Assignment 17

Erstyna – Data Analytics Student

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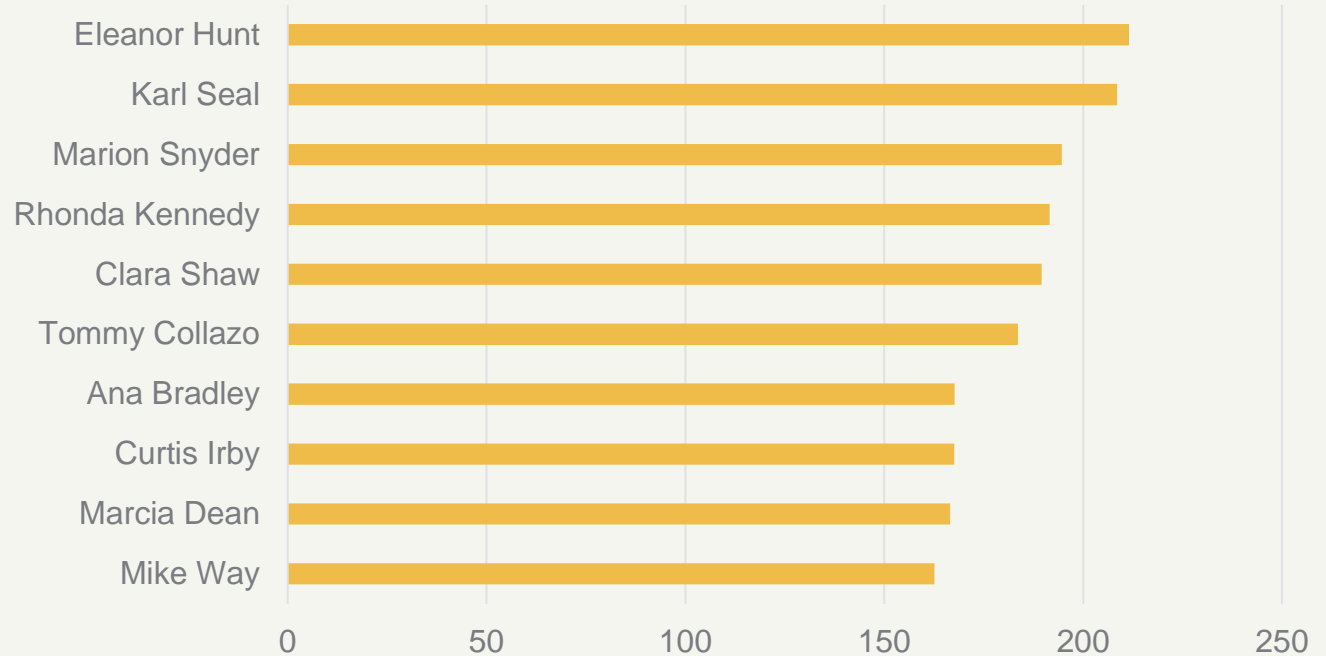
Written SQL Query

Query Result (Screenshoot)

```sql
select concat(customer.first_name, ' ',
customer.last_name) as full_name,
customer.email,
sum(amount) as totalpayment
from payment
join customer
on payment.customer_id =
customer.customer_id
group by customer.customer_id
order by totalpayment desc
limit 10
```

	full_name	email	totalpayment
1	Eleanor Hunt	eleanor.hunt@sakilacustomer.org	211.55
2	Karl Seal	karl.seal@sakilacustomer.org	208.58
3	Marion Snyder	marion.snyder@sakilacustomer.org	194.61
4	Rhonda Kennedy	rhonda.kennedy@sakilacustomer.org	191.62
5	Clara Shaw	clara.shaw@sakilacustomer.org	189.6
6	Tommy Collazo	tommy.collazo@sakilacustomer.org	183.63
7	Ana Bradley	ana.bradley@sakilacustomer.org	167.67
8	Curtis Irby	curtis.irby@sakilacustomer.org	167.62
9	Marcia Dean	marcia.dean@sakilacustomer.org	166.61
10	Mike Way	mike.way@sakilacustomer.org	162.67

