University of Belize
Department of Mathematics, Physics, & Information Technology

CMPS1171 - Introduction to Databases

Project 2

NOTE: Create two files named project_tables_data.sql and project_queries.sql

PROBLEM STATEMENT: The Belmopan New Thought Preschool **BNTP** has seen an increase in the number of applicants to the school. The principal, Ms. Smith, is ecstatic about the growing popularity of the school; however, currently the records for **BNTP** are kept on paper. Ms. Smith has decided that the school's records should be digitized. You have been brought in as a consultant to accomplish this task. After three meetings between you and Ms. Smith, you conclude that the only four things that need tracking for the school system are:

- Student information, such as name, address, DOB, etc.
- Parent information, such as name, address, phone, etc.
- Classroom information, such as name, building etc.
- Teacher information, such as name, address, phone, etc.

There are currently two building on the school grounds. Each building has two classrooms. So there are a total of four classrooms that are used for the students. The buildings are named after former Belize Prime Ministers who are deceased. The four classrooms are named after the national symbols of Belize (excluding the national flag). Eventually there will be more building added, with more classrooms.

ASSUMPTIONS:

- A student can have multiple parents listed.
- A parent can have multiple students attending **BNTP**.
- Teachers and parents (and students) have been known to change their addresses.
- A common task that Ms. Smith has to do is to find which classroom a student belongs so that she can deliver messages to that student from that student's parent/parents.

Create and then login to a database named **project**. The password for the **project** database should be set to **#swordfish#**

1. Using the information above in the problem statement and the assumptions, create the appropriate tables that the system will use. Read the assumptions very carefully, so that you can determine whether there are any one-to-many and many-to-many relationships between the information presented. If there is a need for linking-tables, then you are responsible for creating them. Place all your tables including any linking tables in the project_tables_data.sql file. **[25 points]**

2. Insert ten rows of data into each of the tables that you created in problem one above. Place these inserts in your project_tables_data.sql file. You can now go ahead and load your project_tables_data.sql file into the **project** database to create the tables and populate them with data. **[10 points]**

NOTE: All the queries below are to be placed in the project_queries.sql file. No queries should be typed at the command line.

3. Write a query to find for each student, their parent name(s), email, and phone. The student name(s) must also be shown. I do not want to see any ids in the query results. **[7 points]**

4. Write a query to find for each student, their building name and their classroom name. The student name(s) must also be shown. I do not want to see any ids in the query results. **[7 points]**

5. Write a query to find for each parent, their children name(s). The parent name(s)

must also be shown. I do not want to see any ids in the query results. **[7 points]**

6. Write a query to find the email and phone number for each teacher. The teacher name(s) must also be shown. I do not want to see any ids in the query results. **[7 points]**

7. Write **queries** to find for each classroom, how many students are in that classroom. I do not want to see any ids in the query results. Note that this problem cannot be solved by writing a single query. You will need to write a query for each classroom. **[7 points]**