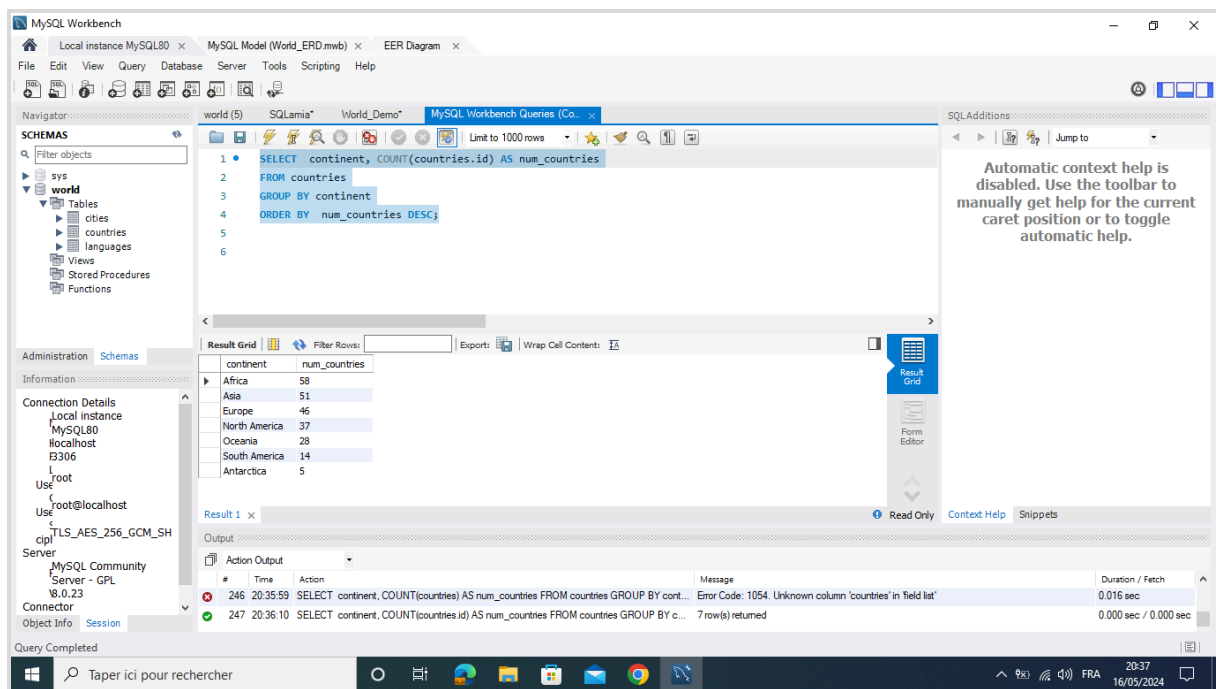


Solutions MySQL Workbench Queries (Core)

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

```
SELECT continent, COUNT(countries.id) AS num_countries
FROM countries
GROUP BY continent
ORDER BY num_countries DESC;
```



2. What query would you run to get all the countries that speak Greek? 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.

```
SELECT countries.name, percentage
```

```
FROM countries
```

```
JOIN languages
```

ON countries.id = languages.country_id

WHERE languages.language = 'Greek';

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

```
2 FROM countries
3 GROUP BY continent
4 ORDER BY num_countries DESC;
5 • SELECT countries.name, percentage
6 FROM countries
7 JOIN languages
8 ON countries.id = languages.country_id
9 WHERE languages.language = 'Greek';
10
```

The Results tab shows the following data:

name	percentage
Albania	1.8
Australia	1.6
Cyprus	74.1
Germany	0.4
Greece	98.5

The Output tab shows the following messages:

#	Time	Action	Message	Duration / Fetch
250	20:48:01	SELECT continent, COUNT(countries.id) AS num_countries FROM countries GROUP BY c...	7 row(s) returned	0.000 sec / 0.000 sec
251	20:48:01	SELECT countries.name, percentage FROM countries JOIN languages ON countries.id = lan...	5 row(s) returned	0.000 sec / 0.000 sec

3. What query would you run to get all the countries with Surface Area less than 1000 OR a population greater than 100,000,000? Include the country name, surface area, and population in your results.

SELECT continent, countries.surface_area, countries.population

FROM countries

WHERE countries.surface_area < 501 AND countries.population > 100000;

4. What query would you run to get countries with a government form of “Federal Republic” with a life expectancy of less than 75 years? Include the country name, form of government, and life expectancy in the results.

**SELECT countries.name, countries.government_form,
countries.life_expectancy**

FROM countries

**WHERE countries.life_expectancy < 75 AND countries.government_form=
"Federal Republic" ;**

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

```
11 FROM countries
12 HAVING countries.population>1000000000 AND countries.surface_area<1000;
13 • SELECT continent, countries.surface_area, countries.population
14 FROM countries
15 WHERE countries.surface_area < 501 AND countries.population > 100000;
16 • SELECT countries.name, countries.government_form, countries.life_expectancy
17 FROM countries
18 WHERE countries.life_expectancy < 75 AND countries.government_form= "Federal Republic" ;
```

The Results grid shows the output of the query:

name	government_form	life_expectancy
Azerbaijan	Federal Republic	62.9
Bosnia and Herzegovina	Federal Republic	71.5
Brazil	Federal Republic	62.9
Micronesia, Federated States of	Federal Republic	68.6
India	Federal Republic	62.5
Madagascar	Federal Republic	55.0
Mexico	Federal Republic	71.5
Nigeria	Federal Republic	51.6
Russian Federation	Federal Republic	67.2