Visuali-zation

Top 10 Customers based on Amount of Payment

2. Identify the bottom 10 customers and their emails
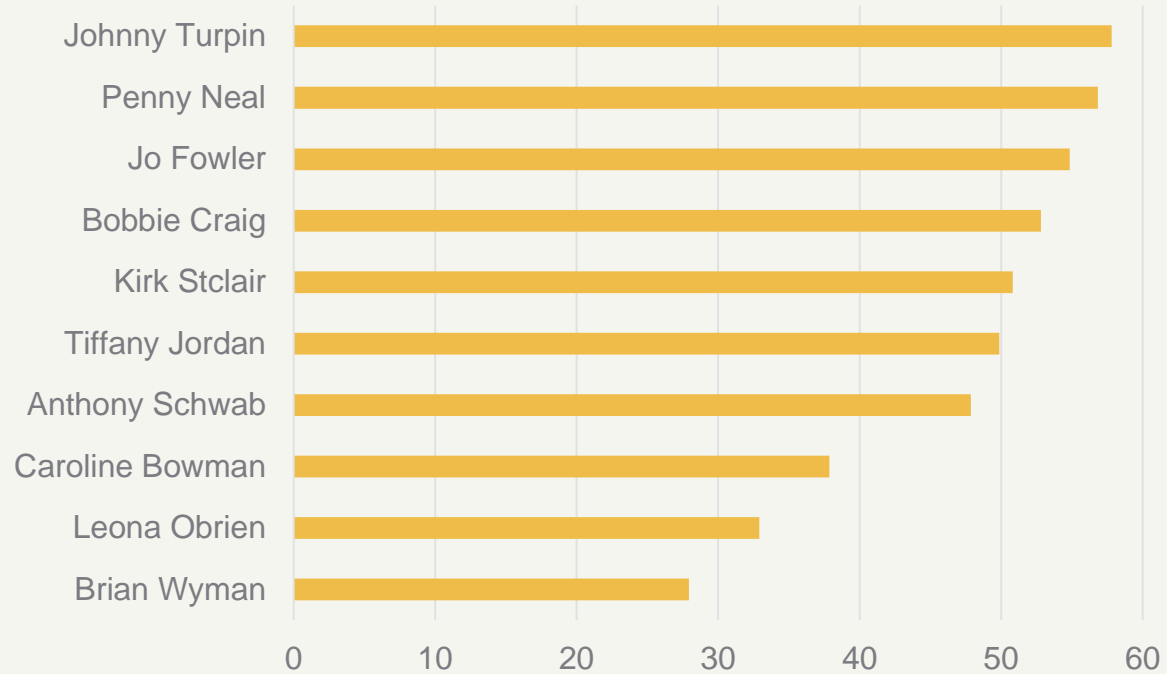
Written SQL Query

Query Result (Screenshoot)

```sql
select concat(customer.first_name,
' ', customer.last_name) as
full_name, customer.email,
sum(amount) as totalpayment
from payment
join customer
on payment.customer_id =
customer.customer_id
group by customer.customer_id
order by totalpayment asc
limit 10
```

	full_name	email	totalpayment
1	Brian Wyman	brian.wyman@sakilacustomer.org	27.93
2	Leona Obrien	leona.obrien@sakilacustomer.org	32.9
3	Caroline Bowman	caroline.bowman@sakilacustomer.org	37.87
4	Anthony Schwab	anthony.schwab@sakilacustomer.org	47.85
5	Tiffany Jordan	tiffany.jordan@sakilacustomer.org	49.88
6	Kirk Stclair	kirk.stclair@sakilacustomer.org	50.83
7	Bobbie Craig	bobbie.craig@sakilacustomer.org	52.81
8	Jo Fowler	jo.fowler@sakilacustomer.org	54.85
9	Penny Neal	penny.neal@sakilacustomer.org	56.84
10	Johnny Turpin	johnny.turpin@sakilacustomer.org	57.81

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Visuali-zation

Bottom 10 Customers based on Amount of Payment

# 3. What are the most profitable movie genres (ratings)?

Written SQL Query

```sql
select category.name as genre,
count(payment.customer_id) as demand,
sum(amount) as profit
from payment, rental, inventory,
film_category, category
where payment.rental_id =
rental.rental_id
and rental.inventory_id =
inventory.inventory_id
and inventory.film_id =
film_category.film_id
and film_category.category_id =
category.category_id
group by category.name
order by profit desc
```
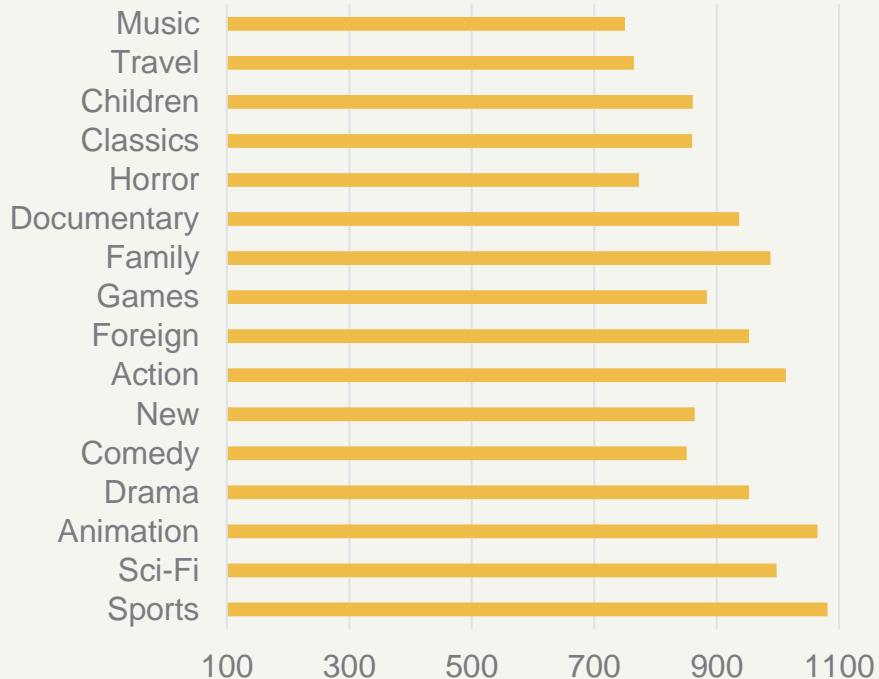
Query Result (Screenshoot)

