W1D1 – LESSON1 ASSIGNMENT:

In this assignment, you are required to do the following:

A. Answer the following questions:
   a. Briefly discuss (i.e. in 2-4 statements or sentences) each of the following terms:
      i. Data
      ii. Database
      iii. Database Management system
      iv. Database application program
   b. Describe the main characteristics of the Data approach and contrast it with the File-based approach.
   c. What are the five components of the DBMS environment and how are they related to each other?
   d. Study the *DreamHome* case study introduced/presented in this Lesson 1. And answer the following questions:
      i. What do you think are the main objects that need to be represented in the database?
      ii. What relationships do you think exist between these main objects?
      iii. For each of the objects, what details do you think need to be stored in the database?
      iv. Give at least 3 queries you think will be required.

B. Perform the following tasks:
   a. Obtain and install the MySQL database (dbms) product, on your computer.
   b. Using the MySQL dbms which you have installed, complete the following sub-tasks:
      i. Start the MySQL database server instance (if it is not already running)
      ii. Launch open the MySQL Shell and execute the following shell commands (Note: For each command you successfully execute, take a screenshot of the output and add it to your Assignment1 answers document, which you will submit):
         1. MySQL JS > **\status**
            (This command will display information about the current global session. Since no connection has been made at this time, it will simply print the MySQL Shell version).

         2. MySQL JS > **\connect root@localhost**
            (This command will open a connection to the database server as the super-user named, root. Note: You will be prompted to enter the correct password for "root").

3. MySQL JS > **\sql**
   (This command will switch the Shell session from JavaScript processing mode to SQL processing mode).

4. MySQL localhost:33060+ ssl SQL > **show databases;**
   (This will display a list of the Databases found in the MySQL DBMS instance).

5. MySQL localhost:33060+ ssl SQL > **use world;**
   (This will set the default/active schema to "world". Note: schema here means the database).

6. MySQL localhost:33060+ ssl SQL > **show tables;**
   (This will display a list of all the tables in the world schema (database)).

7. MySQL localhost:33060+ ssl SQL > **desc country;**
   (This will display the schema/specification for the table named, country).

8. MySQL localhost:33060+ ssl SQL > **desc city;**
   (This will display the schema/specification for the table named, city).

iii. Carefully examine the schema/specifications for both the table named, country and the one named, city. Is there any relationship(s) between the two tables? Yes or No? If yes, describe the relationship(s) which you can identify.

iv. Launch open the MySQL Workbench GUI tool and take a screenshot of it.