Nama : Nurlita Kholishotunnisa

Spesialisasi : Data Analyst

Id Live Class : 041

1. **Exercise 1:**

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

SQL Query:

```
SELECT concat (first_name,' ',last_name) as full_name, email, sum(amount) as total_amount
FROM customer
JOIN payment on payment.customer_id = customer.customer_id
GROUP BY 1,2
ORDER BY 3 DESC
LIMIT 10;
```

Query Result:

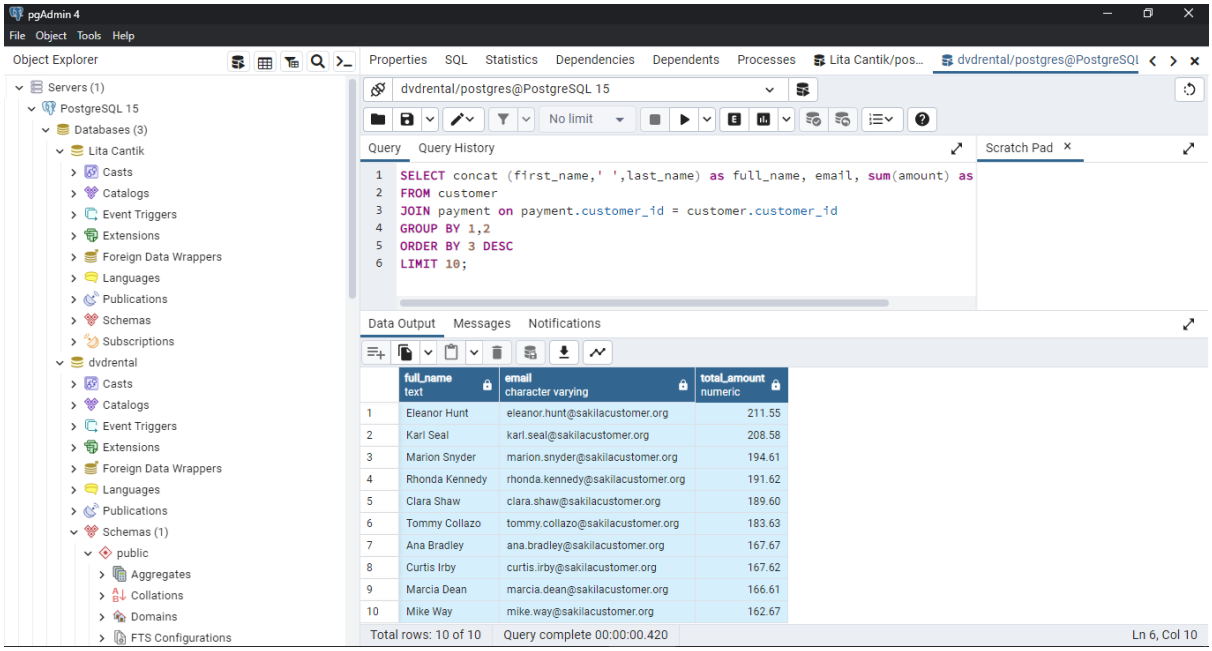
full_name	email	total_amount
Eleanor Hunt	eleanor.hunt@sakilacustomer.org	211,55
Karl Seal	karl.seal@sakilacustomer.org	208,58
Marion Snyder	marion.snyder@sakilacustomer.org	194,61
Rhonda Kennedy	rhonda.kennedy@sakilacustomer.org	191,62
Clara Shaw	clara.shaw@sakilacustomer.org	189,6
Tommy Collazo	tommy.collazo@sakilacustomer.org	183,63
Ana Bradley	ana.bradley@sakilacustomer.org	167,67
Curtis Irby	curtis.irby@sakilacustomer.org	167,62
Marcia Dean	marcia.dean@sakilacustomer.org	166,61
Mike Way	mike.way@sakilacustomer.org	162,67

