

Assignment Part 1

Database Design

Implement below on workbench

- Design a database for INFO 6210 with the tables we discussed in-class
- Agenda is to create a schema that captures details of all the students, teams they belong to and their project idea - Identify the columns for each table
- Clearly define data types, primary key, foreign key (optional: or/and any other key references)
- Make sure to create attributes that include the use of not null, default (and/or any other conditions that restrict what values can go into that specific column)
- define the relationships between these tables - use crow notation, include cardinalities – Explain the reasoning behind your relationship definition
- Note that for this assignment, we only need the schema, no insert queries are required

Assignment Part 2

This assignment is on the world database that was downloaded in class

Vocabulary

- "*largest*" and "*smallest*" refer to size (surfaceArea).
- "*most populous*", "*least populous*" refer to population
and population > 0. (exclude unpopulated nations)
- "*richest*", "*poorest*" means *GNP per capita*
not total GNP,
and GNP > 0 (GNP = 0 means no data).
- "*most crowded*" refers to population/surfaceArea

Language Hints

- "*Fortran is an official language*" means its an official language of the country
- "*Pascal is spoken unofficially*" means it is spoken, but not an official language
- "*COBOL is spoken*" means COBOL is a language **and** percentage > 0

1. What is the World's Smallest surface area Nation?

How big is it?

2. What is the most populous Country in Africa?

- Show the SQL
- How big is it?

3. What are the Poorest Countries in Asia?

- must have GNP data (GNP > 0)
- List 3 poorest nations.
- What is the GNP per person?

NOTE: GNP is measured in \$1,000,000. So, Multiply your answer by 1,000,000 to get US\$.

4. In what countries is 'english' and 'hindi' spoken?

```
SELECT ...  
    FROM Country C  
    JOIN CountryLanguage L  
      ON C.code = L.countrycode  
WHERE ...
```

5. How many people speak English?

2 queries:

- how many in each country
- total for world

```
SELECT ...  
  FROM Country C  
  JOIN CountryLanguage L  
    ON C.code = L.countrycode  
WHERE ...
```