

Queries: World (Practice)

1. What query would you run to get all the countries with a Surface Area below 501 and a Population greater than 100,000? Include the country name, surface area, and population in your results.

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

```
1 USE world;
2
3 SELECT name, surface_area, population
4 FROM countries
5 WHERE surface_area < 501 AND population > 100000;
```

The Results tab displays the following data:

name	surface_area	population
Aruba	193.00	103000
Barbados	430.00	270000
Macao	18.00	473000
Maldives	298.00	286000
Malta	316.00	380200
Mayotte	373.00	149000
Saint Vincent and the Grenadines	388.00	114000

The left sidebar shows the Schemas tree with the 'world' database selected. The 'Columns' tab for the 'countries' table is active, showing columns like 'id', 'code', 'name', 'continent', 'region', 'surface_area', 'indep_year', 'population', etc. The 'Output' tab at the bottom shows a log of actions and their results, including the execution of the query and the number of rows returned.

2. What query would you run to get countries with only a Constitutional Monarchy with a capital greater than 200 and a life expectancy greater than 75 years? Include the country name, form of government, and capital in your results.

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

```
1 • USE world;
2
3 • SELECT name, government_form, capital
4 FROM countries
5 WHERE government_form = 'Constitutional Monarchy'
6 AND capital > 200
7 AND life_expectancy > 75;
```

The Results window displays the following data:

name	government_form	capital
Denmark	Constitutional Monarchy	3315
Spain	Constitutional Monarchy	653
United Kingdom	Constitutional Monarchy	456
Jamaica	Constitutional Monarchy	1530
Jordan	Constitutional Monarchy	1786
Japan	Constitutional Monarchy	1532
Liechtenstein	Constitutional Monarchy	2446
Luxembourg	Constitutional Monarchy	2452
Monaco	Constitutional Monarchy	2695
Norway	Constitutional Monarchy	2807
New Zealand	Constitutional Monarchy	3499
Sweden	Constitutional Monarchy	3048

The Object Info window shows details for the `country_code` column:

- Column: `country_code`
- Collation: `latin1_swedish_ci`
- Definition: `country_code char(3)`

The Output window shows the execution log:

#	Time	Action	Message	Duration / Fetch
8	21:38:03	SELECT countries.name, languages.language F...	12 row(s) returned	0.000 sec / 0.000 sec
9	21:38:24	SELECT c.name, l.language FROM countries A...	12 row(s) returned	0.000 sec / 0.000 sec
10	21:47:03	SELECT name, surface_area, population FROM...	7 row(s) returned	0.000 sec / 0.000 sec
11	21:53:33	SELECT name, government_form, capital FRO...	10 row(s) returned	0.000 sec / 0.000 sec
12	21:54:04	SELECT name, government_form, capital FRO...	20 row(s) returned	0.016 sec / 0.000 sec
13	21:57:01	SELECT name, government_form, capital FRO...	12 row(s) returned	0.000 sec / 0.000 sec

3. What query would you run to summarize the number of countries in each region? The query should display the name of the region and the number of countries. Also, the query should arrange the result by the number of countries in descending order.

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

```
1 • USE world;
2
3 • SELECT region, COUNT(name) as `n countries`
4 FROM countries
5 GROUP BY region
6 ORDER BY `n countries` DESC
7
```

The Results window displays the following data:

region	n countries
Caribbean	24
Eastern Africa	20
Middle East	18
Western Africa	17
Southern Europe	15
Southern and Central Asia	14
South America	14
Southeast Asia	11
Polynesia	10
Eastern Europe	10
Central Africa	9
Western Europe	9
Central America	8
Eastern Asia	8
Nordic Countries	7
Northern Africa	7
Micronesia	7
Antarctica	5
Australia and New Zealand	5
North America	5
Southern Africa	5
Melanesia	5
Baltic Countries	3
British Islands	2

The Output window shows the execution log:

#	Time	Action	Message	Duration / Fetch
19	22:04:04	SELECT region, name as N_count...	Error Code: 1055. Expression #2 of SELECT list is not in GRO...	0.000 sec
20	22:04:25	SELECT region, name FROM cou...	Error Code: 1055. Expression #2 of SELECT list is not in GRO...	0.000 sec
21	22:05:07	SELECT region, name FROM cou...	239 row(s) returned	0.000 sec / 0.000 sec
22	22:05:28	SELECT region, name FROM cou...	Error Code: 1055. Expression #2 of SELECT list is not in GRO...	0.000 sec
23	22:06:43	SELECT region, COUNT(name) F...	25 row(s) returned	0.000 sec / 0.000 sec
24	22:07:33	SELECT region, COUNT(name) as...	25 row(s) returned	0.000 sec / 0.000 sec

4. What query would you run to get all the countries that speak Slovene? Your query should return the name of the country, language, and language percentage. Your query should arrange the result by language percentage in descending order.