Nama : Nurlita Kholishotunnisa

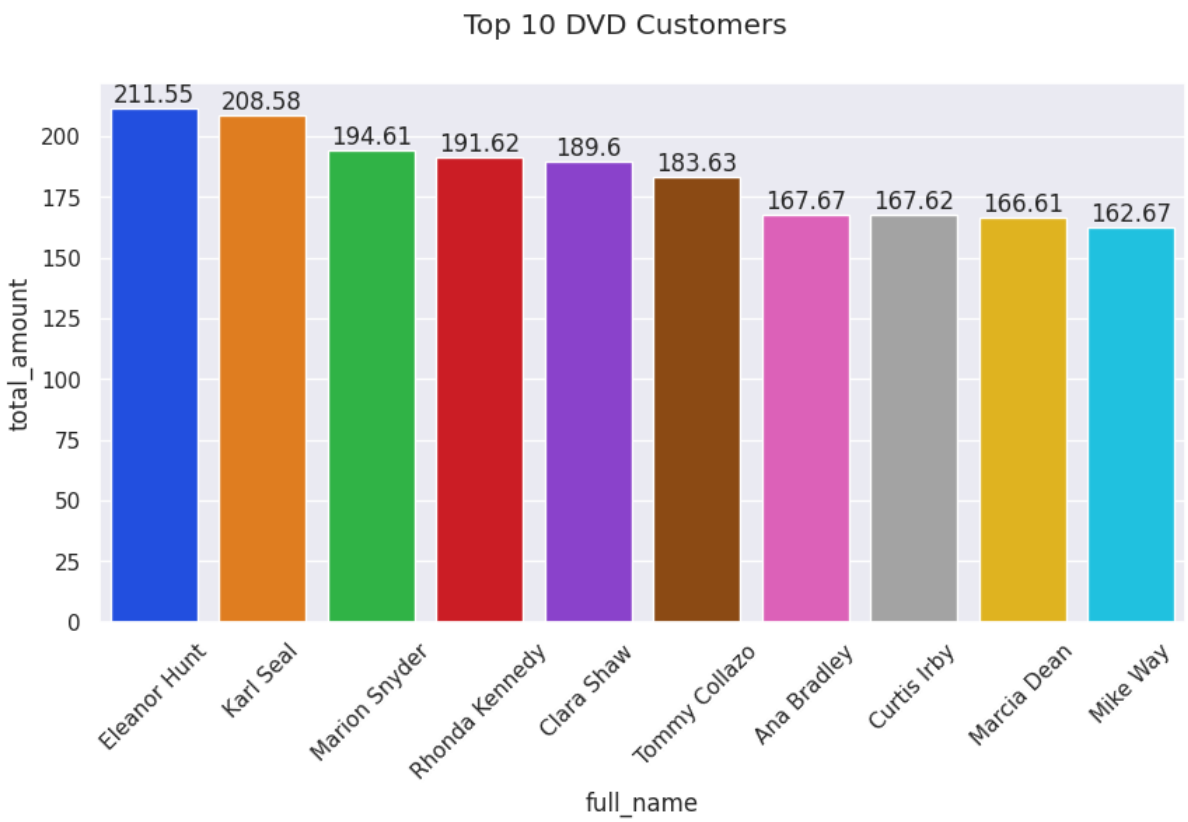
Spesialisasi : Data Analyst

Id Live Class : 041

Screenshot



Visualization:



Nama : Nurlita Kholishotunnisa

Spesialisasi : Data Analyst

Id Live Class : 041

2. **Exercise 2:**

   Identify the bottom 10 customers and their emails

SQL Query:

```
SELECT concat (first_name,' ',last_name) as full_name, email, sum(amount) as total_amount
FROM customer
JOIN payment on payment.customer_id = customer.customer_id
GROUP BY 1,2
ORDER BY 3 ASC
LIMIT 10;
```

Query Result:

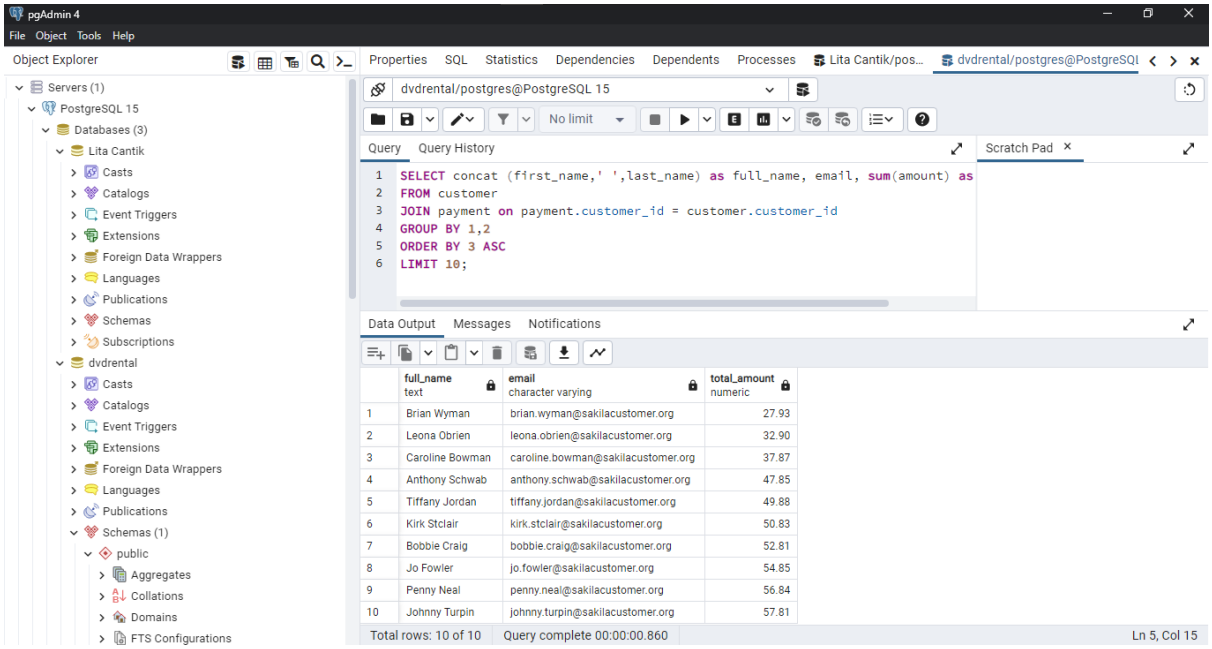
full_name	email	total_amount
Brian Wyman	brian.wyman@sakilacustomer.org	27,93
Leona Obrien	leona.obrien@sakilacustomer.org	32,9
Caroline Bowman	caroline.bowman@sakilacustomer.org	37,87
Anthony Schwab	anthony.schwab@sakilacustomer.org	47,85
Tiffany Jordan	tiffany.jordan@sakilacustomer.org	49,88
Kirk Stclair	kirk.stclair@sakilacustomer.org	50,83
Bobbie Craig	bobbie.craig@sakilacustomer.org	52,81
Jo Fowler	jo.fowler@sakilacustomer.org	54,85
Penny Neal	penny.neal@sakilacustomer.org	56,84
Johnny Turpin	johnny.turpin@sakilacustomer.org	57,81

