World Database

EER Diagram

countries
- 🔑 id INT
- ◇ code CHAR(3)
- ◇ name CHAR(52)
- ◇ continent ENUM(...)
- ◇ region CHAR(26)
- ◇ surface_area FLOAT(10,2)
- ◇ indep_year SMALLINT
- ◇ population INT
- ◇ life_expectancy FLOAT(3,1)
- ◇ gnp FLOAT(10,2)
- ◇ gnp_old FLOAT(10,2)
- ◇ local_name CHAR(45)
- ◇ government_form CHAR(45)
- ◇ head_of_state CHAR(60)
- ◇ capital INT
- ◇ code2 CHAR(2)

Indexes

languages
- 🔑 id INT
- ◇ country_code CHAR(3)
- ◇ language CHAR(30)
- ◇ is_official ENUM('T', 'F')
- ◇ percentage FLOAT(4,1)
- ◆ country_id INT

Indexes

cities
- 🔑 id INT
- ◇ name CHAR(35)
- ◇ country_code CHAR(3)
- ◇ district CHAR(20)
- ◇ population INT
- ◆ country_id INT

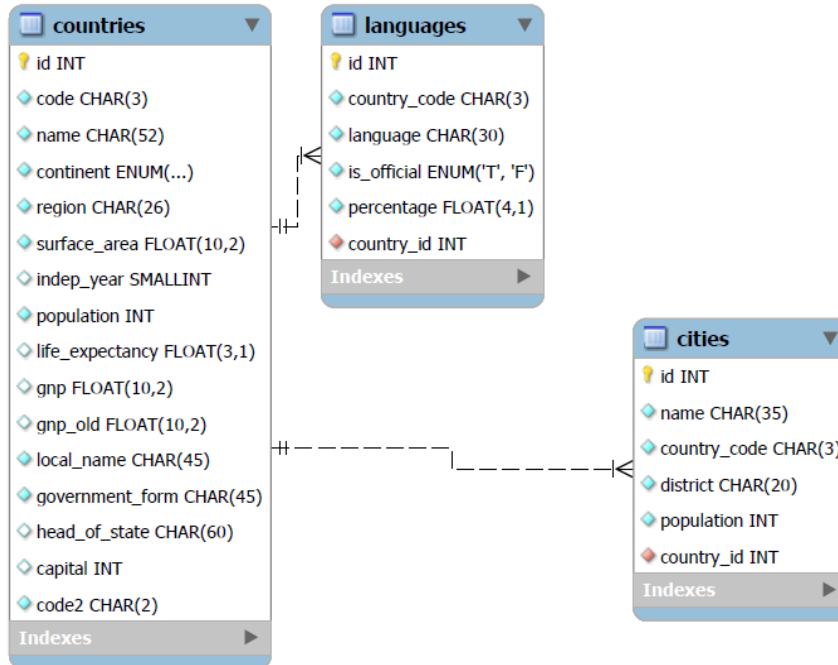Indexes

MySQL Queries:

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.

```
1 •    SELECT c.continent, COUNT(c.name) as num_countries
2      FROM countries as c
3      GROUP BY c.continent
4      ORDER BY num_countries DESC;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Co

continent	num_countries
Africa	58
Asia	51
Europe	46
North America	37
Oceania	28
South America	14
Antarctica	5

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.

```sql
1 •   SELECT c.name, l.language, l.percentage
2     FROM countries as c
3     JOIN languages as l
4     ON c.id = l.country_id
5     WHERE l.language = 'Greek'
6     ORDER BY l.percentage DESC;
```

Result Grid | Filter Rows: | Export:

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

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.

```sql
1 •   SELECT c.name, c.surface_area, x.population
2     FROM countries as c
3     JOIN cities as x
4     ON c.id = x.country_id
5     WHERE c.surface_area < 1000 OR x.population > 100000000;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: ⊼A

name	surface_area	population
Aruba	193.00	29034
Anguilla	96.00	961
Anguilla	96.00	595
Andorra	468.00	21189
Netherlands Antilles	800.00	2345
American Samoa	199.00	5200
American Samoa	199.00	2323
Antigua and Barbuda	442.00	24000
Bahrain	694.00	148000
Bermuda	53.00	1800
Bermuda	53.00	1200
Barbados	430.00	6070
Cocos (Keeling) Isla...	14.00	503
Cocos (Keeling) Isla...	14.00	167
Cook Islands	236.00	11900
Christmas Island	135.00	700
Cayman Islands	264.00	19600
Dominica	751.00	16243
Micronesia, Federat...	702.00	22000
Micronesia, Federat...	702.00	8600
Gibraltar	6.00	27025
Grenada	344.00	4621

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.

```sql
1   SELECT c.name, c.government_form, c.life_expectancy
2   FROM countries as c
3   WHERE c.government_form = "Federal Republic" AND c.life_expectancy < 75;
```

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
Venezuela	Federal Republic	73.1
Yugoslavia	Federal Republic	72.4

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.

```sql
1   SELECT c.name, x.name, x.district, x.population
2   FROM countries as c
3   JOIN cities as x
4   ON c.id = x.country_id
5   WHERE c.name = 'Mexico' AND x.district = 'Veracruz' AND x.population > 100000;
```

name	name	district	population
Mexico	Veracruz	Veracruz	457119
Mexico	Xalapa	Veracruz	390058
Mexico	Coatzacoalcos	Veracruz	267037
Mexico	CÃ³rdoba	Veracruz	176952
Mexico	Papantla	Veracruz	170123
Mexico	MinatitlÃn	Veracruz	152983
Mexico	Poza Rica de Hidalgo	Veracruz	152678
Mexico	San AndrÃ©s Tuxtla	Veracruz	142251
Mexico	TÃºxpam	Veracruz	126475
Mexico	MartÃnez de la Torre	Veracruz	118815
Mexico	Orizaba	Veracruz	118488
Mexico	Temapache	Veracruz	102824

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.

```sql
1  SELECT c.name, x.name, x.population
2  FROM countries as c
3  JOIN cities as x
4  ON c.id = x.country_id
5  WHERE c.name = 'Brazil'
6  ORDER BY x.population
7  LIMIT 10;
```

Result Grid | Filter Rows: | Export:

name	name	population
Brazil	Ãguas Lindas de GoiÃis	89200
Brazil	PoÃi	89236
Brazil	Bento GonÃ§alves	89254
Brazil	Barra do PiraÃ-	89388
Brazil	PalhoÃ§a	89465
Brazil	CorumbÃi	90111
Brazil	Ituiutaba	90507
Brazil	Patos	90519
Brazil	Campo Largo	91203
Brazil	Votorantim	91777

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

```sql
1  SELECT c.name, l.language, l.percentage
2  FROM countries as c
3  JOIN languages as l
4  ON c.id = l.country_id
5  WHERE c.name = 'Monaco' AND l.percentage > 10
6  ORDER BY l.percentage;
7
```

Result Grid | Filter Rows: | Export: | Wrap

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