

Mini Project – SQL

Using the dvdrental tables, answer the following questions with a SQL query. To get full credit, please past your SQL Code and a screenshot of it completing.

1. Write a select statement to return all columns and rows from the customer table.

Data Output	Explain	Messages	Notifications								
	customer_id [PK] integer	store_id smallint	first_name character varying (45)	last_name character varying (45)	email character varying (50)	address_id smallint	activebool boolean	create_date date	last_update timestamp without time zone	active integer	
1	524	1	Jared	Ely	jared.ely@sakilacustomer.org	530	true	2006-02-14	2013-05-26 14:49:45.738	1	
2	1	1	Mary	Smith	mary.smith@sakilacustomer.org	5	true	2006-02-14	2013-05-26 14:49:45.738	1	
3	2	1	Patricia	Johnson	patricia.johnson@sakilacustomer.org	6	true	2006-02-14	2013-05-26 14:49:45.738	1	
4	3	1	Linda	Williams	linda.williams@sakilacustomer.org	7	true	2006-02-14	2013-05-26 14:49:45.738	1	
5	4	2	Barbara	Jones	barbara.jones@sakilacustomer.org	8	true	2006-02-14	2013-05-26 14:49:45.738	1	
6	5	1	Elizabeth	Brown	elizabeth.brown@sakilacustomer.org	9	true	2006-02-14	2013-05-26 14:49:45.738	1	
7	6	2	Jennifer	Davis	jennifer.davis@sakilacustomer.org	10	true	2006-02-14	2013-05-26 14:49:45.738	1	
8	7	1	Maria	Miller	maria.miller@sakilacustomer.org	11	true	2006-02-14	2013-05-26 14:49:45.738	1	
9	8	2	Susan	Wilson	susan.wilson@sakilacustomer.org	12	true	2006-02-14	2013-05-26 14:49:45.738	1	
10	9	2	Margaret	Moore	margaret.moore@sakilacustomer.org	13	true	2006-02-14	2013-05-26 14:49:45.738	1	
11	10	1	Dorothy	Taylor	dorothy.taylor@sakilacustomer.org	14	true	2006-02-14	2013-05-26 14:49:45.738	1	
12	11	2	Lisa	Anderson	lisa.anderson@sakilacustomer.org	15	true	2006-02-14	2013-05-26 14:49:45.738	1	
13	12	1	Nancy	Thomas	nancy.thomas@sakilacustomer.org	16	true	2006-02-14	2013-05-26 14:49:45.738	1	
14	13	2	Karen	Jackson	karen.jackson@sakilacustomer.org	17	true	2006-02-14	2013-05-26 14:49:45.738	1	
15	14	2	Betty	White	betty.white@sakilacustomer.org	18	true	2006-02-14	2013-05-26 14:49:45.738	1	
16	15	1	Helen	Harris	helen.harris@sakilacustomer.org	19	true	2006-02-14	2013-05-26 14:49:45.738	1	

Code:

```
SELECT * from customer
```

2. Write a query to return unique rows from the release_year column in the film table

Code:

```
SELECT DISTINCT release_year  
FROM film
```

Data Output	Explain	Messages	Notifications		
	release_year integer				
1	2006				

3. We're trying to find a customer located at a certain address '259 Ipoh Drive' – can you find their phone number?

Code:

```
SELECT phone FROM address  
WHERE address = '259 Ipoh Drive'
```

Data Output	Explain	Message
<div> <div>phone</div> <div>character varying (20)</div> <div>🔒</div> </div>		
1	419009857119	

4. Write a query from the payment table where the amount is either 4.99 or 1.99.

Code:

```
SELECT * FROM payment
```

```
WHERE amount
```

```
IN(4.99,1.99)
```

Data Output		Explain	Messages	Notifications		
	payment_id [PK] integer	customer_id smallint	staff_id smallint	rental_id integer	amount numeric (5,2)	payment_date timestamp without time zone
1	17504	341	1	1778	1.99	2007-02-16 17:23:14.996577
2	17512	343	2	1547	4.99	2007-02-16 00:10:50.996577
3	17520	344	2	1475	4.99	2007-02-15 19:36:27.996577
4	17523	345	1	1457	4.99	2007-02-15 18:34:15.996577
5	17525	345	2	2766	4.99	2007-02-19 16:13:41.996577
6	17531	347	1	3026	4.99	2007-02-20 10:16:26.996577
7	17549	352	1	1649	4.99	2007-02-16 07:48:59.996577
8	17550	352	1	1678	4.99	2007-02-16 09:36:54.996577
9	17551	352	1	1780	4.99	2007-02-16 17:40:11.996577
10	17552	352	2	3331	4.99	2007-02-21 08:06:19.996577
11	17557	354	1	2275	4.99	2007-02-18 04:59:55.996577

5. Display the total amount paid by all customers in the payment table.

Code:

```
SELECT SUM(amount) as total_amount FROM payment
```

Data Output	Explain	Messages
<div> <div>total_amount</div> <div>numeric</div> <div>🔒</div> </div>		
1	61312.04	

6. For each store, display the number of customers.

Code:

```
SELECT COUNT(customer_id) FROM customer
```

```
GROUP BY store_id
```

[Data Output](#) [Explain](#) [Messages](#)



	count bigint 	
1	326	
2	273	

7. Show the number of movies each actor acted in

Code:

```
SELECT actor_id, COUNT(film_id) FROM film_actor
GROUP BY actor_id
```

[Data Output](#) [Explain](#) [Messages](#) [Notifications](#)

	actor_id smallint 	count bigint 	
1	58	32	
2	8	20	
3	184	29	
4	116	24	
5	87	21	
6	71	18	
7	68	30	
8	51	25	
9	146	33	
10	80	28	
11	70	23	
12	52	26	
13	190	27	
14	162	25	
15	132	22	