Nama : Nurlita Kholishotunnisa

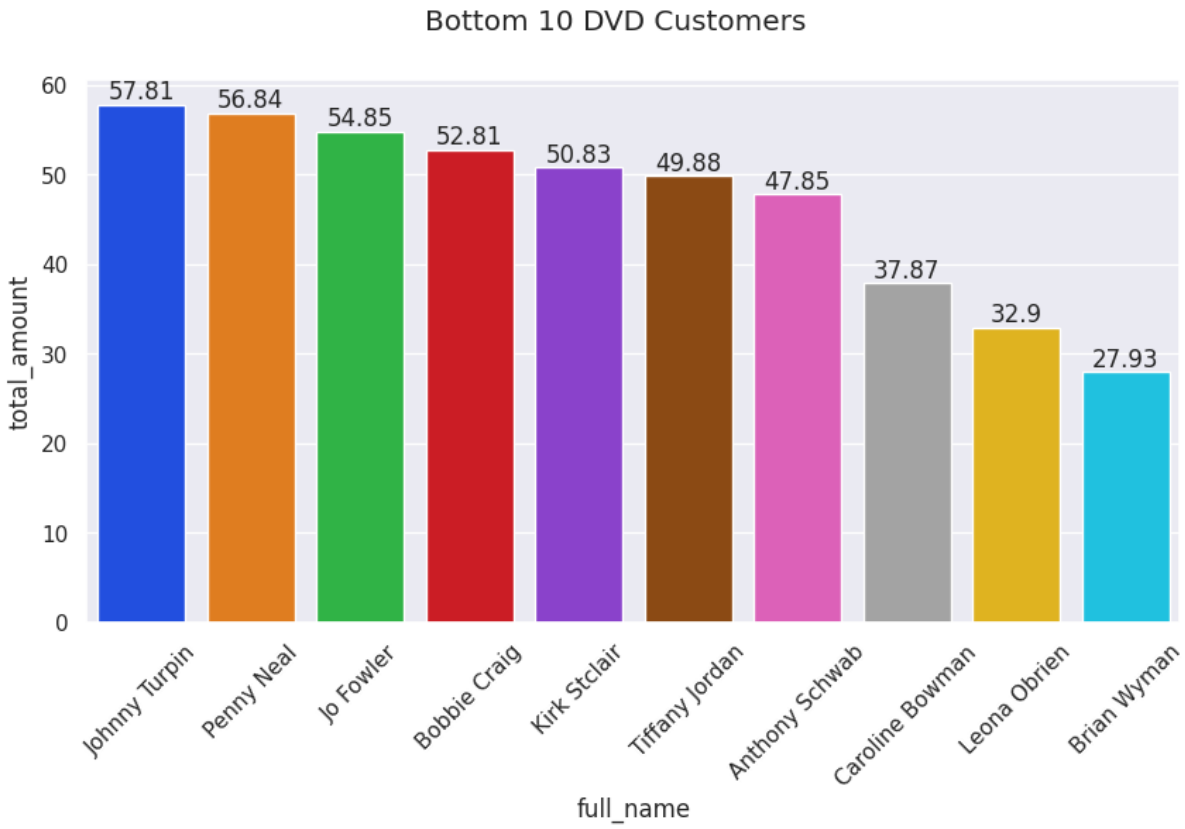
Spesialisasi : Data Analyst

Id Live Class : 041

Screenshot:



Visualization:



Nama : Nurlita Kholishotunnisa

Spesialisasi : Data Analyst

Id Live Class : 041

3. **Exercise 3:**

   What are the most profitable movie genres (ratings)?

   SQL Query:

```
SELECT c.name AS genre, SUM(p.amount) AS total_sales
FROM payment p
JOIN rental r ON p.rental_id = r.rental_id
JOIN inventory i ON r.inventory_id = i.inventory_id
JOIN film f ON i.film_id = f.film_id
JOIN film_category fc ON f.film_id = fc.film_id
JOIN category c ON fc.category_id = c.category_id
GROUP BY 1
ORDER BY 2 DESC
LIMIT 3
```

   Query Result:

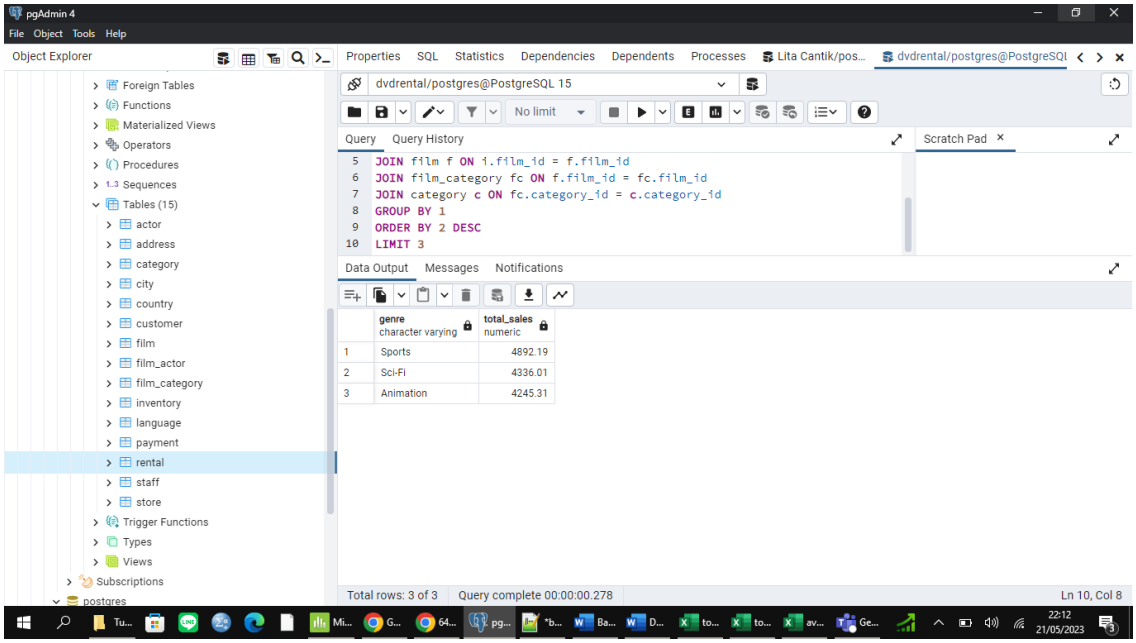
genre	total_sales
Sports	4892,19
Sci-Fi	4336,01
Animation	4245,31
Drama	4118,46
Comedy	4002,48
New	3966,38
Action	3951,84
Foreign	3934,47
Games	3922,18
Family	3830,15
Documentary	3749,65
Horror	3401,27
Classics	3353,38
Children	3309,39
Travel	3227,36
Music	3071,52

