

## Challenges:

```
-- Challenges
/*
```

Question 1:

Level: Simple

Topic: DISTINCT

Task: Create a list of all the different (distinct) replacement costs of the films.

Question: What's the lowest replacement cost?

Answer: 9.99

```
*/
```

```
-- data
```

```
select * from film limit 100;
```

```
select * from film_category limit 100;
```

```
select * from category limit 100;
```

```
select * from actor;
```

```
select * from film_actor;
```

```
select * from film limit 100;
```

```
select min(REPLACEMENT_COST) as lowest_replacement_cost
from ( select distinct REPLACEMENT_COST from film )
as distinct_cost;
```

The screenshot shows a database query results interface. At the top, there are tabs for 'Results' (selected) and 'Chart'. On the right, there are icons for search, filters, download, refresh, and a settings icon. The main area displays a table with one row and one column. The column is labeled 'LOWEST\_REPLACEMENT\_COST' and the row contains the value '9.99'. To the right of the table, there is a 'Query Details' panel. It shows 'Query duration' as 63ms with a progress bar, 'Rows' as 1, and 'Query ID' as '01b3124b-3201-077f-0...'. There is also a small '...' icon next to 'Query Details'.

LOWEST_REPLACEMENT_COST
9.99

Query Details ...

Query duration 63ms

Rows 1

Query ID 01b3124b-3201-077f-0...

/\*

Question 2:

Level: Moderate

Topic: CASE + GROUP BY

Task: Write a query that gives an overview of how many films have replacements costs

in the following cost ranges

1. low: 9.99 - 19.99

2. medium: 20.00 - 24.99

3. high: 25.00 - 29.99

Question: How many films have a replacement cost in the "low" group?

Answer: 514

\*/

```
select * from film;
```

```
select case
```

```
when replacement_cost between 9.99 and 19.99 then 'low'
```

```
when replacement_cost between 20.00 and 24.99 then 'medium'
```

```
when replacement_cost between 25.00 and 29.99 then 'high'
```

```
end as cost_range,
```

```
count(*) as all_films
```

```
from film
```

```
where replacement_cost between 9.99 and 19.99 group by cost_range;
```

Results		Chart			
	COST_RANGE		ALL_FILMS	Query Details	
1	low		514	Query duration	47ms
				Rows	1
				Query ID	01b3124b-3201-0730-0...

/\*

Question 3:

Level: Moderate

Topic: JOIN

Task: Create a list of the film titles including their title, length, and category name

ordered descendingly by length. Filter the results to only the movies in the category

'Drama' or 'Sports'.

Question: In which category is the longest film and how long is it?

Answer: Sports and 184

\*/

```
select
    f.title,
    f.length,
    c.name AS category_name
from
    film f
join
    film_category fc ON f.film_id = fc.film_id
join
    category c ON fc.category_id = c.category_id
where
    c.name IN ('Drama', 'Sports')
order by
    f.length DESC limit 1;
```

Results		Chart			
	TITLE	LENGTH	CATEGORY_NAME	Query Details	
1	SMOOCHY CONTROL	184	Sports	Query duration	64ms
				Rows	1
				Query ID	01b3124c-3201-077e-0...

```

/*
Question 4:
Level: Moderate
Topic: JOIN & GROUP BY
Task: Create an overview of how many movies (titles) there are in each
category
(name).
Question: Which category (name) is the most common among the films?
Answer: Sports with 74 titles
*/

```

```

select
    c.name as category_name,
    count(f.title) as num_titles
from
    category c
join
    film_category fc on c.category_id = fc.category_id
join
    film f on fc.film_id = f.film_id
group by
    c.name
order by
    num_titles desc
limit 1;

```

Results		Chart			
	CATEGORY_NAME		NUM_TITLES	Query Details	
1	Sports		74	Query duration	76ms
				Rows	1
				Query ID	01b3124c-3201-0730-0...

```

/*
Question 5:
Level: Moderate
Topic: JOIN & GROUP BY
Task: Create an overview of the actors' first and last names and in how many
movies
they appear in.
Question: Which actor is part of most movies??
Answer: Susan Davis with 54 movies
*/

```

```

select
    a.first_name,
    a.last_name,
    count(fa.actor_id) as num_movies
from
    actor a
join
    film_actor fa on a.actor_id = fa.actor_id
group by
    a.first_name, a.last_name
order by
    num_movies desc
limit 1;

```

↶ Results

↷ Chart

	FIRST_NAME	LAST_NAME	NUM_MOVIES
1	SUSAN	DAVIS	54

Query Details

...

Query duration

32ms

Rows

1

Query ID

01b3124d-3201-0730-0...

/\*

Question 6:

Level: Moderate

Topic: LEFT JOIN & FILTERING

Task: Create an overview of the addresses that are not associated to any customer.

Question: How many addresses are that?

Answer: 4

\*/

-- metadata

select \* from city limit 100;

select \* from country limit 10;

select \* from customer limit 10;

select \* from payment limit 10;

select

count(a.address\_id) as num\_addresses

from

address a

left join

customer c on a.address\_id = c.address\_id

where

c.address\_id is null;

Results		Chart		Query Details	
NUM_ADDRESSES	4			Query duration	66ms
1				Rows	1
				Query ID	01b3124d-3201-077f-0...
				NUM_ADDRESSES	#
				100% filled	

/\*

Question 7:

Level: Moderate

Topic: JOIN & GROUP BY

Task: Create an overview of the cities and how much sales (sum of amount) have occurred there.

Question: Which city has the most sales?

Answer: Cape Coral with a total amount of 221.55

\*/

select

ci.city,

sum(p.amount) as total\_sales

from

city ci

join

address a on ci.city\_id = a.city\_id

join

customer c on a.address\_id = c.address\_id

join

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

group by

ci.city

order by

total\_sales desc limit 1;

Results		Chart			
	CITY	...	TOTAL_SALES	Query Details	
1	Cape Coral		221.55	Query duration	76ms
				Rows	1
				Query ID	01b3124e-3201-077f-0...
				CITY	A
				100% filled	

```

/*
Question 8:
Level: Moderate to difficult
Topic: JOIN & GROUP BY
Task: Create an overview of the revenue (sum of amount) grouped by a column in
the
format "country, city".
Question: Which country, city has the least sales?
Answer: United States, Tallahassee with a total amount of 50.85
*/

```

```

select
    concat(co.country, ', ', ci.city) as country_city,
    sum(p.amount) as total_sales
from
    country co
join
    city ci on co.country_id = ci.country_id
join
    address a on ci.city_id = a.city_id
join
    customer c on a.address_id = c.address_id
join
    payment p on c.customer_id = p.customer_id
group by
    country_city
order by
    total_sales limit 1;

```

Results		Chart			
	COUNTRY_CITY		TOTAL_SALES	Query Details	
1	United States, Tallahassee		50.85	Query duration	39ms
				Rows	1
				Query ID	01b3124e-3201-077f-0...
				COUNTRY_CITY	100% filled