

# Project #1: Exploring Sample DBs

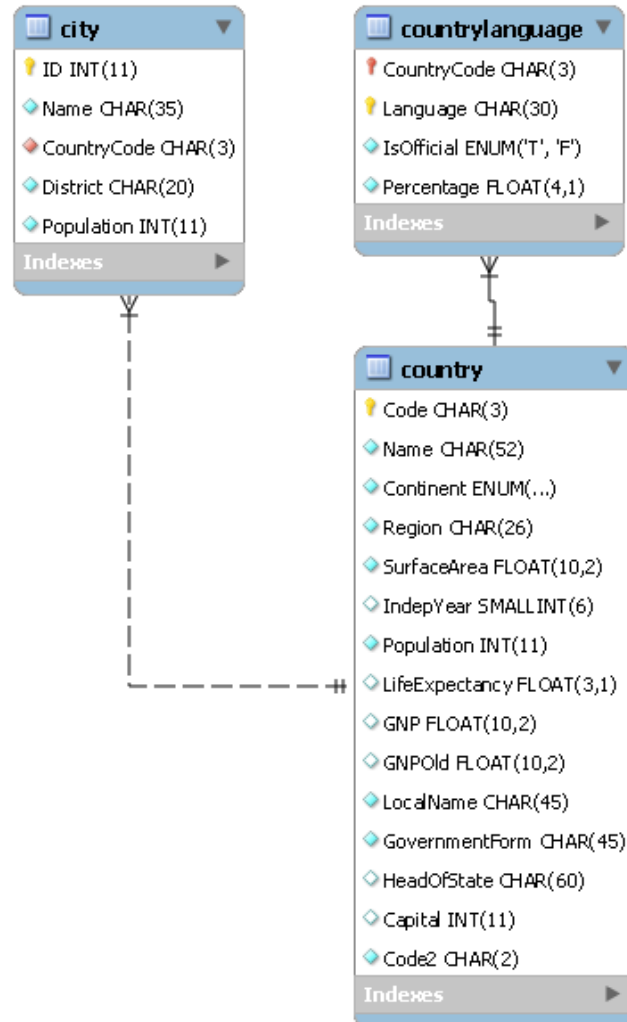
Questions: ½ point x 20 = 10 points total. Submit a text file or Word document with your answers.

## 1 MySQL World DB

### 1.1 From EER

You should be able to answer these questions from the EER alone:

1. What are the primary keys for each table? Are they single-column or composite keys?
2. What foreign keys are present in each table, if any?
3. What type of relationship exists between the City and Country tables (one to one, one to many, many to many)? What fields in *each* table map that relationship?
4. What type of relationship exists between the CountryLanguage and Country tables (one to one, one to many, many to many)? What fields in each table map that relationship?
5. What is the difference between a field marked with a gold (or light) key symbol and a field marked with a red (darker) key symbol?



### 1.2 From Exploration

Use MySQL and look at column definitions and/or data to answer these questions:

6. What are the valid enumerated values in the Country table's Continent column? List them. Are all continents represented there?
7. Give two examples of forms of government listed in the Country table's GovernmentForm column.
8. How many countries are represented in the Country table?
9. By looking at the first dozen Country records, what columns sometimes have null values in them?
10. In the Country table, what data type is specified for the LifeExpectancy column? How about the IndepYear column?

## 2 Textbook OM DB

### 2.1 From EER

11. How does column naming in this database differ from what you saw in the previous database? Does this make it easier or harder for you to understand the relationships between tables?
12. What are the primary keys for each table? Are they single-column or composite keys?
13. What foreign keys are present in each table, if any?
14. What type of relationship exists between the Orders and Customers tables (one to one, one to many, many to many)? Are any linking tables required, to support the relationship? What fields in *each* table map the relationship?
15. What type of relationship exists between the Orders and Items tables (one to one, one to many, many to many)? Are any linking tables required, to support the relationship? What fields in each table map the relationship?

### 2.2 From Exploration

16. What is the format of actual data in the Customers table phone column? Do any characters tend to appear there besides numeric digits?
17. How many customers are currently in the Customers table? How many items in the Items table?
18. *Write down what you find in each of the following steps.* Find the Item\_Id listed in the first row in the Order\_Details table. Trace that Item\_Id into the Items table to find out what item was ordered. From the same row in Order\_Details, trace the Order\_Id into the Orders table to find the order date and the customer Id, then follow the customer Id into the Customers table to find the name of the customer. This should give you a complete picture of that one piece of data and how it's related to other data within the database. Write a full English sentence describing everything you've learned.
19. In the Items table, what data type is specified for the Unit\_Price column?
20. For the Items table, are there any indexes created besides the expected Primary Key index? What column(s) does it include?