Nama : Nurlita Kholishotunnisa

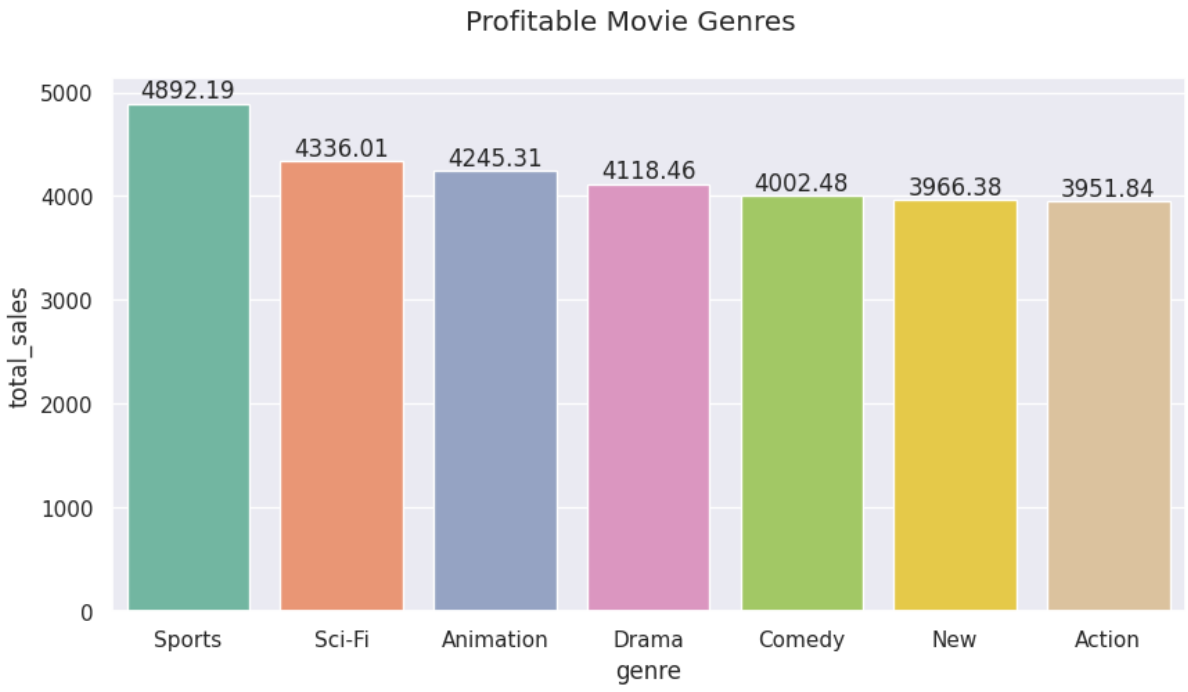
Spesialisasi : Data Analyst

Id Live Class : 041

Screenshot:



Visualization:



Based on the output above, it can be concluded that the most profitable movie genre is Sports with total sales of 4892,19.

Nama : Nurlita Kholishotunnisa

Spesialisasi : Data Analyst

Id Live Class : 041

4. **Exercise 4:**

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

SQL Query:

```
SELECT CASE
 WHEN rental_duration > date_part('day', return_date - rental_date)
 THEN 'Returned Early'
 WHEN rental_duration = date_part('day', return_date - rental_date)
 THEN 'On Time'
 WHEN rental_duration < date_part('day', return_date - rental_date)
 THEN 'Returned Late'
 ELSE 'Not Returned'
END AS status,
COUNT(*) AS jumlah_film
FROM film
INNER JOIN inventory USING(film_id)
INNER JOIN rental USING(inventory_id)
GROUP BY status
ORDER BY jumlah_film
```

Query Result:

