

Using the Classic Models DB

1. Give me the employeeNumber, lastName, and firstName of the person that Andy Fixter reports to.

The screenshot shows the MySQL Workbench interface. The 'Query Editor' window contains the following SQL query:

```
1 SELECT e.employeeNumber, e.lastName, e.firstName
2 FROM employees AS e
3 WHERE e.employeeNumber = (
4     SELECT reportsTo
5     FROM employees
6     WHERE lastName = 'Fixter' AND firstName = 'Andy'
7 )
```

The 'Result Grid' window displays the results of the query:

employeeNumber	lastName	firstName
1088	Patterson	William

The 'Schemas' window on the left shows the database structure, including the 'employees' table. The 'Table: employees' window at the bottom left lists the columns and their data types:

Columns:	employeeNumber	lastName	firstName	extension	email	officeCode	reportsTo
	int	PI	varch	varch	varch	varch	int

The 'Output' window at the bottom right shows the execution of the query, indicating that 1 row(s) were returned.

Using the World DB

2. What country has the largest surface area

MySQL Workbench

The screenshot shows the MySQL Workbench interface. The top menu bar includes File, Edit, View, Query, Database, Server, Tools, Scripting, and Help. The left sidebar contains a Navigator pane with a Schemas list (classicmodels, sakila, sys, world) and a Filter objects search bar. The main query editor displays the following SQL query:

```
1 • SELECT name AS country_name
2 FROM world.country
3 ORDER BY surfacearea DESC
4 LIMIT 1;
```

Below the query editor, the Result Grid tab is active, showing a single row of results:

country_name
Russian Federation

The bottom pane shows the Output tab with the Action Output section. It displays a message indicating the query was successful and returned 1 row(s):

#	Time	Action	Message
1	20:24:04	SELECT name AS country_name FROM world.country ORDER BY surface...	1 row(s) returned

The status bar at the bottom indicates "Query Completed".

3. Give me the city name and country name of every city whose COUNTRY has a surface area greater than 1000

MySQL Workbench

Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

- classicmodels
- sakila
- sys
- world

Query 1 x

```
1 • SELECT city.name AS city_name, country.name AS country_name
2 FROM world.city
3 JOIN world.country ON city.countrycode = country.code
4 WHERE country.surfacearea > 1000;
```

Limit to 1000 rows

Result Grid

city_name	country_name
Kabul	Afghanistan
Qandahar	Afghanistan
Herat	Afghanistan
Mazar-e-Sharif	Afghanistan
Luanda	Angola
Huambo	Angola
Lobito	Angola

Administration Schemas

Information

Schema: classicmodels

Object Info Session

Output

Action Output

#	Time	Action	Message
✓ 1	20:25:38	SELECT city.name AS city_name, country.name AS country_name FROM ...	1000 row(s) returned

Query Completed

4. Give me the city name and country name for every city whose population is greater than 100,000 and whose country's independence year is after 1950.

MySQL Workbench

Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator: Schemas

Filter objects

- classicmodels
- sakila
- sys
- world

Query 1 x

```
1 • SELECT city.name AS city_name, country.name AS country_name
2 FROM world.city
3 JOIN world.country ON city.countrycode = country.code
4 WHERE city.population > 100000 AND country.indepyear > 1950;
```

Result Grid

city_name	country_name
Luanda	Angola
Huambo	Angola
Lobito	Angola
Benguela	Angola
Namibe	Angola
Dubai	United Arab Emirates
Abu Dhabi	United Arab Emirates

Administration Schemas

Information

Schema: classicmodels

Object Info Session

Result 8 x

Read Only

Output

Action Output

#	Time	Action	Message
✓ 1	20:26:18	SELECT city.name AS city_name, country.name AS country_name FROM ...	705 row(s) returned

Query Completed

Using the Sakila DB

5. Find the total amount of money that each customer has paid. Give me the sum total and the customer_id

The screenshot shows the MySQL Workbench interface. The 'Query Editor' window contains the following SQL query:

```
1 SELECT customer_id, SUM(amount) AS total_amount_paid
2 FROM sakila.payment
3 GROUP BY customer_id;
```

The 'Result Grid' window displays the results of the query, showing 7 rows of data:

	customer_id	total_amount_paid
1	1	118.68
2	2	128.73
3	3	135.74
4	4	81.78
5	5	144.62
6	6	93.72
7	7	151.67

The 'Output' window shows the execution message:

```
1 20:27:15 SELECT customer_id, SUM(amount) AS total_amount_paid FROM sakila.p... 599 row(s) returned
```

The 'Navigator' window on the left shows the database structure, including the 'sakila' database and its tables.

6. Find me the customer (ID, first name, last name) of the customer who has paid the most in payments. **You must use a CTE as part of your solution to get full credit for this problem**

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' panel with a tree view containing 'classicmodels', 'sakila', 'sys', and 'world'. The main editor window shows a SQL query using a Common Table Expression (CTE) to find the customer with the highest total amount paid. The query is as follows:

```
1 WITH CustomerPayments AS (  
2   SELECT customer_id, SUM(amount) AS total_amount_paid  
3   FROM sakila.payment  
4   GROUP BY customer_id  
5 )  
6 SELECT customer_id, first_name, last_name  
7 FROM sakila.customer  
8 WHERE customer_id = (SELECT customer_id FROM CustomerPayments ORDER BY total_amount_paid DESC LIMIT 1);
```

Below the query editor, the 'Result Grid' is visible, showing the results of the query. The results are as follows:

customer_id	first_name	last_name
526	KARL	SEAL

The bottom of the interface shows the 'Output' panel with a message indicating that the query was completed successfully and returned 1 row(s).

7. I want to know if the cost to replace a film is influenced by the length of the film. So find the average replacement cost for each film.length. I.E. for film length = 46 average replacement cost is X, for film length = 47 average replacement cost is Y, and so on.

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

- classicmodels
- sakila
- sys
- world

Query: 1

Find

```
1 WITH FilmLengthReplacement AS (  
2     SELECT length, AVG(replacement_cost) AS avg_replacement_cost  
3     FROM sakila.film  
4     GROUP BY length  
5 )  
6 SELECT length, avg_replacement_cost  
7 FROM FilmLengthReplacement;
```

Result Grid

length	avg_replacement_cost
86	15.790000
48	17.899091
50	18.545556
117	20.990000
130	19.323333
169	15.656667
62	24.156667

Result 12

Output

Action Output

#	Time	Action	Message
1	20:29:51	WITH FilmLengthReplacement AS (SELECT length, AVG(replacement_cost) AS avg_replacement_cost F...	140 row(s) returned

Schema: classicmodels

Object Info Session

Query Completed

8. What is the film length group with the highest average replacement cost? **You must use a CTE as part of your solution to get full credit for this problem**

MySQL Workbench

Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

classicmodels
sakila
sys
world

Query 1 x

Find

Limit to 1000 rows

```
1 WITH FilmLengthReplacement AS (  
2   SELECT length, AVG(replacement_cost) AS avg_replacement_cost  
3   FROM sakila.film  
4   GROUP BY length  
5 )  
6 SELECT length, avg_replacement_cost  
7 FROM FilmLengthReplacement  
8 ORDER BY avg_replacement_cost DESC  
9 LIMIT 1;
```

Result Grid

length	avg_replacement_cost
177	27.323333

Administration Schemas

Information

Schema: classicmodels

Object Info Session

Query Completed

Result 13 x

Output

Action Output

#	Time	Action	Message
1	20:30:35	WITH FilmLengthReplacement AS (SELECT length, AVG(replacement_cost) AS avg_replacement_cost	1 row(s) returned