



3.01 Lab | SQL Join + Multiple Tables

📅 Completed Date	@Nov 2, 2020
☰ Description	Exercises using joins, pretty cool!
▼ Module	Unit 3
▼ Status	Complete
☰ Type	Lab

Lab | [SQL Join](#)

[Instructions](#)

Lab | [SQL Joins on multiple tables](#)

[Instructions](#)

In this lab, you will be using the [Sakila](#) database of movie rentals.

Lab | SQL Join

In this lab, you will be using the [Sakila](#) database of movie rentals.

Instructions

List number of films per **category**.

```
select category_id, COUNT(film_id) as 'total_films' from film_category
group by category_id
order by category_id

select name as category_name, count(*) as num_films
from sakila.category
inner join sakila.film_category
```

```
using (category_id)
group by name
order by num_films desc;
```

category_id	total_films
1	64
2	66
3	60
4	57
5	58
6	68
7	62
8	69
9	73
10	61
11	56
12	51
13	63
14	61
15	74
16	57

Display the first and last names, as well as the address, of each staff member.

```
select s.first_name, s.last_name, s.address_id, a.address from sakila.staff s
left join sakila.address a
on a.address_id=s.address_id
```

first_name	last_name	address_id	address
Mike	Hillyer	3	23 Workhaven Lane
Jon	Stephens	4	1411 Lillydale Drive
Tammy	Sanders	79	1551 Rampur Lane

Display the total amount rung up by each staff member in August of 2005.

```
select staff_id, SUM(amount) as 'total_amount', left(payment_date,7) as month from payment
where date(payment_date) between date('2005-08-01') and date('2005-08-30')
group by staff_id, month
```

```
select staff.staff_id, first_name || ' ' || last_name as employee, sum(amount) as `total amount`
from sakila.staff
inner join sakila.payment
on staff.staff_id = payment.staff_id
where month(payment.payment_date) = 8 and year(payment.payment_date) = 2005
group by staff.staff_id;
```

staff_id	total_amount	month
2	12218.48	2005-08
1	11853.65	2005-08

List each film and the number of actors who are listed for that film.

```
select f.film_id, f.title, COUNT(a.actor_id) as 'total_actors' from film f
left join film_actor a
on f.film_id=a.film_id
group by film_id, title
```

film_id	title	total_actors
1	ACADEMY DINOSAUR	10
2	ACE GOLDFINGER	4
3	ADAPTATION HOLES	5
4	AFFAIR PREJUDICE	5
5	AFRICAN EGG	5
6	AGENT TRUMAN	7
7	AIRPLANE SIERRA	5
8	AIRPORT POLLOCK	4
9	ALABAMA DEVIL	9
10	ALADDIN CALENDAR	8
11	ALAMO VIDEOTAPE	4
12	ALASKA PHANTOM	7
13	ALI FOREVER	5
14	ALICE FANTASIA	4
15	ALIEN CENTER	6
16	ALLEY EVOLUTION	5
17	ALONE TRIP	8
18	ALTER VICTORY	4
19	AMADEUS HOLY	6
20	AMELIE HELLFIGHTERS	6
21	AMERICAN CIRCUS	5
22	AMISTAD MIDSUMMER	4
23	ANACONDA CONFESSIONS	5
24	ANALYZE HOOSIERS	5
25	ANGELS LIFE	9

Using the tables `payment` and `customer` and the JOIN command, list the total paid by each customer. List the customers alphabetically by last name.

```
select c.customer_id, c.last_name, SUM(p.amount) as 'total_payment' from customer c
join payment p
on c.customer_id=p.customer_id
group by c.customer_id, c.last_name
order by last_name ASC
```

customer_id	last_name	total_payment
505	ABNEY	97.79
504	ADAM	133.72
36	ADAMS	92.73
96	ALEXANDER	105.73
470	ALLARD	160.68
27	ALLEN	126.69
220	ALVAREZ	114.73
11	ANDERSON	106.76
326	ANDREW	96.75
183	ANDREWS	76.77
449	AQUINO	99.80
368	ARCE	157.65
560	ARCHULETA	132.70
188	ARMSTRONG	92.75
170	ARNOLD	119.74
591	ARSENAULT	134.73
345	ARTIS	106.77
530	ASHCRAFT	76.77
540	ASHER	112.76
196	AUSTIN	151.65
60	BAILEY	98.75
37	BAKER	95.77
383	BALES	103.73
559	BANDA	110.72
215	BANKS	91.74

