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

```sql
select concat(customer.first_name,' ',customer.last_name ) as
full_name,customer.customer_id,customer.email,count(rental_id) as jumlah_rental
from customer
inner join rental on customer.customer_id = rental.customer_id
group by customer.customer_id
order by 4 desc
limit 10;
```

result :

	full_name	customer_id	email	jumlah_rental
1	Eleanor Hunt	148	eleanor.hunt@sakilacustomer.org	46
2	Karl Seal	526	karl.seal@sakilacustomer.org	45
3	Clara Shaw	144	clara.shaw@sakilacustomer.org	42
4	Marcia Dean	236	marcia.dean@sakilacustomer.org	42
5	Tammy Sanders	75	tammy.sanders@sakilacustomer.org	41
6	Wesley Bull	469	wesley.bull@sakilacustomer.org	40
7	Sue Peters	197	sue.peters@sakilacustomer.org	40
8	Tim Cary	468	tim.cary@sakilacustomer.org	39
9	Rhonda Kennedy	137	rhonda.kennedy@sakilacustomer.org	39
10	Marion Snyder	178	marion.snyder@sakilacustomer.org	39

Explanation :

Ini adalah 10 customer paling atas dengan jumlah rental paling banyak sehingga dengan informasi ini akan membantu pemilihan customer untuk diberikan reward.

2. Identify the bottom 10 customers and their emails
Sql quey:

```sql
select concat(customer.first_name,' ',customer.last_name ) as
full_name,customer.customer_id,customer.email,count(rental_id) as jumlah_rental
from customer
inner join rental on customer.customer_id = rental.customer_id
group by customer.customer_id
order by 4 asc
limit 10;
```

result :

	full_name	customer_id	email	jumlah_rental
1	Brian Wyman	318	brian.wyman@sakilacustomer.org	12
2	Katherine Rivera	61	katherine.rivera@sakilacustomer.or	14
3	Leona Obrien	281	leona.obrien@sakilacustomer.org	14
4	Tiffany Jordan	110	tiffany.jordan@sakilacustomer.org	14
5	Anita Morales	136	anita.morales@sakilacustomer.org	15
6	Caroline Bowmar	248	caroline.bowman@sakilacustomer.	15
7	Lester Kraus	492	lester.kraus@sakilacustomer.org	16
8	Jerome Kenyon	464	jerome.kenyon@sakilacustomer.or	16
9	Joann Gardner	164	joann.gardner@sakilacustomer.org	16
10	Antonio Meek	398	antonio.meek@sakilacustomer.org	16

Explanation :
Ini adalah daftar 10 customer paling bawah dengan jumlah rental paling sedikit . sehingga kita tidak perlu memberikan reward terhadap mereka.

3.What are the most profitable movie genres (ratings)?
Sql quey:

```sql
select category.name as genre, count(*) as jumlah_peminat, sum(amount) as
pendapatan_per_genre
from category
inner join film_category on category.category_id = film_category.category_id
inner join film on film_category.film_id = film.film_id
inner join inventory on film.film_id = inventory.film_id
inner join rental on inventory.inventory_id = rental.inventory_id
inner join payment on rental.rental_id = payment.rental_id
group by category.name
order by 2 desc;
```

result :

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

Explanation :

Dapat dilihat dari tabel diatas bahwa genre sports menjadi genre paling menguntungkan dengan pendapatan paling tinggi. Sehingga dapat disimpulkan jika toko memperbanyak stock genre sport itu akan meningkatkan pendapatan dari toko.

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

```sql
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
'returned on time'
      else 'returned late'
end as status_pengembalian ,
count(*) as jumlah_film
from film
inner join inventory on film.film_id = inventory.film_id
inner join rental on inventory.inventory_id = rental.inventory_id
```

```
group by 1
order by 2 desc ;
```

result :

	status_pengembalian	jumlah_film
1	returned early	7,738
2	returned late	6,586
3	returned on time	1,720

Explanation :
Kebanyakan film dikembalikan sebelum jatuh tempo waktu pengembaliannya. Tetapi banyak juga film yang dikembalikannya telat atau setelah jatuh tempo. Hanya sekitar 10 % saja yang dikembalikan tepat waktu.

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

```
select country.country as negara,count(customer_id) as jumlah_customer
from country
inner join city on country.country_id = city.country_id
inner join address on city.city_id = address.city_id
inner join customer on address.address_id = customer.address_id
group by country.country_id
order by 2 desc;
```

result :

	negara	jumlah_customer
1	India	60
2	China	53
3	United States	36
4	Japan	31
5	Mexico	30
6	Russian Federa	28
7	Brazil	28
8	Philippines	20
9	Turkey	15
10	Indonesia	14

Note : negaranya ada 108 tetapi, cuma menampilkan screenshoot 10 negara saja karena tidak muat untuk di screenshoot semua negaranya.

Explanation :

dari 108 negara, India menduduki puncak grafik dengan basis pelanggan 60, dan Afghanistan berada di urutan terakhir dengan beberapa negara lain dengan basis pelanggan 1

6. Which country is the most profitable for the business?
Sql quey:

```sql
select country.country as negara,sum (amount) as jumlah_pendapatan
from country
inner join city on country.country_id = city.country_id
inner join address on city.city_id = address.city_id
inner join customer on address.address_id = customer.address_id
inner join payment on customer.customer_id = payment.customer_id
group by country.country_id
order by 2 desc
limit 10;
```

result :

	negara	jumlah_pendapatan
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 Federa	2,765.62
8	Philippines	2,219.7
9	Turkey	1,498.49
10	Indonesia	1,352.69

Explanation :

Dari tabel diatas menunjukkan mayoritas pendapatan toko rental dvd ini berasal dari negara india , disusul china dan USA di posisi kedua dan ketiga. Ini berarti toko bisa lebih gencar lagi dalam melakukan promosi di negara tersebut. Itu akan menarik lebih banyak pelanggan dan memperbesar pendapatan.

7.What is the average rental rate per movie genre (rating)?
Sql quey:

```sql
select category.name as genre, avg(rental_rate) as rata_rata_tarif_sewa
from category
inner join film_category on category.category_id = film_category.category_id
inner join film on film_category.film_id = film.film_id
inner join inventory on film.film_id = inventory.film_id
inner join rental on inventory.inventory_id = rental.inventory_id
inner join payment on rental.rental_id = payment.rental_id
group by 1
order by 2 desc ;
```

result :

genre	rata_rata_tarif_sewa
1	Travel	3.3063398693
2	Comedy	3.2978730905
3	Drama	3.1725813221
4	Games	3.1438461538
5	Horror	3.0909055627
6	Sports	3.0806567993
7	New	3.0617592593
8	Music	3.0406666667
9	Sci-Fi	2.9980160321
10	Foreign	2.9606190976
11	Animation	2.7477464789
12	Family	2.7086234818
13	Children	2.6857026713
14	Action	2.6563376111
15	Classics	2.6411627907
16	Documentary	2.6079295624

Explanation :

Dilihat dari tabel diatas , rata-rata tarif sewa berdasarkan jenis genre paling mahal adalah genre travel. Kemudian paling murah adalah genre documentary. Ini dapat menjadikan pertimbakan apakah jenis genre travel sepi peminat dikarenakan biaya tarif sewanya terlalu mahal sehingga toko harus menurunkan biaya sewanya.