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Topik 15,16,17 - Assignment | Hands-On SQL

Data Analytics

1. Identify the top 10 customers and their email so we can reward them

Sql query :

The result :

2. Identify the bottom 10 customers and their emails

Sql query :

The result :
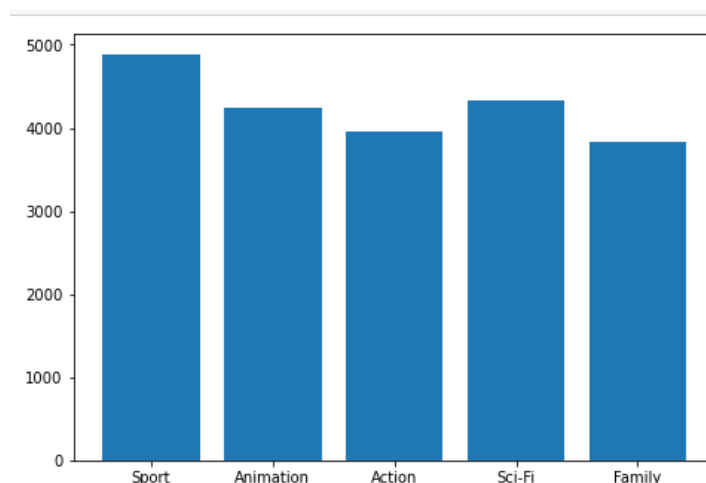
3. What are the most profitable movie genres (ratings)?

Sql query :

```
1   3. What are the most profitable movie genres (ratings)?
2
3   Select category.name as genre, count (customer.customer_id) as total_demanded,
4   sum(payment.amount) as total_sales from category
5   inner join film_category on category.category_id = film_category.category_id
6   inner join film on film_category.film_id = film.film_id
7   inner join inventory on film.film_id = inventory.film_id
8   inner join rental on inventory.inventory_id = rental.inventory_id
9   inner join customer on rental.customer_id = customer.customer_id
10  inner join payment on rental.rental_id = payment.rental_id
11  group by 1
```

The result :

	genre character varying (25)	total_demanded bigint	total_sales numeric
1	Sports	1081	4892.19
2	Animation	1065	4245.31
3	Action	1013	3951.84
4	Sci-Fi	998	4336.01
5	Family	988	3830.15
6	Foreign	953	3934.47
7	Drama	953	4118.46
8	Documentary	937	3749.65
9	Games	884	3922.18
10	New	864	3966.38
11	Children	861	3309.39
12	Classics	860	3353.38

Total rows: 16 of 16   Query complete 00:00:00.083   Ln 36, Col 17

Kategori sports tampaknya menjadi genre yang paling banyak disewa dalam hal berapa kali disewa, dan juga memiliki total penjualan tertinggi. Sedangkan kategori musik adalah genre yang paling sedikit disewa dalam hal berapa kali disewa dan memiliki total penjualan terendah.

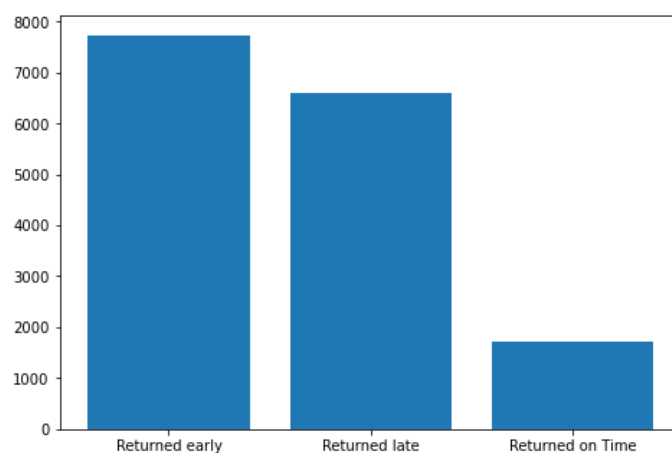## 4. How many rented movies were returned late, early, and on time?

Sql query :

```sql
38  4. How many rented movies were returned late, early, and on time?
39  WITH t1 AS (select *, DATE_PART('day',return_date - rental_date)
40              AS date_difference
41          FROM rental),
42  t2 AS (select rental_duration, date_difference,
43      CASE
44          WHEN rental_duration > date_difference THEN 'Returned early'
45          WHEN rental_duration = date_difference THEN 'Returned on Time'
46          ELSE 'Returned late'
47          END AS Return_Status
48      FROM film f
49      JOIN inventory i
50      USING (film_id)
51      JOIN t1
52      USING (inventory_id))
53  SELECT Return_status, count(*) As total_no_of_films
54  FROM t2
55  GROUP BY 1
56  ORDER BY 2 DESC;
```

The result :

	return_status text	total_no_of_films bigint
1	Returned early	7738
2	Returned late	6586
3	Returned on Time	1720

Total rows: 3 of 3   Query complete 00:00:00.120   Ln 56, Col 17

Dari kueri di atas, 7738 film dikembalikan lebih awal dari tanggal jatuh tempo sementara 6586 film dikembalikan terlambat dan 1720 film tiba tepat waktu.

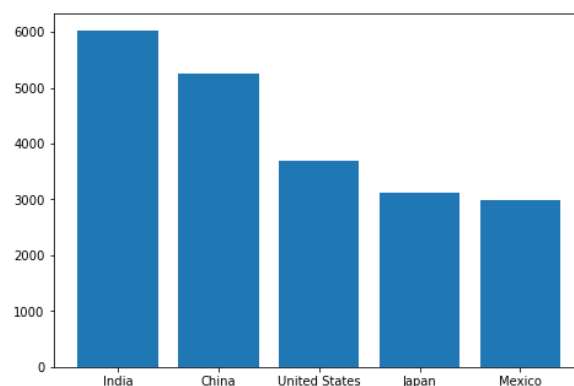5. What is the customer base in the countries where we have a presence?