	ᴬᴮᶜ genre	123 demand	123 profit
1	Sports	1,081	4,892.19
2	Sci-Fi	998	4,336.01
3	Animation	1,065	4,245.31
4	Drama	953	4,118.46
5	Comedy	851	4,002.48
6	New	864	3,966.38
7	Action	1,013	3,951.84
8	Foreign	953	3,934.47
9	Games	884	3,922.18
10	Family	988	3,830.15
11	Documentary	937	3,749.65
12	Horror	773	3,401.27
13	Classics	860	3,353.38
14	Children	861	3,309.39
15	Travel	765	3,227.36
16	Music	750	3,071.52

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Visualization (Genres)

Profit based on Genres
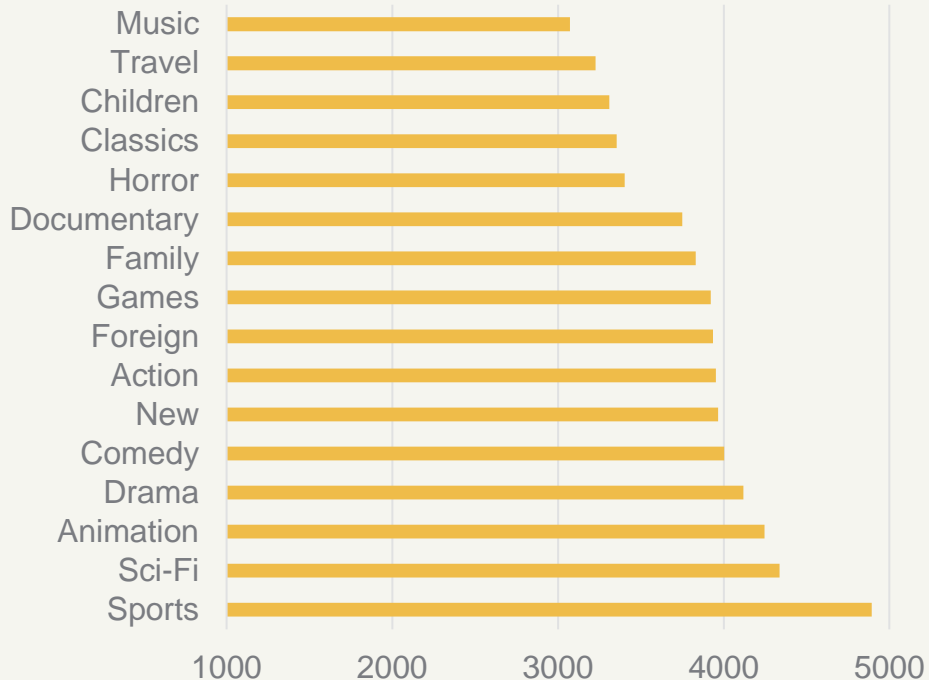
Demand based on Genres
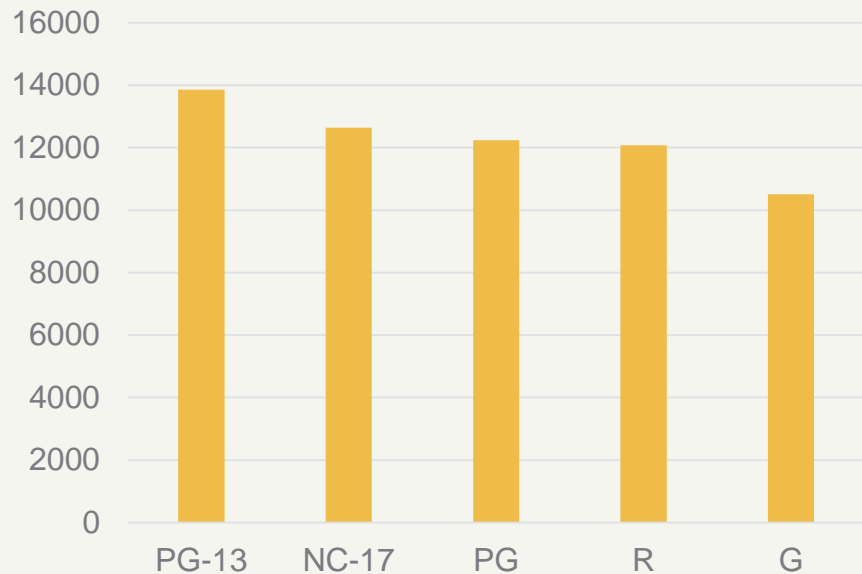
Written SQL Query