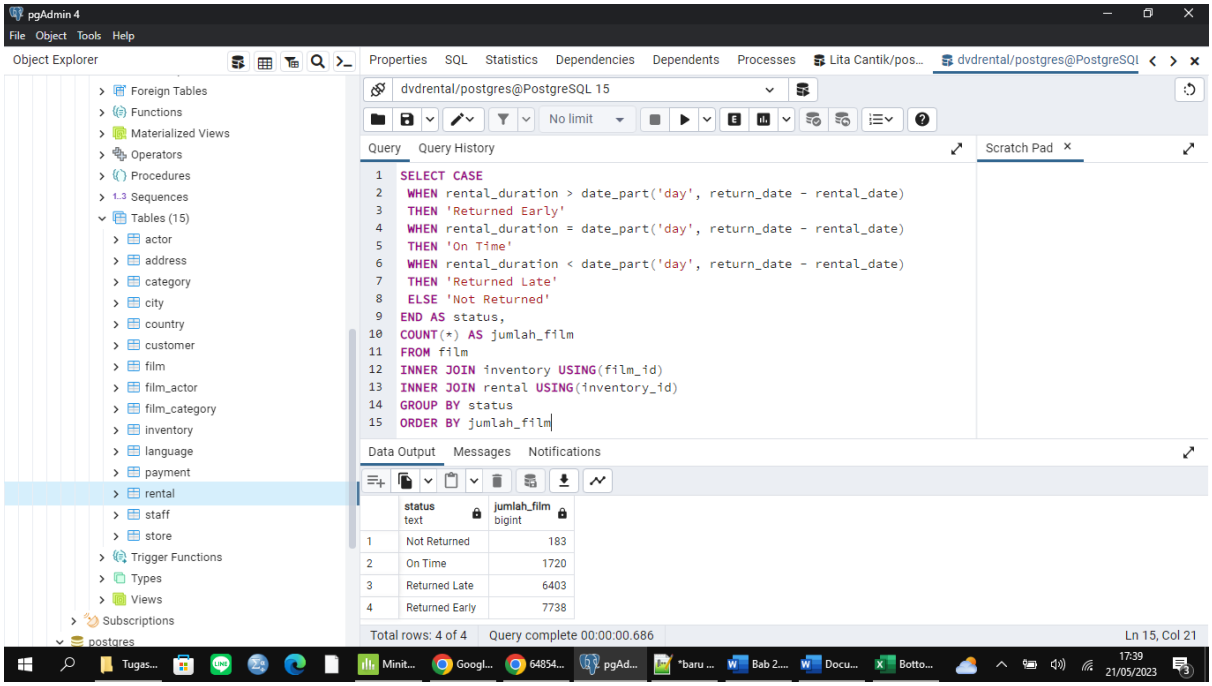
status	jumlah_film
Not Returned	183
On Time	1720
Returned Late	6403
Returned Early	7738

Nama : Nurlita Kholishotunnisa

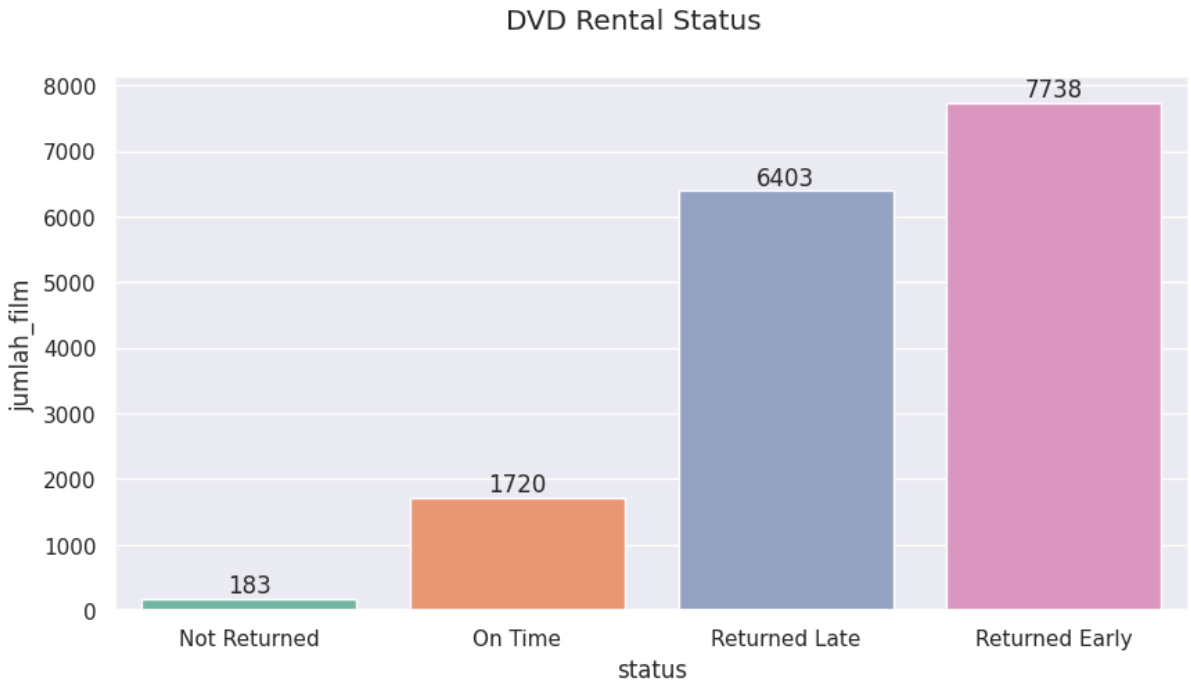
Spesialisasi : Data Analyst

Id Live Class : 041

Screenshot:



Visualization:



Nama : Nurlita Kholishotunnisa

Spesialisasi : Data Analyst

Id Live Class : 041

5. **Exercise 5:**

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

SQL Query:

```
SELECT country, COUNT(customer_id) AS total_customers
FROM country
JOIN city ON country.country_id = city.country_id
JOIN address ON city.city_id = address.city_id
JOIN customer ON address.address_id = customer.address_id
GROUP BY 1
ORDER BY 2 DESC
```

Query Result:

country	total_customers
India	60
China	53
United States	36
Japan	31
Mexico	30
Brazil	28
Russian Federation	28
Philippines	20
Turkey	15
Indonesia	14
Argentina	13
Nigeria	13
South Africa	11
Taiwan	10
United Kingdom	9
Poland	8
Iran	8
Germany	7