Sql query :

```
Query    Query History                                                    ↗
11   5. What is the customer base in the countries where we have a presence?
12   SELECT country, count(DISTINCT customer_id) as customer_base, SUM(amount)
13   AS total_sales
14   FROM country
15   JOIN city
16   USING(country_id)
17   JOIN address
18   USING(city_id)
19   JOIN customer
20   USING(address_id)
21   JOIN payment
22   USING(customer_id)
23   GROUP BY 1
24   ORDER BY 2 DESC;
```

The result :

	country character varying (50)	customer_base bigint	total_sales numeric
1	India	60	6034.78
2	China	53	5251.03
3	United States	36	3685.31
4	Japan	31	3122.51
5	Mexico	30	2984.82
6	Brazil	28	2919.19
7	Russian Federation	28	2765.62
8	Philippines	20	2219.7
9	Turkey	15	1498.49
10	Indonesia	14	1352.69
11	Nigeria	13	1314.92
12	Argentina	13	1298.8
13	South Africa	11	1069.46
14	Taiwan	10	1155.1
15	United Kingdom	9	850.96

Total rows: 108 of 108   Query complete 00:00:00.133

Hadir di 108 negara dengan India memiliki basis customer tertinggi yaitu 60 pelanggan dan total penjualan terbesar. Sedangkan Afghanistan memiliki total penjualan terkecil.

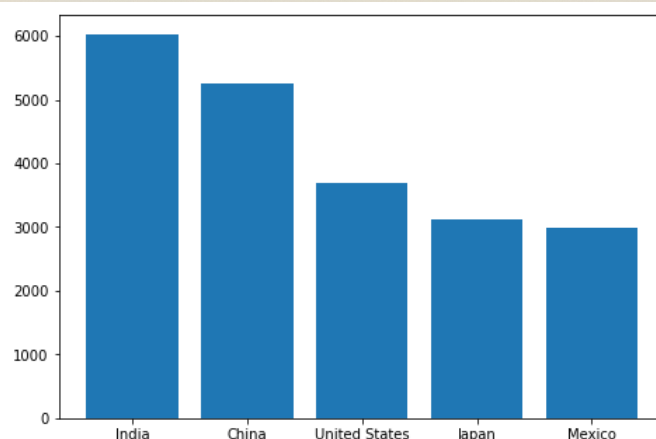## 6. Which country is the most profitable for the business?

Sql query :

```sql
68  6. Which country is the most profitable for the business?
69  SELECT country, COUNT(*) AS total_customers, SUM(amount) AS total_penjualan
70  FROM country
71  INNER JOIN city on country.country_id= city.country_id
72  INNER JOIN address on city.city_id=address.city_id
73  INNER JOIN customer on address.address_id=customer.address_id
74  INNER JOIN payment on customer.customer_id=payment.customer_id
75  GROUP BY 1
76  ORDER BY 2 DESC;
```

The result :

	country character varying (50)	total_customers bigint	total_penjualan numeric
1	India	1422	6034.78
2	China	1297	5251.03
3	United States	869	3685.31
4	Japan	749	3122.51
5	Mexico	718	2984.82
6	Brazil	681	2919.19
7	Russian Federation	638	2765.62
8	Philippines	530	2219.7
9	Turkey	351	1498.49
10	Indonesia	331	1352.69
11	Argentina	320	1298.8
12	Nigeria	308	1314.92
13	Taiwan	290	1155.1
14	South Africa	254	1069.46
15	United Kingdom	204	850.96
16	Iran	204	877.06

Total rows: 108 of 108   Query complete 00:00:00.277   Ln 76, Col 17

Berdasarkan hasil query diatas menunjukkan bahwa negara India adalah negara yang menguntungkan bagi bisnis karena jumlah customer dan total penjualan di India paling tinggi.
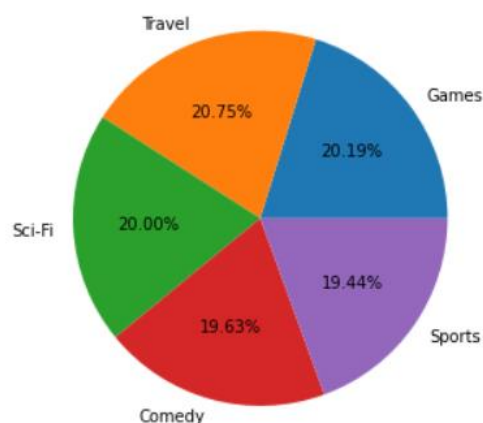
7. What is the average rental rate per movie genre (rating)?

Sql query :

```
Query    Query History
1    7. What is the average rental rate per movie genre (rating)?
2    SELECT c.name AS genre, ROUND(AVG(f.rental_rate),2) AS Average_rental_rate
3    FROM category c
4    JOIN film_category fc
5    USING(category_id)
6    JOIN film f
7    USING(film_id)
8    GROUP BY 1
9    ORDER BY 2 DESC;
```

The Result :

	genre character varying (25)	average_rental_rate numeric
1	Games	3.25
2	Travel	3.24
3	Sci-Fi	3.22
4	Comedy	3.16
5	Sports	3.13
6	New	3.12
7	Foreign	3.10
8	Horror	3.03
9	Drama	3.02
10	Music	2.95
11	Children	2.89
12	Animation	2.81
13	Family	2.76
14	Classics	2.74
15	Documentary	2.67

Total rows: 16 of 16   Query complete 00:00:00.191

Dari hasil query tersebut menunjukkan bahwa harga sewa rata-rata paling tinggi adalah genre games dan yang terendah adalah documentary