Query Result (Screenshoot)

```sql
select film.rating,
count(payment.customer_id) as demand,
sum(amount) as profit
from payment, rental, inventory, film
where payment.rental_id =
rental.rental_id
and rental.inventory_id =
inventory.inventory_id
and inventory.film_id = film.film_id
group by film.rating
order by profit desc
```

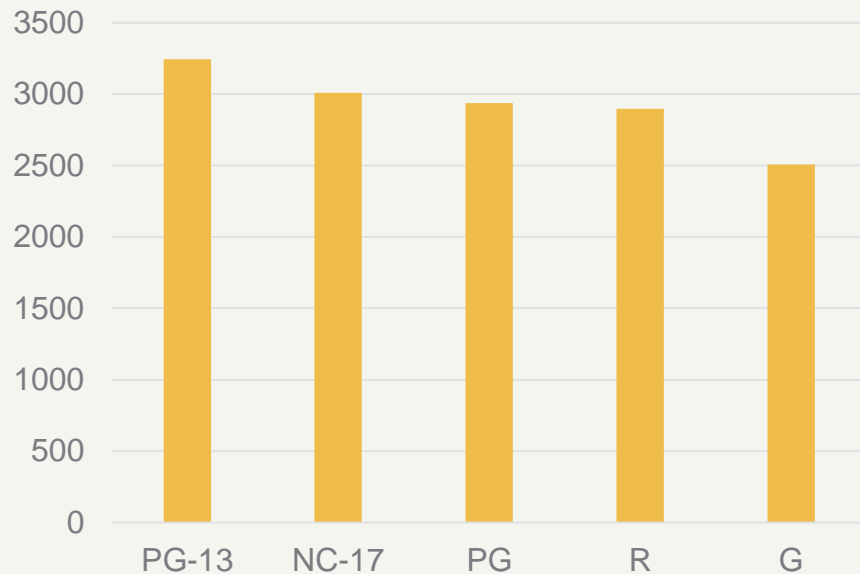|	rating	demand	profit
1	PG-13	3,245	13,855.56
2	NC-17	3,008	12,634.92
3	PG	2,938	12,236.65
4	R	2,897	12,073.03
5	G	2,508	10,511.88

Visualization (Ratings)

Profit based on Ratings

Demand based on Ratings

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

Written SQL Query

```sql
create table "daysrent"
as select rental.rental_id, film.film_id,
film.rental_duration,
extract(day from age(return_date, rental_date)) as days_rent,
(case
    when extract(day from age(return_date, rental_date)) < rental_duration then 'Early'
    when extract(day from age(return_date, rental_date)) = rental_duration then 'On
Time'
    else 'Late'
end) as category
from rental, film, inventory
where film.film_id = inventory.film_id
and inventory.inventory_id = rental.inventory_id
```

Query Result (Screenshoot)

|	rental_id	film_id	rental_duration	days_rent	category
1	2	333	7	3	Early
2	3	373	7	7	On Time
3	4	535	6	9	Late
4	5	450	5	8	Late
5	6	613	5	2	Early
6	7	870	4	4	On Time
7	8	510	6	3	Early
8	9	565	6	3	Early
9	10	396	5	6	Late
10	11	971	4	8	Late
11	12	347	7	5	Early
12	13	499	3	5	Late
13	14	593	6	1	Early
14	15	670	4	9	Late
15	16	86	6	1	Early
16	17	181	7	1	Early
17	18	741	7	6	Early
18	19	422	7	6	Early
19	20	770	5	2	Early
20	21	31	5	0	Early
21	22	159	5	1	Early
22	23	971	4	4	On Time
23	24	721	7	1	Early

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Written SQL Query

```sql
select category as return_status,
count(category) as total
from daysrent
group by daysrent.category
```

Query Result (Screenshoot)