The Output tab shows the execution details:

#	Time	Action	Message	Duration / Fetch
297	21:16:59	SELECT continent, countries.surface_area, countries.population FROM countries WHERE c...	7 row(s) returned	0.000 sec / 0.000 sec
298	21:17:00	SELECT countries.name, countries.government_form, countries.life_expectancy FROM coun...	11 row(s) returned	0.000 sec / 0.000 sec

5. What query would you run to get all the cities of Mexico inside the Veracruz district and have a population greater than 100,000? The query should return the Country Name, City Name, District, and Population.

```
SELECT countries.name, cities.name, cities.district, cities.population  
FROM countries
```

```
JOIN cities ON countries.id = cities.country_id
```

```
WHERE cities.name = 'Mexico' AND cities.district = 'Veracruz' AND  
cities.population > 100.000 ;
```

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

```
30 JOIN languages ON countries.id = languages.country_id  
31 WHERE countries.name = 'Monaco' AND languages.percentage > 10;  
32 SELECT countries.name, cities.name, cities.district, cities.population  
33 FROM countries  
34 JOIN cities ON countries.id = cities.country_id  
35 WHERE countries.name = 'Mexico' AND cities.district = 'Veracruz' AND cities.population > 100000 ;  
36  
37  
38
```

The Results tab shows the output of the query, which is a table with 4 columns: name, name, district, and population. The data is as follows:

name	name	district	population
Mexico	Veracruz	Veracruz	457119
Mexico	Xalapa	Veracruz	390058
Mexico	Coatzacoalcos	Veracruz	267037
Mexico	Córdoba	Veracruz	176952
Mexico	Papantla	Veracruz	170123
Mexico	Minatitlán	Veracruz	152963
Mexico	Pozos Rie de Hidalgo	Veracruz	152678
Mexico	San Andrés Tuxtla	Veracruz	142251
Mexico	Tehuacan	Veracruz	126475

The bottom of the screenshot shows the Output tab with the following message:

```
415 22:12:58 SELECT continent, COUNT(countries.id) AS num_countries FROM countries GROUP BY conti... 7 row(s) returned  
416 22:12:58 SELECT countries.name, percentage FROM countries JOIN languages ON countries.id = langu... 5 row(s) returned
```

6. What query would you run to get all the ten cities in Brazil with the smallest population? Your query should include the country name, city name, and population. Arrange the result by population in ascending order. Limit the result to the 10 cities with the smallest population.

```
SELECT countries.name, cities.name, cities.population
```

```
FROM countries
```

```
JOIN cities ON countries.id = cities.country_id
```

```
WHERE countries.name = 'Brazil'
```

```
LIMIT 10;
```

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

```
20 FROM countries
21 JOIN cities ON countries.id = cities.country_id
22 WHERE cities.name = 'Mexico' AND cities.district = 'Veracruz' AND cities.population > 100.000 ;
23 SELECT countries.name, cities.name, cities.population
24 FROM countries
25 JOIN cities ON countries.id = cities.country_id
26 WHERE countries.name = 'Brazil'
27 LIMIT 10;
```

The Results tab displays the following data:

	name	name	population
▶	Brazil	São Paulo	9968485
	Brazil	Rio de Janeiro	5598953
	Brazil	Salvador	2302832
	Brazil	Belo Horizonte	2139125
	Brazil	Fortaleza	2097757
	Brazil	Brasília	1969868
	Brazil	Curitiba	1584232
	Brazil	Recife	1378087
	Brazil	Porto Alegre	1314032

The Output tab shows the following action output:

#	Time	Action	Message	Duration / Fetch
389	21:52:01	SELECT countries.name, cities.name, cities.district, cities.population FROM countries JOIN cities ON countries.name = 'Mexico' AND cities.district = 'Veracruz' AND cities.population > 100.000 ;	0 row(s) returned	0.000 sec / 0.000 sec
390	21:52:01	SELECT countries.name, cities.name, cities.population FROM countries JOIN cities ON countries.name = 'Brazil' LIMIT 10;	10 row(s) returned	0.000 sec / 0.000 sec

7. What query would you run to get all languages spoken greater than 10% in Monaco? Display the country name, language, and percentage.

SELECT countries.name, languages.language, languages.percentage

FROM countries

JOIN languages ON countries.id = languages.country_id

WHERE countries.name = 'Monaco' AND languages.percentage > 10;

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

```
24 FROM countries
25 JOIN cities ON countries.id = cities.country_id
26 WHERE countries.name = 'Brazil'
27 LIMIT 10;
28 • SELECT countries.name, languages.language, languages.percentage
29 FROM countries
30 JOIN languages ON countries.id = languages.country_id
31 WHERE countries.name = 'Monaco' AND languages.percentage > 10;
32
```

The Results Grid shows the following data:

name	language	percentage
Monaco	French	41.9
Monaco	Italian	16.1
Monaco	Monegasque	16.1

The bottom status bar indicates: Query Completed, 437 22:13:44, SELECT countries.name, cities.name, cities.population FROM countries JOIN cities ON countries.name = cities.country_id, 10 row(s) returned, Duration / Fetch 0.000 sec / 0.000 sec.