

Aggregate Functions and Group By SQL

#Find the maost a video was ever rented for

```
select max(amount)
from sakila.payment;
```

Find the smallest cost a video was ever rented for

```
select min(amount)
from sakila.payment;
```

What is the total profits derived from ren ng videos?

```
select sum(amount)
from sakila.payment;
```

What is the average video rental price?

```
select avg(amount)
from sakila.payment;
```

How many mes has any video been rented?

```
select count(rental_id)
from sakila.payment;
```

How many records are in the payment table, regardless of whether they are complete?

```
select count(*)
from sakila.payment;
```

How many different prices are there for video rentals?

```
select count(distinct amount)
from sakila.payment;
```

Make it pretty with an alias

```
select count(distinct amount) as "Number of Prices"
from sakila.payment;
```

How does the price differ by film category (genre)? Find the average price by category.

```
select avg(amount) as AvgPrice, name
from sakila.payment
join sakila.rental using(rental_id)
join sakila.inventory using (inventory_id)
join sakila.film_category using (film_id)
join sakila.category using (category_id)
group by name;
```

What if you wanted to then order this by the average price, even when it is grouped? You can do that, too!

```
select avg(amount) as AvgPrice, name
from sakila.payment
join sakila.rental using(rental_id)
join sakila.inventory using (inventory_id)
join sakila.film_category using (film_id)
join sakila.category using (category_id)
group by name
order by AvgPrice;
```

How about the maximum price by category and by state?

```
select * from address;
```

```
select max(amount) as HighestPrice, name, district
from sakila.payment
join sakila.rental using(rental_id)
join sakila.customer using (customer_id)
join sakila.inventory using (inventory_id)
join sakila.film_category using (film_id)
join sakila.category using (category_id)
join sakila.address using (address_id)
group by name, district;
```

```
select max(amount) as HighestPrice, name, district
from sakila.payment
join sakila.rental using(rental_id)
join sakila.customer on rental.customer_id = customer.customer_id
join sakila.inventory using (inventory_id)
join sakila.film_category using (film_id)
join sakila.category using (category_id)
join sakila.address using (address_id)
group by name, district;
```

Which genre is most popular?

```
select name, count(name) as GenreFrequency
from sakila.payment
join sakila.rental using(rental_id)
join sakila.inventory using (inventory_id)
join sakila.film_category using (film_id)
join sakila.category using (category_id)
group by name
having GenreFrequency;
```

Want to see be er which one is highest/lowest?

```
select name, count(name) as GenreFrequency
from sakila.payment
join sakila.rental using(rental_id)
join sakila.inventory using (inventory_id)
join sakila.film_category using (film_id)
join sakila.category using (category_id)
group by name
having GenreFrequency
order by GenreFrequency;
```

Which genre has the most variability in pricing?

```
select name, count(dis nct amount) as PriceVariability
from sakila.payment
join sakila.rental using(rental_id)
join sakila.inventory using (inventory_id)
join sakila.film_category using (film_id)
join sakila.category using (category_id)
group by name
having PriceVariability
order by PriceVariability;
```