	ABC return_status	123 total
1	On Time	1,720
2	Late	6,586
3	Early	7,738

Visuali-zation

Return Status
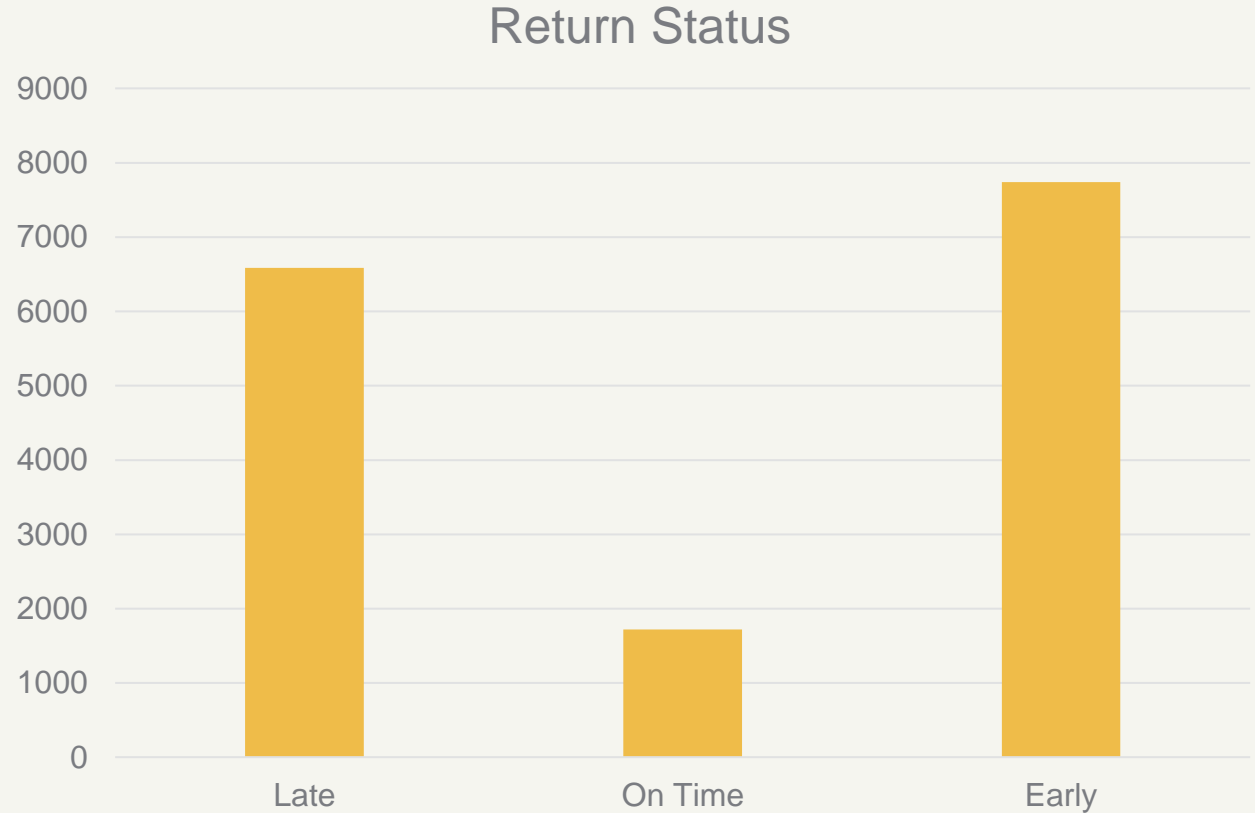
5. What is the customer base in the countries where we have a presence?
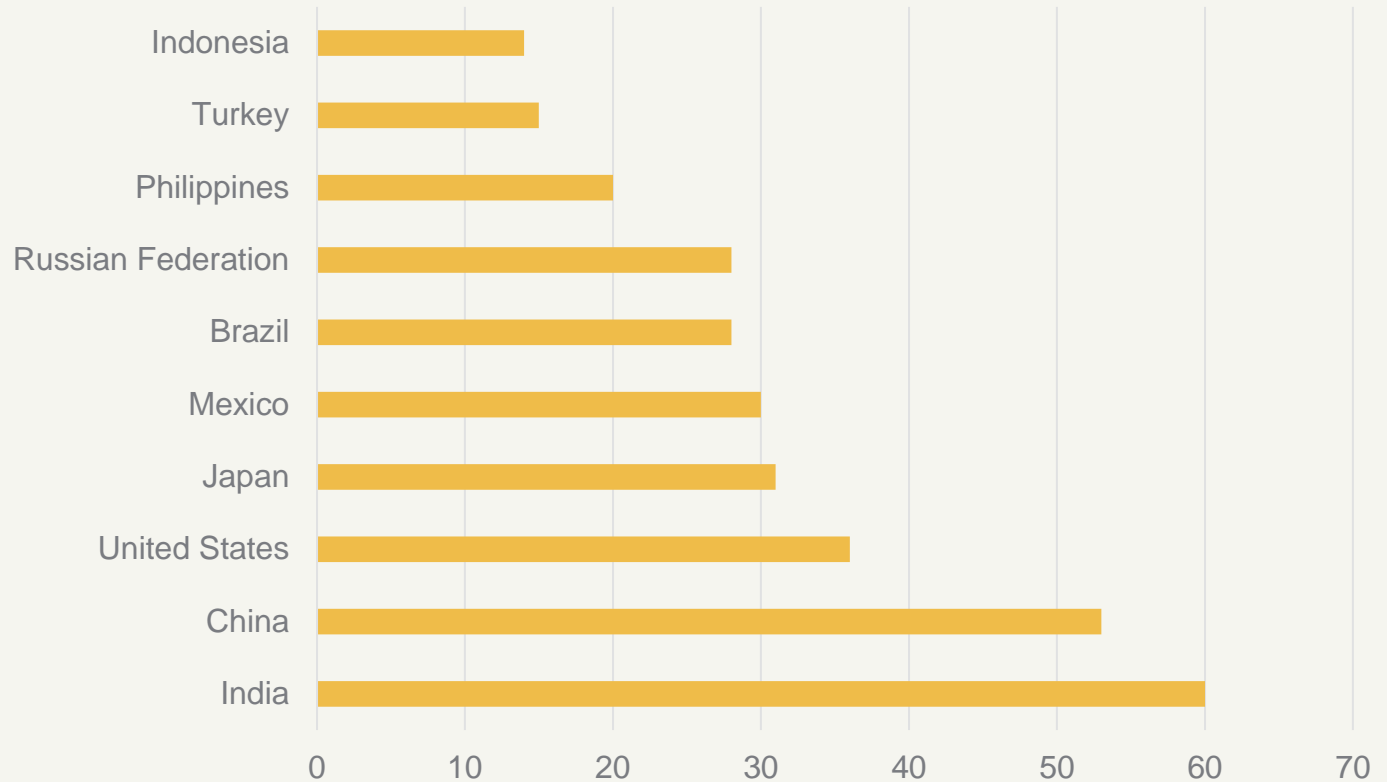
Written SQL Query