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

```
1 • USE world;
2
3 • SELECT countries.name as Country, languages.language as Lang, languages.percentage as Perc
4 FROM countries
5 JOIN languages
6 ON languages.country_code = countries.code
7 HAVING Lang = 'Slovene';
```

The Result Grid shows the following data:

Country	Lang	Perc
Slovenia	Slovene	87.9
Austria	Slovene	0.4
Italy	Slovene	0.2
Croatia	Slovene	0.0

The left sidebar shows the SCHEMAS tree with the 'world' database selected. The 'languages' table is highlighted. The bottom status bar shows the column definition for 'region':

Column: region
Collation: latin1_swedish_ci
Definition: region char(26)

The bottom right corner shows a Snipping Tool window with the text: "Screenshot copied to clipboard and saved. Select here to mark up and share the image."

5. What query would you run to display the total number of cities for each country? Your query should return the name of the country and the total number of cities. Your query should arrange the result by the number of cities in descending order.

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

```
1 • USE world;
2
3 • SELECT countries.name as Country, COUNT(cities.name) as `n cities`
4 FROM countries
5 JOIN cities
6 ON cities.country_code = countries.code
7 GROUP BY Country
8 ORDER BY `n cities` DESC;
9
```

The Result Grid displays the following data:

Country	n cities
China	363
India	341
United States	274
Brazil	250
Japan	248
Russian Federation	189
Mexico	173
Philippines	136
Germany	93
Indonesia	85
United Kingdom	81
South Korea	70
Iran	67
Nigeria	64
Turkey	62
Spain	59
Pakistan	59
Italy	58
Argentina	57
Ukraine	57
Canada	49
South Africa	44

The Output tab shows the execution log:

#	Time	Action	Message	Duration / Fetch
28	22:17:21	SELECT countries.name as Count...	0 row(s) returned	0.000 sec / 0.000 sec
29	22:17:24	SELECT countries.name as Count...	4 row(s) returned	0.000 sec / 0.000 sec
30	22:17:28	SELECT countries.name as Count...	60 row(s) returned	0.016 sec / 0.000 sec
31	22:17:47	SELECT countries.name as Count...	4 row(s) returned	0.000 sec / 0.000 sec
32	22:20:53	SELECT countries.name as Count...	Error Code: 1056. Can't group on 'n cities'	0.000 sec
33	22:23:08	SELECT countries.name as Count...	232 row(s) returned	0.000 sec / 0.000 sec

6. What query would you run to get all the cities in Mexico with a population of greater than 500,000? Your query should arrange the result by population in descending order.

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

```
1 • USE world;
2
3 • SELECT cities.name as City
4 FROM countries
5 JOIN cities
6 ON cities.country_code = countries.code
7 WHERE countries.name = 'Mexico'
8 AND cities.population > 500000
9 ORDER BY cities.population DESC;
```

The Result Grid shows the following cities:

City
Ciudad de México
Guadalajara
Ecatepec de Morelos
Puebla
Nezahualcóyotl
Juárez
Tijuana
León
Monterrey
Zapopan
Naucalpan de Juárez
Mexicali
Culiacán
Acapulco de Juárez
Tlalpantla de Baz
Mérida
Chihuahua
San Luis Potosí
Guadalupe
Toluca
Aguascalientes
Querétaro

The Action Output pane shows the following log:

#	Time	Action	Message	Duration / Fetch
31	22:17:47	SELECT countries.name as Count...	4 row(s) returned	0.000 sec / 0.000 sec
32	22:20:53	SELECT countries.name as Count...	Error Code: 1056. Can't group on 'n cities'	0.000 sec
33	22:23:08	SELECT countries.name as Count...	232 row(s) returned	0.000 sec / 0.000 sec
34	22:27:03	SELECT cities.name as City FRO...	Error Code: 1054. Unknown column 'cities.population' in 'wher...	0.000 sec
35	22:27:21	SELECT cities.name as City FRO...	27 row(s) returned	0.000 sec / 0.000 sec
36	22:28:15	SELECT cities.name as City FRO...	27 row(s) returned	0.016 sec / 0.000 sec

7. What query would you run to get all languages in each country with a percentage greater than 89%? Include the country name, language, and percentage. Your query should arrange the result by percentage in descending order.

