Part 1: Reading Assignment. Read the following sections in the textbook and then answer the questions below.

- Ch. 3: 3.1, 3.2

In addition, use the following as a reference:

- MariaDB Data Types: https://mariadb.com/kb/en/the-mariadb-library/data-types/

1. Briefly compare the basic types in the textbook to those available in MariaDB. Are all of the basic types in the textbook supported in MariaDB? What, if any, are the types supported by MariaDB that are not listed as basic types in the textbook?

2. Why might it be a good idea to use the “not null” constraint in “create table” statements? Should every attribute always have such a constraint (i.e., when does it make sense not to use not null)?

3. Use MariaDB/MySQL to see if it supports adding attributes to tables using the “alter table” syntax described in the textbook, and the effect it has if any on tables that have one or more existing rows. Describe how you tested this and show the results of your tests.

Part 2: Database Implementation. Use SQL to create and populate the tables you defined in HW 1. You should “implement” the tables within MariaDB/MySQL (either on the database server, or within your own MariaDB/MySQL installation). When defining your tables with SQL, pick appropriate data types and basic constraints (i.e., key, foreign key, and not null). As in HW 1, your tables should be able to support the following queries (however, you don’t need to write these queries yet using SQL) and should contain enough rows so that each query would return at least two results:

Q1: Find the album titles created by a particular music group.

Q2: Find the music groups that play a particular genre of music. Note that a group can be associated with multiple genres of music (e.g., rock as well as rap).

Q3: Find the names of people that were members of a particular music group in a particular year.

Q4: Find the song titles for a particular album.

Q5: Find the song titles that were on albums of groups that had a particular group member at the time the album was recorded.

Q6: Find album titles released under a particular record label (e.g., “Columbia”, “CBS”, etc.) within a given range of years (e.g., “2000” to “2005”).

Note that you may modify your schema from HW 1 as needed (e.g., if you find some issues with the way you have defined your tables). You may also need to add additional rows to your tables so that each query returns at least two rows. Finally, create a script (.sql) file that can be used to create and populate your tables. To make testing easier, the beginning of your script should first
drop all of the tables you create if they exist (prior to creating the tables themselves) so that the script can easily be run over a database instance.

**Turn in** a hard copy print of your SQL script for creating and populating your tables, and the contents of your tables as shown by MariaDB/MySQL (e.g., using `SELECT * FROM tablename`). In addition, use the online submission system to upload your SQL script under Homework 2.