Query Result (Screenshoot)

```sql
select distinct country,
count(customer_id) as
amount_customers
from customer, country, address,
city
where customer.address_id =
address.address_id
and address.city_id =
city.city_id
and city.country_id =
country.country_id
group by country.country
order by amount_customers desc
```

	country	amount_customers
1	India	60
2	China	53
3	United States	36
4	Japan	31
5	Mexico	30
6	Brazil	28
7	Russian Federation	28
8	Philippines	20
9	Turkey	15
10	Indonesia	14
11	Argentina	13
12	Nigeria	13

Visuali-zation

Top 10 Countries Where the Customers Live In

6. Which country is the most profitable for the business?
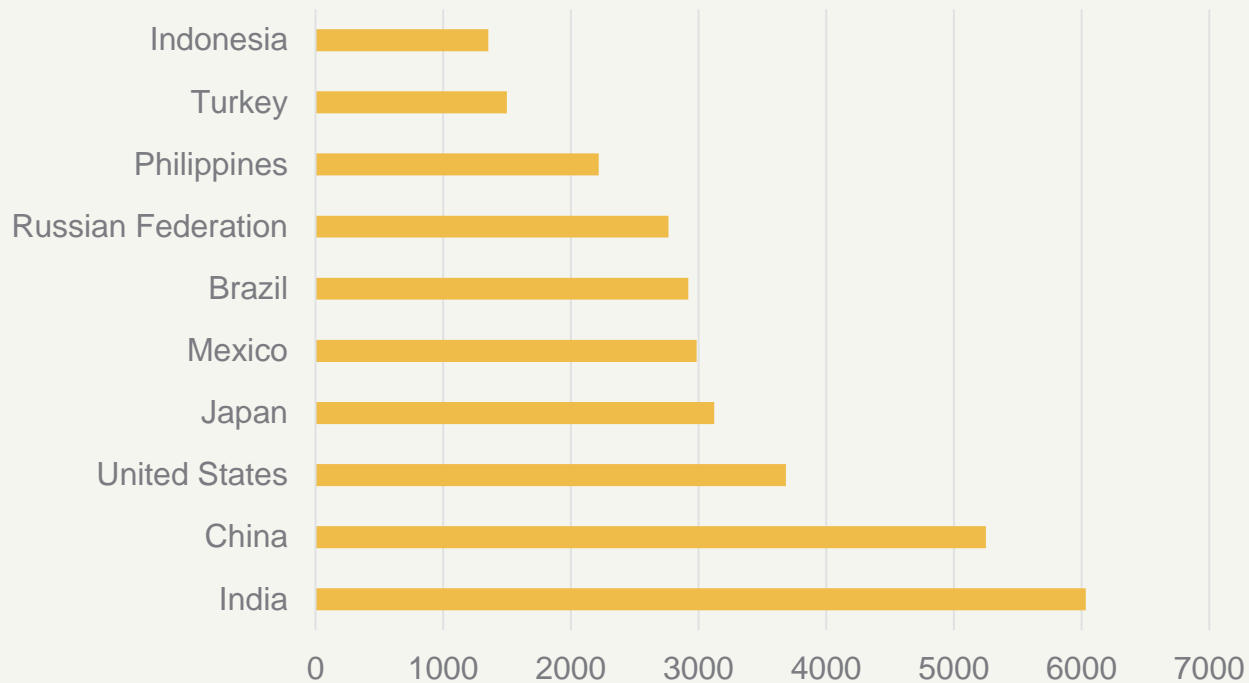
Written SQL Query

○ # Query Result (Screenshoot)

```sql
select country.country, sum(amount) as
profit
from payment, country, city, address,
customer
where country.country_id =
city.country_id