Lab | SQL Joins on multiple tables

Instructions

→ Write a query to display for each store its store ID, city, and country.

```
select s.store_id, c.city, q.country from store s
join address a
on s.address_id=a.address_id
join city c
on a.city_id=c.city_id
join country q
on q.country_id=c.country_id
```

store_id	city	country
1	Lethbridge	Canada
2	Woodridge	Australia

→ Write a query to display how much business, in dollars, each store brought in.

```
select s.store_id, SUM(p.amount) as 'total_sales' from staff s
join payment p
on s.staff_id=p.staff_id
group by s.staff_id, s.store_id
```

store_id	total_sales
1	33489.47
2	33927.04

→ What is the average running time of films by category?

```
select fc.category_id, c.name, AVG(f.length) as 'AVG lenght' from film f
join film_category fc
on f.film_id=fc.film_id
join category c
on fc.category_id=c.category_id
group by fc.category_id, c.name
```

category_id	name	AVG lenght
1	Action	111.6094
2	Animation	111.0152
3	Children	109.8000
4	Classics	111.6667
5	Comedy	115.8276
6	Documentary	108.7500
7	Drama	120.8387
8	Family	114.7826
9	Foreign	121.6986
10	Games	127.8361
11	Horror	112.4821
12	Music	113.6471
13	New	111.1270
14	Sci-Fi	108.1967
15	Sports	128.2027
16	Travel	113.3158

→ **Which film categories are longest?**

```
select fc.category_id, c.name, AVG(f.length) as 'AVG length' from film f
join film_category fc
on f.film_id=fc.film_id
join category c
on fc.category_id=c.category_id
group by fc.category_id, c.name
order by AVG(f.length) DESC
```

→ **Display the most frequently rented movies in descending order.**

```
select f.title, COUNT(r.rental_id) as 'times_rented' from rental r
join inventory i
on r.inventory_id=i.inventory_id
join film f
on i.film_id=f.film_id
group by f.title
order by times_rented DESC
```

title	times_rented
title – VARCHAR(512) D	34
ROCKETEER MOTHER	33
FORWARD TEMPLE	32
GRIT CLOCKWORK	32
JUGGLER HARDLY	32
RIDGEMONT SUBMARINE	32
SCALAWAG DUCK	32
APACHE DIVINE	31
GOODFELLAS SALUTE	31
HOBBIT ALIEN	31
NETWORK PEAK	31
ROBBERS JOON	31
RUSH GOODFELLAS	31
TIMBERLAND SKY	31
WIFE TURN	31
ZORRO ARK	31
BUTTERFLY CHOCOLAT	30
CAT CONEHEADS	30
DOGMA FAMILY	30
ENGLISH BULWORTH	30
FROST HEAD	30
GRAFFITI LOVE	30
HARRY IDAHO	30
IDOLS SNATCHERS	30
MARRIED GO	30

→ List the top five genres in gross revenue in descending order.

```
select c.name, 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_category fc
on i.film_id=fc.film_id
join category c
on fc.category_id=c.category_id
group by c.name
order by total_sales DESC
limit 5
```

Sports	5314.21
Sci-Fi	4756.98
Animation	4656.30
Drama	4587.39
Comedy	4383.58

→ Is "Academy Dinosaur" available for rent from Store 1?

```
select f.title, f.film_id, i.store_id from film f
join inventory i
on f.film_id=i.film_id
where title= 'Academy DINOSAUR' and i.store_id=1
```

```
select f.title, COUNT(i.store_id) as 'available copies in store 1' from film f
join inventory i
on f.film_id=i.film_id
where title= 'Academy DINOSAUR' and i.store_id=1
group by f.title, f.film_id
```

title	available copies in store 1
ACADEMY DINOSAUR	4