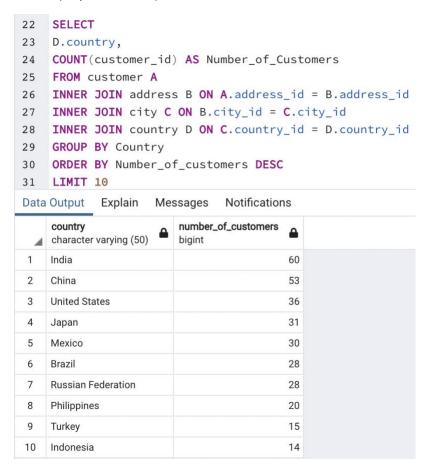
## Ex 3.7 Joining Tables of Data

Write a query to find the top 10 countries for Rockbuster in terms of customer numbers:



SELECT
D.country,
COUNT(customer\_id) AS Number\_of\_Customers
FROM customer A
INNER JOIN address B ON A.address\_id = B.address\_id
INNER JOIN city C ON B.city\_id = C.city\_id
INNER JOIN country D ON C.country\_id = D.country\_id
GROUP BY Country
ORDER BY Number\_of\_customers DESC
LIMIT 10

The request was to find the top 10 countries by number of customers so the 2 columns needed are Country and the count of the customer IDs.

We can get and group the count of customer IDs from the customer table but to get the customer countries, we have to join the customer table to get the city code using the address ID. We can then join the city table to the country table using the city ID to get the country code.

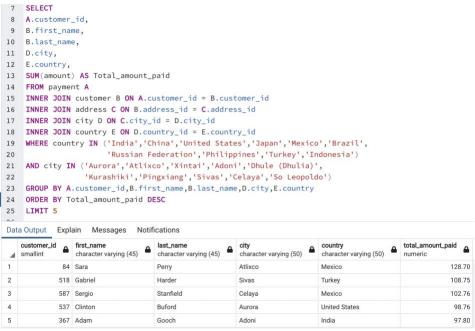
With the joins complete, we can then group the customer ID count by country, sort by the highest count and limit to only show the top 10 countries.

Write a query to find the top 10 cities within the top 10 countries identified in step 1:

```
22 SELECT
23 C.city,
24 D.country,
25 COUNT(customer_id) AS Number_of_Customers
26 FROM customer A
27 INNER JOIN address B ON A.address_id = B.address_id
28 INNER JOIN city C ON B.city_id = C.city_id
    INNER JOIN country D ON C.country_id = D.country_id
30
    WHERE country IN ('India','China','United States','Japan','Mexico','Brazil',
                        'Russian Federation', 'Philippines', 'Turkey', 'Indonesia')
31
32 GROUP BY city, country
33 ORDER BY Number_of_Customers DESC
34 LIMIT 10
Data Output Explain Messages Notifications
                     country character varying (50)
                                            number_of_customers
    Aurora
                        United States
                                                              2
2
    Atlixco
                        Mexico
3
    Xintai
                        China
4
    Adoni
                        India
5
    Dhule (Dhulia)
                        India
    Kurashiki
                        Japan
7
    Pingxiang
                        China
8
    Sivas
                        Turkey
9
    Celaya
                        Mexico
10 So Leopoldo
```

The initial query was modified to count the number of customer IDs by city within the top 10 countries initially found. This was done by adding the city to the SELECT command and adding a 'WHERE' clause to filter data for the top 10 countries.

Write a query to find the top 5 customers in the top 10 cities who have paid the highest total amounts to Rockbuster. The customer team would like to reward them for their loyalty!



```
SELECT
A.customer id.
B.first_name,
B.last_name,
D.city,
E.country,
SUM(amount) AS Total_amount_paid
FROM payment A
INNER JOIN customer B ON A.customer_id = B.customer_id
INNER JOIN address C ON B.address_id = C.address_id
INNER JOIN city D ON C.city_id = D.city_id
INNER JOIN country E ON D.country_id = E.country_id
WHERE country IN ('India', 'China', 'United States', 'Japan', 'Mexico', 'Brazil',
                                    'Russian Federation', 'Philippines', 'Turkey', 'Indonesia')
AND city IN ('Aurora', 'Atlixco', 'Xintai', 'Adoni', 'Dhule (Dhulia)',
                           'Kurashiki', 'Pingxiang', 'Sivas', 'Celaya', 'So Leopoldo')
GROUP BY A.customer_id,B.first_name,B.last_name,D.city,E.country
ORDER BY Total_amount_paid DESC
LIMIT 5
```