and city.city_id = address.city_id
and address.address_id =
customer.address_id
and customer.customer_id =
payment.customer_id
group by country.country
order by profit desc
limit 10
```

	country	profit
1	India	6,034.78
2	China	5,251.03
3	United States	3,685.31
4	Japan	3,122.51
5	Mexico	2,984.82
6	Brazil	2,919.19
7	Russian Federatio	2,765.62
8	Philippines	2,219.7
9	Turkey	1,498.49
10	Indonesia	1,352.69

Visualiza-tion

Top 10 Countries with Highest Profit (based on Amount of Payment)

7. What is the average rental rate per movie genre (rating)?
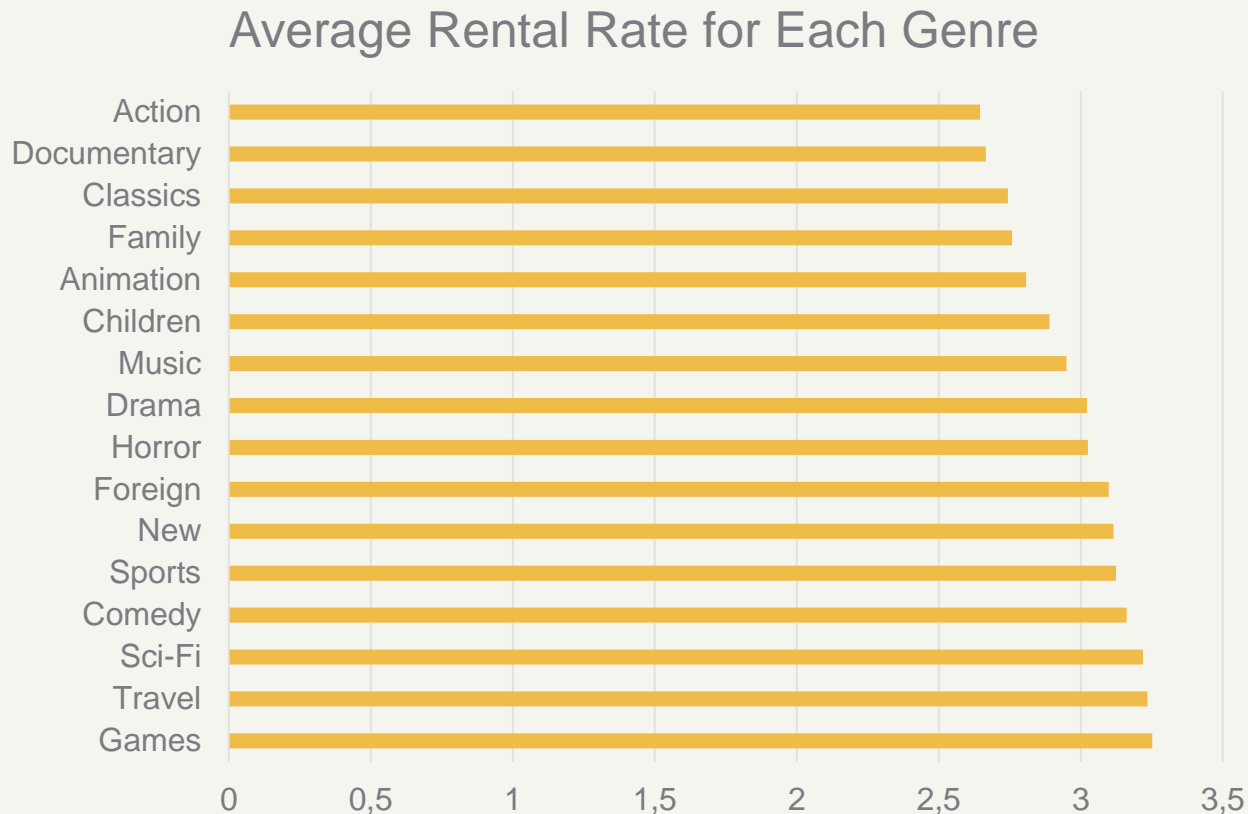
Written SQL Query

Query Result (Screenshoot)

```sql
select category.name as genre,
avg(film.rental_rate) as
avg_rent_rate
from film, film_category, category
where film.film_id =
film_category.film_id
and film_category.category_id =
category.category_id
group by category.name
order by avg(film.rental_rate) desc
```

