Lab Sheet 7
Practice with a fresh database

The database for today's lab has the following schema. The DB contents can be downloaded from Canvas; its name is `world`.

```
cities(id, name, country_code, district, population)
countries (code, name, continent, region, surface_area, indep_year,
  population, life_expectancy, gnp, gnp_old, local_name,  government_form,
  head_of_state, capital, code2)
country_languages(country_code, language, is_official, percentage)
```

[1]

1. List the twenty most populous cities in the world. (MySQL's LIMIT feature may prove handy here.)

2. List the countries that have at least five cities with a population of one million or more. List the country's name and the number of such cities.

3. List all the countries which achieve independence since India did.

4. List those language that are spoken by a significant proportion of the population of at least six countries. (We take 25% or more to be "significant".)

5. List the names of all countries that are both among the twenty poorest (lowest GNP per capita) and among the twenty with the lowest life expectancy. Note: take care to filter out countries whose life expectancy, population or GNP is unknown.

6. List all the countries that comprise a "significant" portion (at least 10%) of the total surface area of the continent to which they belong. As a warm up, first do this for a specific continent (say South America). You may find the notion of a correlated subquery useful here (look it up).

7. Calculate what proportion of the world's total GNP is belongs to the 20 richest (by GNP) countries.

8. Determine the head of state with the greatest amount of territory (by surface area).

9. List for each continent, the name of the country with the greatest and smallest population.

10. For each country in Europe list the percentage of its population that live in its most populous city.

11. List in descending order of population all countries in which none of the following languages are spoken by a significant proportion of the population: English, Spanish, Chinese, Arabic or Hindi

12. List all the languages that are spoken by a majority of people in countries in at least two continents.

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[1]This database is adapted from one bundled with the standard MySQL installation package.