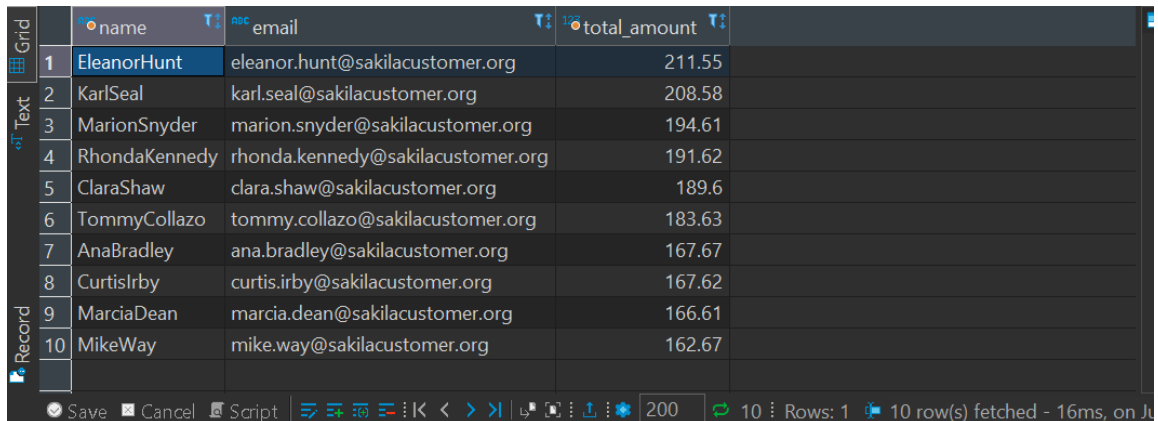## Topic 17 – Assignment
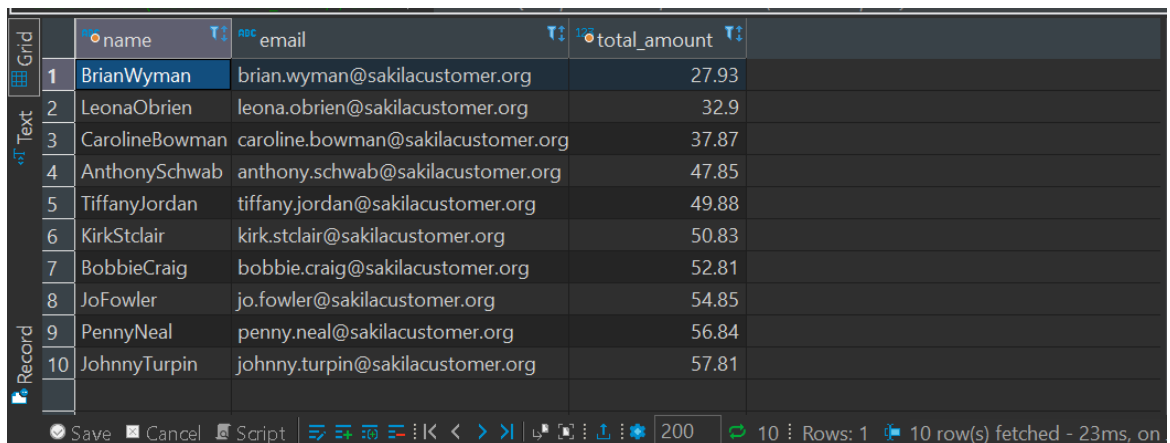
1. the top 10 customers and their emails

```sql
select concat(customer.first_name,'', customer.last_name) as name,
customer.email,  sum(amount) as total_amount
from customer
join payment using (customer_id)
group by 1, 2
order by 3 desc
limit 10;
```

	name	email	total_amount
1	EleanorHunt	eleanor.hunt@sakilacustomer.org	211.55
2	KarlSeal	karl.seal@sakilacustomer.org	208.58
3	MarionSnyder	marion.snyder@sakilacustomer.org	194.61
4	RhondaKennedy	rhonda.kennedy@sakilacustomer.org	191.62
5	ClaraShaw	clara.shaw@sakilacustomer.org	189.6
6	TommyCollazo	tommy.collazo@sakilacustomer.org	183.63
7	AnaBradley	ana.bradley@sakilacustomer.org	167.67
8	CurtisIrby	curtis.irby@sakilacustomer.org	167.62
9	MarciaDean	marcia.dean@sakilacustomer.org	166.61
10	MikeWay	mike.way@sakilacustomer.org	162.67

