

TOPIC 15,16,17 Hands-On SQL

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

```
select concat(first_name,' ',last_name)as full_name,email,sum(amount) as total_amount_paid
from customer
inner join payment on payment.customer_id=customer.customer_id
group by 1,2
order by 3 desc
limit 10;
```

Query

Query History

```
1 select concat(first_name,' ',last_name)as full_name,email,sum(amount) as total_amount_paid
2 from customer
3 inner join payment on payment.customer_id=customer.customer_id
4 group by 1,2
5 order by 3 desc
6 limit 10;
```

Data Output

Messages

Notifications

	full_name text	email character varying (50)	total_amount_paid numeric
1	Eleanor Hunt	eleanor.hunt@sakilacustomer.org	211.55
2	Karl Seal	karl.seal@sakilacustomer.org	208.58
3	Marion Snyder	marion.snyder@sakilacustomer.org	194.61
4	Rhonda Kenn...	rhonda.kennedy@sakilacustomer....	191.62
5	Clara Shaw	clara.shaw@sakilacustomer.org	189.60
6	Tommy Collazo	tommy.collazo@sakilacustomer.org	183.63
7	Ana Bradley	ana.bradley@sakilacustomer.org	167.67
8	Curtis Irby	curtis.irby@sakilacustomer.org	167.62
9	Marcia Dean	marcia.dean@sakilacustomer.org	166.61
10	Mike Way	mike.way@sakilacustomer.org	162.67

2. Identify the bottom 10 customers and their emails

```
select concat(first_name,' ',last_name)as full_name,email,sum(amount) as total_amount_paid
from customer
inner join payment on payment.customer_id=customer.customer_id
group by 1,2
order by 3 asc
limit 10;
```

Query

Query History

```
1 select concat(first_name, ' ',last_name)as full_name,email,sum(amount) as total_amount_paid
2 from customer
3 inner join payment on payment.customer_id=customer.customer_id
4 group by 1,2
5 order by 3 asc
6 limit 10;
```

Data Output

Messages

Notifications

	full_name text	email character varying (50)	total_amount_paid numeric
1	Brian Wyman	brian.wyman@sakilacustomer.org	27.93
2	Leona Obrien	leona.obrien@sakilacustomer.org	32.90
3	Caroline Bowm...	caroline.bowman@sakilacustomer...	37.87
4	Anthony Schw...	anthony.schwab@sakilacustomer....	47.85
5	Tiffany Jordan	tiffany.jordan@sakilacustomer.org	49.88
6	Kirk Stclair	kirk.stclair@sakilacustomer.org	50.83
7	Bobbie Craig	bobbie.craig@sakilacustomer.org	52.81
8	Jo Fowler	jo.fowler@sakilacustomer.org	54.85
9	Penny Neal	penny.neal@sakilacustomer.org	56.84
10	Johnny Turpin	johnny.turpin@sakilacustomer.org	57.81

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

```
select category.name as genre,count(customer.customer_id) as total_demand,
sum(payment.amount) as total_sales 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 customer on rental.customer_id=customer.customer_id
inner join payment on rental.rental_id=payment.rental_id
group by 1
order by 2 desc
```

Query

Query History

```

1 select category.name as genre,count(customer.customer_id) as total_demand,
2 sum(payment.amount) as total_sales from category
3 inner join film_category on category.category_id=film_category.category_id
4 inner join film on film_category.film_id=film.film_id
5 inner join inventory on film.film_id=inventory.film_id
6 inner join rental on inventory.inventory_id=rental.inventory_id
7 inner join customer on rental.customer_id=customer.customer_id
8 inner join payment on rental.rental_id=payment.rental_id
9 group by 1
10 order by 2 desc

```

Data Output

Messages

Notifications

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	genre character varying (25) 🔒	total_demand bigint 🔒	total_sales numeric 🔒
1	Sports	1081	4892.19
2	Animation	1065	4245.31
3	Action	1013	3951.84
4	Sci-Fi	998	4336.01
5	Family	988	3830.15
6	Foreign	953	3934.47
7	Drama	953	4118.46
8	Documentary	937	3749.65
9	Games	884	3922.18
10	New	864	3966.38

Total rows: 16 of 16

Query complete 00:00:00.067

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

```
select case
    when rental_duration > date_part('day',return_date-rental_date) then 'early'
    when rental_duration = date_part('day',return_date-rental_date) then 'on time'
    else 'late'
end as status_return,
count(*) as total_no_of_films
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
```

Query	Query History
1	<code>select case</code>
2	<code>when rental_duration > date_part('day',return_date-rental_date) then 'early'</code>
3	<code>when rental_duration = date_part('day',return_date-rental_date) then 'on time'</code>
4	<code>else 'late'</code>
5	<code>end as status_return,</code>
6	<code>count(*) as total_no_of_films</code>
7	<code>from film</code>
8	<code>inner join inventory on film.film_id=inventory.film_id</code>
9	<code>inner join rental on inventory.inventory_id = rental.inventory_id</code>
10	<code>group by 1 order by 2 desc</code>

Data Output	Messages	Notifications
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	status_return text	total_no_of_films bigint
1	early	7738
2	late	6586
3	on time	1720

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

```
select country,count(customer_id)as 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 1
order by 2 desc
```

Query	Query History
1	<code>select country,count(customer_id)as customer</code>
2	<code>from country</code>
3	<code>inner join city on country.country_id=city.country_id</code>
4	<code>inner join address on city.city_id=address.city_id</code>
5	<code>inner join customer on address.address_id=customer.address_id</code>
6	<code>group by 1</code>
7	<code>order by 2 desc</code>

Data Output	Messages	Notifications
<div> <div>+</div> <div>≡</div> <div>▼</div> <div>📄</div> <div>🗑️</div> <div>📦</div> <div>⬇️</div> <div>📈</div> </div>		
	country character varying (50)	customer bigint
1	India	60
2	China	53
3	United States	36
4	Japan	31
5	Mexico	30
6	Brazil	28
7	Russian Federation	28
8	Philippines	20
9	Turkey	15
10	Indonesia	14
11	Argentina	13
12	Nigeria	13
13	South Africa	11
Total rows: 108 of 108 Query complete 00:00:00.090		

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

```
select name as movie_genre,avg(rental_rate) as avg_rental_rate
from category
join film_category
using(category_id)
join film
using(film_id)
group by 1
order by 2 descs
```

Query Query History

1 select name as movie_genre,avg(rental_rate) as avg_rental_rate

2 from category

3 join film_category

4 using(category_id)

5 join film

6 using(film_id)

Data Output Messages Notifications

	movie_genre character varying (25)	avg_rental_rate numeric
1	Games	3.2522950819672
2	Travel	3.2356140350877
3	Sci-Fi	3.2195081967213
4	Comedy	3.1624137931034
5	Sports	3.1251351351351
6	New	3.1169841269841
7	Foreign	3.0995890410958
8	Horror	3.0257142857142
9	Drama	3.0222580645161
10	Music	2.9507843137254
11	Children	2.8900000000000
12	Animation	2.8081818181818
13	Family	2.7581159420289
14	Classics	2.7443859649122
15	Documentary	2.6664705882352

Total rows: 16 of 16 Query complete 00:00:00.287