**W3schools practice**

1. **How many different products are in each order? Which order has the most number of unique products?**

SELECT OrderID, COUNT(DISTINCT(ProductID)) as NUM\_product

FROM [OrderDetails]

Group by OrderID

Order by OrderID, COUNT(DISTINCT(ProductID)) asc;

## 或者order by 1,2 desc 第一列第二列;

SELECT OrderID, COUNT(DISTINCT(ProductID)) as NUM\_product

FROM [OrderDetails]

Group by OrderID

Having count(distinct( ProductID)) =

Select max（Num\_product）

From

(SELECT OrderID, COUNT(DISTINCT(ProductID)) as NUM\_product

FROM [OrderDetails]

Group by OrderID

Order by 2 desc)

1. **Which products are sold in jars? What is the most expensive product that's sold in jars?**

SELECT ProductName, Unit

FROM [Products]

Where Unit like '%jars%'

SELECT ProductName, Unit,Price

FROM [Products]

Where Unit like '%jars%' and Price = (

Select max(Price)

from

(SELECT ProductName, Unit,Price

FROM [Products]

Where Unit like '%jars%'

Order by Price desc;)

)

1. **What are the product names are included in order ID 10250?**

SELECT ProductName, OrderID

FROM [Products] as p join [OrderDetails] as o

Where OrderID=10250 and p.ProductID=o.ProductID

##

FROM [Products]

join [OrderDetails]

on [Products].ProductID = [OrderDetails].ProductID

where OrderID = 10250

1. **What products are contained in category 'Dairy Products'?**

SELECT ProductName,CategoryName

From Products as p,Categories as c

Where p.CategoryID=c.CategoryID and CategoryName='Dairy Products'

Solution1

##

From products join categories

On products.categoryID = categories.categoryID

Where categoryName=’Dairy Products’

Solution2 Sub-query:

##

SELECT ProductName, ‘Dairy Products' as CategoryName

From Products

Where CategoryID in

(

SELECT CategoryID

FROM Categories

Where CategoryName='Dairy Products'

)

* **MySQL sakila practice**

1. **Which actors have the first name 'Scarlett'?**

SELECT \* FROM sakila.actor

Where first\_name='Scarlett';

1. **Which actors have the last name 'Johansson'**

SELECT \* FROM sakila.actor

Where last\_name='Johansson';

1. **How many distinct actors last names are there?**

SELECT count(distinct(last\_name)) as distinct\_actor FROM sakila.actor;

1. **Which last names appear more than once?**

SELECT last\_name, count(distinct(last\_name)) as appear\_num FROM sakila.actor

Group by last\_name

having count(last\_name)>1

order by 2 desc;

1. **How many total rentals occured in May?**

SELECT count(rental\_id) as num FROM sakila.rental

Where rental\_date like '%-05-%';

1. **How many staff processed rentals in May?**

SELECT count(Distinct(staff\_id)) as num FROM sakila.rental

~~Where rental\_date like '%-05-%';~~

Where month(rental\_date)=5

1. **Which staff processed the most rentals in May?**

Select max(num) as max\_rentals

From

(

SELECT s.first\_name, s.last\_name , count(r.rental\_id) as num

FROM sakila.rental r join sakila.staff s on r.staff\_id=s.staff\_id

~~Where rental\_date like '%-05-%'~~

Where month(rental\_date)=5

group by r.staff\_id

order by count(r.rental\_id) desc ## order by 3 desc

**)temp;**

**Set @max\_rentals=**

**(**

Select max(num) as max\_rentals

From

(

SELECT s.first\_name, s.last\_name , count(r.rental\_id) as num

FROM sakila.rental r join sakila.staff s on r.staff\_id=s.staff\_id

Where month(rental\_date) = 5

group by r.staff\_id

order by 3 desc;

**)temp**

**)**

**Select @max\_rentals; 🡪🡪 directly return the staff processed the most rentals, ‘set’ method only can present one value!**

1. **Which customer paid the most rental in August?**

SELECT c.first\_name, c.last\_name, count(p.amount) as amount

FROM sakila.payment as p join sakila.customer as c

Where p.customer\_id=c.customer\_id and p.payment\_date like'%-08-%'

group by p.customer\_id

order by count(p.amount) desc;

set @max\_amount=

(

select max(amount) from

(

SELECT c.first\_name, c.last\_name, count(distinct p.amount) as amount

FROM sakila.payment as p join sakila.customer as c on p.customer\_id=c.customer\_id

Where month(payment\_date) = 8

group by p.customer\_id

order by 3 desc

)temp

);

SELECT c.first\_name, c.last\_name, count(distinct p.amount) as amount

FROM sakila.payment as p

join sakila.customer as c

on p.customer\_id=c.customer\_id

Where month(payment\_date) = 8

group by p.customer\_id

having count(distinct p.amount)=@max\_amount

order by 3 desc;

1. **A summary of rental total amount by month.**

SELECT date\_format(payment\_date,'%Y%m') as months, count(amount) as amount

FROM sakila.payment

group by months;