Nama : Nurlita Kholishotunnisa

Spesialisasi : Data Analyst

Id Live Class : 041

Italy	7
Venezuela	7
Egypt	6
Colombia	6
Ukraine	6
Vietnam	6
Spain	5
Canada	5
South Korea	5
Pakistan	5
Netherlands	5
Saudi Arabia	5
Israel	4
France	4
Yemen	4
Peru	4
Dominican Republic	3
Bangladesh	3
Thailand	3
Algeria	3
Chile	3
Malaysia	3
Mozambique	3
Switzerland	3
Ecuador	3
Paraguay	3
Austria	3
United Arab Emirates	3
Morocco	3
Tanzania	3
Myanmar	2
Bulgaria	2

Nama : Nurlita Kholishotunnisa

Spesialisasi : Data Analyst

Id Live Class : 041

Cameroon	2
Cambodia	2
Congo, The Democratic Republic of the	2
Sudan	2
Romania	2
Latvia	2
Yugoslavia	2
Puerto Rico	2
Kazakstan	2
Greece	2
Bolivia	2
Kenya	2
French Polynesia	2
Angola	2
Belarus	2
Oman	2
Azerbaijan	2
Hungary	1
American Samoa	1
Armenia	1
Sri Lanka	1
French Guiana	1
Sweden	1
Faroe Islands	1
Ethiopia	1
Bahrain	1
Czech Republic	1
Lithuania	1
Turkmenistan	1
Tunisia	1
Virgin Islands, U.S.	1

Nama : Nurlita Kholishotunnisa

Spesialisasi : Data Analyst

Id Live Class : 041

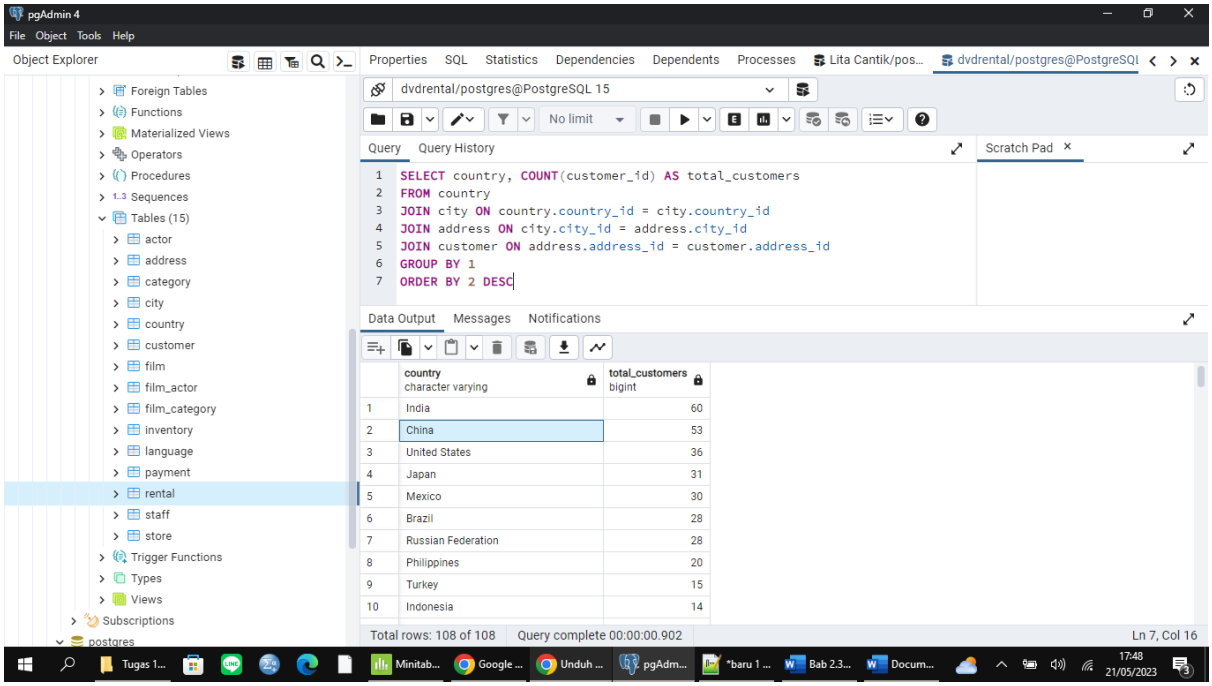
Malawi	1
Chad	1
Afghanistan	1
Greenland	1
Moldova	1
Gambia	1
Holy See (Vatican City State)	1
Estonia	1
Slovakia	1
North Korea	1
Nauru	1
Liechtenstein	1
Senegal	1
Zambia	1
Hong Kong	1
Kuwait	1
Madagascar	1
Runion	1
Saint Vincent and the Grenadines	1
Tuvalu	1
Finland	1
Iraq	1
Anguilla	1
Brunei	1
Tonga	1
Nepal	1
New Zealand	1

