# Part 1

Write an SQL script to achieve the following. You should be able to run the ENTIRE script multiple times sequentially without causing errors. (Ie, make appropriate use of IF [NOT] EXISTS clauses. Any newly created objects should first be dropped if they exist.)

* Create a database with the name ‘csd220\_lab2\_practice’. The default character set for the database should allow for the FULL unicode character set to be used in database tables
* Write a command that results in **all subsequent** commands using the csd220\_lab2\_practice database
* Create a table called ‘building’.
  + It should have fields to store the following data:
    - A name (eg. Algoma Health Centre)
    - A code (eg. AHC). This field should be the primary key for the table
    - The square footage of the building (only positive integers allowed)
    - The number of floors in the building (only positive integers allowed)
    - A time when the building is opened (default to 6am)
    - A time when the building gets locked (default to 10pm)
  + Use a named key to constrain the building table from having two buildings with the same name
* Create a table called ‘room’
  + It should have fields to store the following data:
    - A **composite** primary key consisting of the building code in which the room exists (ie, the building code for a room is a foreign key in addition to being part of the primary key), and the room number.
    - The floor that the room is on (a number)
    - A room type, that may be one of the following values: ‘classroom’, ‘lecture hall’, ‘lab’, ‘office’, ‘bathroom’, ‘utility’
    - The square footage of the room
    - Whether or not the room has windows
  + The room number of a building must be an integer that is somewhere in the range of 1000 x the floor number that the room is on. (Use a CHECK constraint.)
  + If a building is deleted from the database, all rooms in that building should also automatically be deleted
* Use INSERT statements to generate some sample data for the ‘building’ and ‘room’ tables. Add at least 3 buildings, each with several rooms of different types.

# Part 2

In a separate SQL file, write SQL statements that achieve the following. You do NOT need to be able to run the entire script without errors.

* Create a copy of the room table called ‘room\_as’ using the CREATE TABLE … AS syntax
  + SELECT \* FROM room\_as to verify that all data from the room table is now also in room\_as
* Create a copy of the room table called ‘room\_like’ using the CREATE TABLE … LIKE syntax
  + Use an INSERT INTO … SELECT statement to copy the data from the room table into the room\_like table
  + SELECT \* FROM room\_like to verify that all data from the room table is now also in room\_like
* Use SHOW CREATE TABLE commands to compare the three room tables.
  + How do the two copies differ from the the original table?
  + How do the two copies differ from each other?
* Use a TRUNCATE statement to empty the building table of data. Why does this fail?
* Use a DELETE statement to empty the building table of data. Why is the room table now empty as well? (Check that it is using SELECT \* FROM room)
* Re-run your Part 1 script to re-generate the database and sample data