	genre	avg_rent_rate
1	Games	3.252295082
2	Travel	3.2356140351
3	Sci-Fi	3.2195081967
4	Comedy	3.1624137931
5	Sports	3.1251351351
6	New	3.116984127
7	Foreign	3.0995890411
8	Horror	3.0257142857
9	Drama	3.0222580645
10	Music	2.9507843137
11	Children	2.89
12	Animation	2.8081818182
13	Family	2.758115942
14	Classics	2.7443859649
15	Documentary	2.6664705882
16	Action	2.64625

Visuali-zation

Average Rental Rate for Each Genre

Written SQL Query

Query Result (Screenshoot)
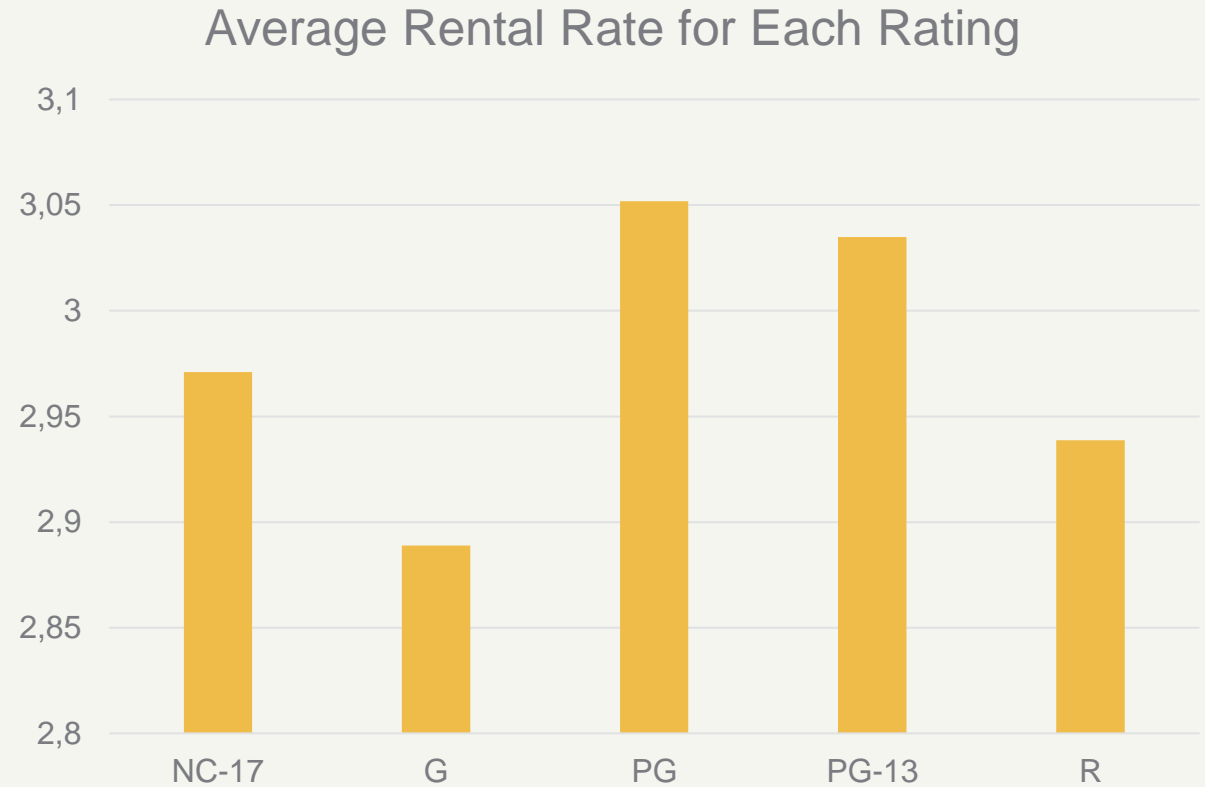
```
select film.rating,
avg(rental_rate) as
average_rate
from film
group by film.rating
```

rating	average_rate
NC-17	2.970952381
G	2.8888764045
PG	3.0518556701
PG-13	3.0348430493
R	2.9387179487

Visuali-zation

Average Rental Rate for Each Rating

Thank you!