Nama : Nurlita Kholishotunnisa

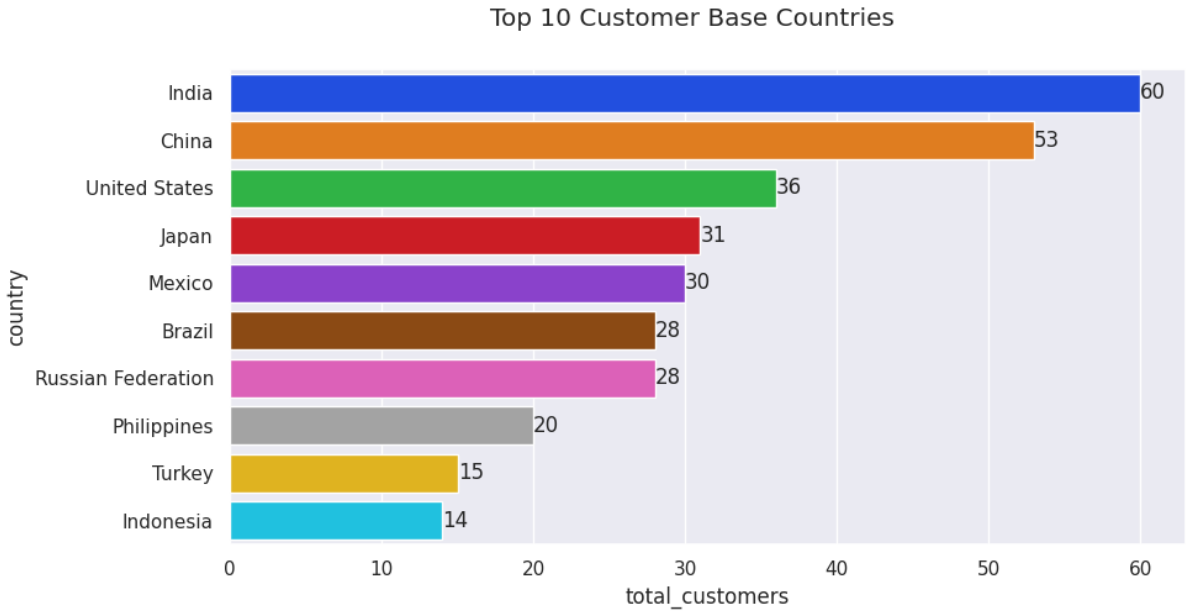
Spesialisasi : Data Analyst

Id Live Class : 041

Screenshot:



Visualization:



Nama : Nurlita Kholishotunnisa

Spesialisasi : Data Analyst

Id Live Class : 041

6. **Exercise 6:**

   Which country is the most profitable for the business?

SQL Query:

```
SELECT country, COUNT(*) AS total_customers, SUM(amount) AS total_sales
FROM country
JOIN city ON country.country_id=city.country_id
JOIN address ON city.city_id=address.city_id
JOIN customer ON address.address_id=customer.address_id
JOIN payment ON customer.customer_id=payment.customer_id
GROUP BY 1
ORDER BY 2 DESC
LIMIT 10
```

Query Result:

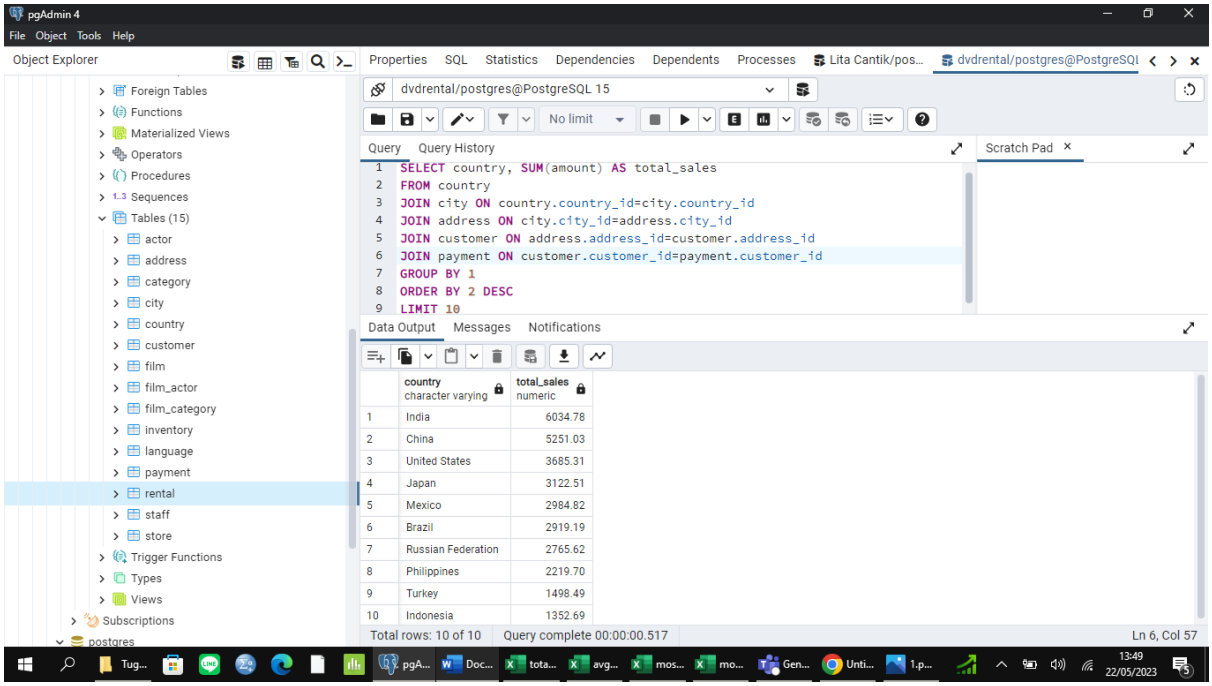
country	total_sales
India	6034,78
China	5251,03
United States	3685,31
Japan	3122,51
Mexico	2984,82
Brazil	2919,19
Russian Federation	2765,62
Philippines	2219,7
Turkey	1498,49
Indonesia	1352,69

