.address\_id = a.address\_id

INNER JOIN city ci ON a.city\_id = ci.city\_id

INNER JOIN country co ON ci.country\_id = co.country\_id

GROUP BY co.country\_id, co.country

ORDER BY COUNT(c.customer\_id) DESC

LIMIT 10

)

GROUP BY ci.city\_id, ci.city, co.country

ORDER BY customer\_count DESC

LIMIT 10;

/\*

**This SQL query retrieves and ranks the top 5 customers based on their total payment amounts in the top 10 countries with the most customers. It joins multiple tables including customer, address, city, country, and payment. The query first identifies the top 10 countries with the most customers using a subquery, then calculates the total payment amount for each customer in those countries. The results are grouped by 'customer\_id,' 'first\_name,' 'last\_name,' 'country,' and 'city,' and sorted in descending order by 'total\_amount\_paid.'**

\*/

SELECT c.customer\_id, c.first\_name, c.last\_name, co.country, ci.city, SUM(p.amount) AS total\_amount\_paid

FROM customer c

INNER JOIN address a ON c.address\_id = a.address\_id

INNER JOIN city ci ON a.city\_id = ci.city\_id

INNER JOIN country co ON ci.country\_id = co.country\_id

INNER JOIN payment p ON c.customer\_id = p.customer\_id

WHERE co.country\_id IN (

-- Subquery for top countries

SELECT co.country\_id

FROM customer c

INNER JOIN address a ON c.address\_id = a.address\_id

INNER JOIN city ci ON a.city\_id = ci.city\_id

INNER JOIN country co ON ci.country\_id = co.country\_id

GROUP BY co.country\_id, co.country

ORDER BY COUNT(c.customer\_id) DESC

LIMIT 10

)

GROUP BY c.customer\_id, c.first\_name, c.last\_name, co.country, ci.city

ORDER BY total\_amount\_paid DESC

LIMIT 5;