8. Count the number of actors who's first_names don't start with an 'A'

Code:

```
SELECT COUNT(*) FROM actor
WHERE first_name NOT LIKE 'A%'
```

Data Output		Expl
	count bigint	
1	187	

9. Show the number of movies each actor acted in - the same question as question 7

10. Return the total amount spent by each customer. Only return those customers who spent more than \$200

Code:

```
SELECT customer_id, SUM(amount) as total_amount FROM payment
GROUP BY customer_id
HAVING SUM(amount) > 200
```

Data Output		Explain	Messages	Notifications
	customer_id smallint		total_amount numeric	
1	526		208.58	
2	148		211.55	

11. Return the top 10 customers by payment amount

Code:

```
SELECT customer_id, SUM(amount) as total_amount FROM payment
GROUP BY customer_id
ORDER BY total_amount DESC
LIMIT 10
```

	customer_id smallint	total_amount numeric
1	148	211.55
2	526	208.58
3	178	194.61
4	137	191.62
5	144	189.60
6	459	183.63
7	181	167.67
8	410	167.62
9	236	166.61
10	403	162.67

12. Return the name of the actor who was in the most movies

Code:





```
SELECT first_name, last_name FROM actor
WHERE actor_id IN (SELECT actor_id FROM (SELECT actor_id, COUNT(film_id) as
total_movies FROM film_actor
GROUP BY actor_id
ORDER BY total_movies DESC LIMIT 1) AS actor_id_table)
```

	first_name character varying (45)	last_name character varying (45)
1	Gina	Degeneres

13. Edit the SQL Query from 12 to include the name of the movies they acted in

Code:

```
SELECT actor.first_name, actor.last_name, film.title FROM film_actor
LEFT JOIN actor ON film_actor.actor_id = actor.actor_id
LEFT JOIN film on film_actor.film_id = film.film_id
WHERE actor.actor_id IN (SELECT actor_id FROM (SELECT actor_id, COUNT(film_id) as
total_movies FROM film_actor
GROUP BY actor_id
ORDER BY total_movies DESC LIMIT 1) AS actor_id_table)
```

	Data Output	Explain	Messages	Notifications
	 first_name character varying (45) 	last_name character varying (45) 	title character varying (255) 	
1	Gina	Degeneres	Bed Highball	
2	Gina	Degeneres	Calendar Gunfight	
3	Gina	Degeneres	Chamber Italian	
4	Gina	Degeneres	Chaplin License	
5	Gina	Degeneres	Chariots Conspiracy	
6	Gina	Degeneres	Clueless Bucket	
7	Gina	Degeneres	Coldblooded Darling	
8	Gina	Degeneres	Coneheads Smoochy	
9	Gina	Degeneres	Darkness War	
10	Gina	Degeneres	Deer Virginian	
11	Gina	Degeneres	Dogma Family	
12	Gina	Degeneres	Elephant Trojan	
13	Gina	Degeneres	Excitement Eve	
14	Gina	Degeneres	Frisco Forrest	

14. For the customer with the highest payment amount, return their name, payment amount, address, address 2, city name, and country

Code:

```
SELECT customer.first_name, customer.last_name, address.address, address.address2,
city.city, country.country, payment_table.payment_amount
FROM customer LEFT JOIN address ON customer.address_id = address.address_id
LEFT JOIN city ON city.city_id = address.city_id
LEFT JOIN country ON country.country_id = city.country_id
LEFT JOIN (SELECT customer_id, SUM(amount) AS payment_amount
FROM payment
GROUP BY customer_id) AS payment_table ON customer.customer_id =
payment_table.customer_id
```

Data Output									Explain	Messages	Notifications
	 first_name character varying (45)	 last_name character varying (45)	 address character varying (50)	 address2 character varying (50)	 city character varying (50)	 country character varying (50)	 payment_amount numeric				
1	Jared	Ely	1003 Qinhuangdao Street		Purwakarta	Indonesia		81.83			
2	Mary	Smith	1913 Hanoi Way		Sasebo	Japan		114.70			
3	Patricia	Johnson	1121 Loja Avenue		San Bernardino	United States		123.74			
4	Linda	Williams	692 Joliet Street		Athenai	Greece		130.76			
5	Barbara	Jones	1566 Inegl Manor		Myingyan	Myanmar		81.78			
6	Elizabeth	Brown	53 Idfu Parkway		Nantou	Taiwan		134.65			
7	Jennifer	Davis	1795 Santiago de Compostela Way		Laredo	United States		84.75			
8	Maria	Miller	900 Santiago de Compostela Parkway		Kragujevac	Yugoslavia		130.72			
9	Susan	Wilson	478 Joliet Way		Hamilton	New Zealand		85.77			
10	Margaret	Moore	613 Korolev Drive		Masqat	Oman		78.80			
11	Dorothy	Taylor	1531 Sal Drive		Esfahan	Iran		94.76			
12	Lisa	Anderson	1542 Tarlac Parkway		Sagamihara	Japan		99.77			
13	Nancy	Thomas	808 Bhopal Manor		Yamuna Nagar	India		93.74			
14	Karen	Jackson	270 Amroha Parkway		Osmaniye	Turkey		131.73			
15	Betty	White	770 Bydgoszcz Avenue		Citrus Heights	United States		96.77			
16	Helen	Harris	419 Iligan Lane		Bhopal	India		134.68			
17	Sandra	Martin	360 Toulouse Parkway		Southend-on-Sea	United Kingdom		109.75			