Nama : Nurlita Kholishotunnisa

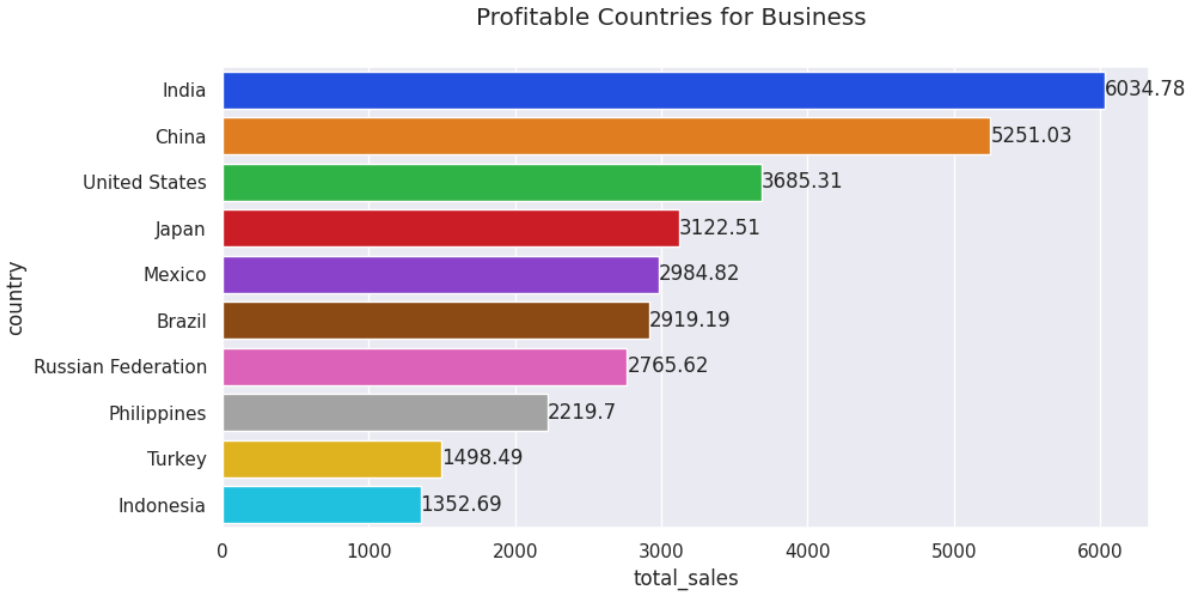
Spesialisasi : Data Analyst

Id Live Class : 041

Screenshot:



Visualization:



Based on the output above, it can be concluded that the most profitable country for business is India because India get total sales of 6034,78.

Nama : Nurlita Kholishotunnisa

Spesialisasi : Data Analyst

Id Live Class : 041

7. **Exercise 7:**

   What is the average rental rate per movie genre (rating)?

SQL Query:

```
SELECT NAME AS movie_genre, AVG(rental_rate) AS average_rental_rate
FROM category
JOIN film_category USING (category_id)
JOIN film USING (film_id)
GROUP BY 1
ORDER BY 2 DESC
```

Query Result:

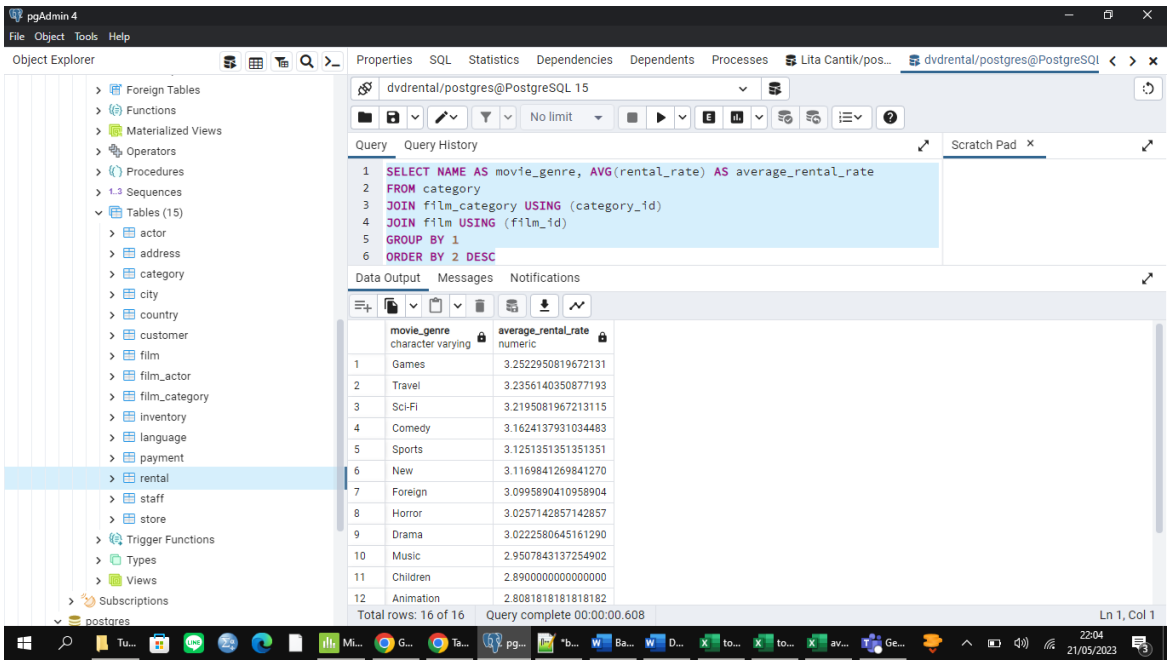
movie_genre	average_rental_rate
Games	3,252295
Travel	3,235614
Sci-Fi	3,219508
Comedy	3,162414
Sports	3,125135
New	3,116984
Foreign	3,099589
Horror	3,025714
Drama	3,022258
Music	2,950784
Children	2,89
Animation	2,808182
Family	2,758116
Classics	2,744386
Documentary	2,666471
Action	2,64625

Nama : Nurlita Kholishotunnisa

Spesialisasi : Data Analyst

Id Live Class : 041

Screenshot:



Visualization: