

# LBSC 690: Information Technology

## Homework 06: RDBMS and SQL

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Figure 1 contains a simplified schema for the database of student drawings from last weeks' homework. Note that we have dropped the requirement that each student has a list of all classes they attend, and hence the "Enrolment" table.

### **Question 1: Building the database schema**

Take the schema in Figure 1 and implement it in PhpMyAdmin, by creating tables for the entities. Make sure that primary keys are properly defined. The indicated foreign keys should be in the required tables, but you do *not* have to use "Relations View" tool to link foreign and primary keys. To demonstrate that this step has been done, use the "Export" function tab to export the SQL definition of the database. (You can export the whole database in one go by clicking on the database in the top bar, and then going to the "Export" tab.)

### **Question 2: Entering and querying data**

Use PhpMyAdmin to enter data representing the following facts:

- On February 18th, 2012, Jane Smith drew a picture called "My Family", stored at `http://eg.edu/1.jpg`, in the Year 4 Art class, taught by Paul Andrews.
- On February 20th, 2012, Tom Adamson drew a picture called "Abraham Lincoln", stored at `http://eg.edu/3.jpg`, in the Year 6 History class, taught by Peter Rose.
- On March 3rd, 2012, Mary Black drew a picture called "Twilight with Unicorns", stored at `http://eg.edu/4.jpg`, in the Year 5 Art class, taught by Andrew Jones.

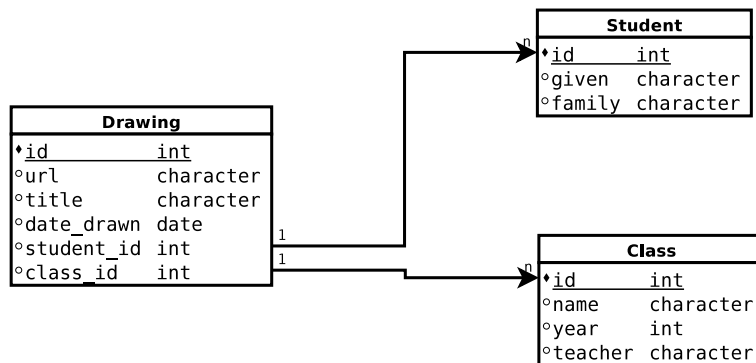


Figure 1: Schema for database of student drawings.

- On March 5th, 2012, Jane Smith drew a picture called “Australia: No Longer In Europe”, stored at <http://eg.edu/2.jpg>, in the Year 4 Geography class, taught by Mary White.

Then use the “SQL” tab of PhpMyAdmin to write and execute queries that do the following:

1. Get a list of the titles and URLs of all drawings in the database.
2. Get the titles, dates drawn, and year levels of all drawings drawn in an “Art” class.
3. Get the titles and student given and family names of all drawings drawn before March 5th in Year 5 or below.

Send the SQL of these queries, and a list of results (a screen shot is fine, or else use the one of the “print” or “export” operations in PhpMyAdmin).