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2. the bottom 10 customers and their emails

```sql
select concat(customer.first_name,'', customer.last_name) as name,
customer.email,  sum(amount) as total_amount
from customer
join payment using (customer_id)
group by 1, 2
order by 3 asc
limit 10;
```

	name	email	total_amount
1	BrianWyman	brian.wyman@sakilacustomer.org	27.93
2	LeonaObrien	leona.obrien@sakilacustomer.org	32.9
3	CarolineBowman	caroline.bowman@sakilacustomer.org	37.87
4	AnthonySchwab	anthony.schwab@sakilacustomer.org	47.85
5	TiffanyJordan	tiffany.jordan@sakilacustomer.org	49.88
6	KirkStclair	kirk.stclair@sakilacustomer.org	50.83
7	BobbieCraig	bobbie.craig@sakilacustomer.org	52.81
8	JoFowler	jo.fowler@sakilacustomer.org	54.85
9	PennyNeal	penny.neal@sakilacustomer.org	56.84
10	JohnnyTurpin	johnny.turpin@sakilacustomer.org	57.81

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3. the most profitable movie genres (ratings)

```sql
select category.name as genre, count(customer.customer_id) as total_demand,
sum(payment.amount) as total_sales
from category
join film_category using(category_id)
join film using(film_id)
join inventory using(film_id)
join rental using(inventory_id)
join customer using(customer_id)
join payment using(rental_id)
group by genre
order by total_demand desc;
```

	genre	total_demand	total_sales
1	Sports	1,081	4,892.19
2	Animation	1,065	4,245.31
3	Action	1,013	3,951.84
4	Sci-Fi	998	4,336.01
5	Family	988	3,830.15
6	Foreign	953	3,934.47
7	Drama	953	4,118.46
8	Documentary	937	3,749.65
9	Games	884	3,922.18
10	New	864	3,966.38
11	Children	861	3,309.39
12	Classics	860	3,353.38
13	Comedy	851	4,002.48
14	Horror	773	3,401.27
15	Travel	765	3,227.36
16	Music	750	3,071.52

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

```sql
select case
        when rental_duration > date_part('day',return_date-rental_date) then
'return_early'
        when rental_duration = date_part('day',return_date-rental_date) then
'return_ontime'
        else 'return_late'
end as return_status, count(*) as total
from film
inner join inventory using (film_id)
inner join rental using (inventory_id)
group by 1
order by 2 desc;
```

	return_status	total
1	return_early	7,738
2	return_late	6,586
3	return_ontime	1,720

5. The customer base in the countries where we have a presence

```
select country, sum(customer.customer_id) as total_customer
from country
join city using(country_id)
join address using (city_id)
join customer using (address_id)
group by country
order by total_customer desc;
```

	country	total_customer
1	China	18,390
2	India	16,116
3	Mexico	11,251
4	United States	9,361
5	Japan	8,873
6	Russian Federation	7,746
7	Brazil	7,739
8	Philippines	6,242
9	Indonesia	5,275
10	Turkey	4,838
11	Argentina	4,219
12	Poland	3,298
13	Nigeria	3,135
14	United Kingdom	3,120

6. The most profitable country for the business

```
select country, count(customer_id) as total_demand, sum(amount) as total_sales
from country
join city using(country_id)
join address using(city_id)
join customer using(address_id)
join payment using (customer_id)
group by 1
order by 3 desc;
```

	country	total_demand	total_sales	
1	India	1,422	6,034.78	
2	China	1,297	5,251.03	
3	United States	869	3,685.31	
4	Japan	749	3,122.51	
5	Mexico	718	2,984.82	
6	Brazil	681	2,919.19	
7	Russian Federation	638	2,765.62	
8	Philippines	530	2,219.7	
9	Turkey	351	1,498.49	
10	Indonesia	331	1,352.69	
11	Nigeria	308	1,314.92	
12	Argentina	320	1,298.8	
13	Taiwan	290	1,155.1	
14	South Africa	254	1,069.46	

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7. The average rental rate per movie genre (rating)

```sql
select category.name, round(avg(film.rental_rate), 2) as avarage
from film
join film_category using (film_id)
join category using (category_id)
group by 1
order by 2 desc
```

	name	avarage
1	Games	3.25
2	Travel	3.24
3	Sci-Fi	3.22
4	Comedy	3.16
5	Sports	3.13
6	New	3.12
7	Foreign	3.1
8	Horror	3.03
9	Drama	3.02
10	Music	2.95
11	Children	2.89
12	Animation	2.81
13	Family	2.76
14	Classics	2.74
15	Documentary	2.67
16	Action	2.65