MySQL Workbench

Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

sys

world

Tables

cities

Columns

id

name

country_code

district

population

country_id

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Foreign Keys

Triggers

countries

languages

Columns

id

country_code

language

is_official

percentage

country_id

Indexes

Foreign Keys

Triggers

Views

Stored Procedures

Functions

Administration Schemas

Information

Column: gnp

Definition:

gnp float(10,2)

SQL File 3*

Limit to 1000 rows

```

1 • USE world;
2
3 • SELECT countries.name as country, languages.language as lang, languages.percentage as perc
4 FROM countries
5 JOIN languages
6 ON languages.country_code = countries.code
7 HAVING perc > 89
8 ORDER BY perc DESC;
9

```

Result Grid

country	lang	perc
Bermuda	English	100.0
Faroe Islands	Faroese	100.0
Cape Verde	Crioulo	100.0
Cuba	Spanish	100.0
Saint Kitts and Nevis	Creole English	100.0
San Marino	Italian	100.0
Grenada	Creole English	100.0
El Salvador	Spanish	100.0
Rwanda	Rwanda	100.0
Dominica	Creole English	100.0
Western Sahara	Arabic	100.0
Maldives	Dhivehi	100.0
Haiti	Haiti Creole	100.0
South Korea	Korean	99.9
North Korea	Korean	99.9
Yemen	Arabic	99.6
Bosnia and Herzego...	Serbo-Croatian	99.2
Saint Vincent and t...	Creole English	99.1
Japan	Japanese	99.1
Portugal	Portuguese	99.0
Colombia	Spanish	99.0
Madagascar	Malagasy	98.9

Result 27 x

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
48	22:37:34	SELECT countries.name as countr...	81 row(s) returned	0.000 sec / 0.000 sec
49	22:39:01	SELECT countries.name as countr...	81 row(s) returned	0.000 sec / 0.000 sec
50	22:39:26	SELECT countries.name as countr...	Error Code: 1064. You have an error in your SQL syntax; chec...	0.000 sec
51	22:39:48	SELECT countries.name as countr...	Error Code: 1064. You have an error in your SQL syntax; chec...	0.000 sec
52	22:39:49	SELECT countries.name as countr...	Error Code: 1064. You have an error in your SQL syntax; chec...	0.000 sec
53	22:40:24	SELECT countries.name as countr...	81 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

8. What query would you run to get all the cities of Argentina inside the Buenos Aires district and have a population greater than 500,000? The query should return the Country Name, City Name, District, and Population.

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree with 'world' selected. The main editor shows a SQL query in 'SQL File 3*' that filters for cities in Argentina with a population over 500,000 in the Buenos Aires district. The 'Result Grid' shows 6 rows of data. The bottom 'Output' pane shows the execution log with successful queries and error messages.

SQL Query:

```
1 • USE world;
2
3 • SELECT countries.name as country, cities.name as city,
4       cities.district as district, cities.population as population
5 FROM countries
6 JOIN cities
7 ON cities.country_code = countries.code
8 HAVING population > 500000 AND district = 'Buenos Aires';
9
```

Result Grid:

country	city	district	population
Argentina	La Matanza	Buenos Aires	1266461
Argentina	Lomas de Zamora	Buenos Aires	622013
Argentina	Quilmes	Buenos Aires	559249
Argentina	Almirante Brown	Buenos Aires	538918
Argentina	La Plata	Buenos Aires	521936
Argentina	Mar del Plata	Buenos Aires	512880

Column: gnp
Definition:
gnp float(10,2)

Output:

#	Time	Action	Message	Duration / Fetch
49	22:39:01	SELECT countries.name as countr...	81 row(s) returned	0.000 sec / 0.000 sec
50	22:39:26	SELECT countries.name as countr...	Error Code: 1064. You have an error in your SQL syntax; chec...	0.000 sec
51	22:39:48	SELECT countries.name as countr...	Error Code: 1064. You have an error in your SQL syntax; chec...	0.000 sec
52	22:39:49	SELECT countries.name as countr...	Error Code: 1064. You have an error in your SQL syntax; chec...	0.000 sec
53	22:40:24	SELECT countries.name as countr...	81 row(s) returned	0.000 sec / 0.000 sec
54	22:44:54	SELECT countries.name as countr...	6 row(s) returned	0.000 sec / 0.000 sec