MSDA 607 - Project 5

You may work in a small group on this assignment. ***Project 5 is due end of day on Sunday March 1st****. Most of your course grade is based on your project work—please start early and reach out for help early if you need it. You will have a lot of latitude on what you choose to work on. You don't need to provide a "complete solution" – full credit can be earned for a database with four or five tables and a small number of rows, for example.*

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You're charged with building a database to support the work of a school. It can be any database (student registration, course catalog, learning analytics, etc.) related to any kind of school (dog obedience, beauty, etc.) Here are your deliverables.

1. **Describe the purpose of the school (to its customers or community), and of your database (to the school). One paragraph of text will be sufficient. You can put these in a comment at the top of your .SQL script file if you will.**
2. **Create the tables for the database, populate the table with records, and write statements that report on all of the tables.**

To receive 85% (80% if you work with a partner), you'll need to satisfactorily complete all six of the following items.

1. You need to have at least 3 rows in each table.
2. You must use at least four tables, and have at least one one-to-many and one many-to-many relationship.
3. Your tables (in total) must use at least 3 different data types.
4. You must include at least one column (in one table) that allows NULL values, and there should be at least one row in that table where the value for that column is NULL.
5. You must include at least one JOIN statement that correctly reports on data in the table with the NULL column, and that gracefully handles the NULL value.
6. I should be able to run your script twice in succession, and get the same results as if I ran it once.

You are encouraged to tackle as many of the following items as you want. You'll receive up to 5% additional credit fr each of the following items that you successfully complete.

1. Create a *design* for a user interface for all or part of the database. [A "wireframe" done by hand or with open source software is all I'm looking for here.
2. Create an entity-relationship diagram for your database. [Neatly by hand is acceptable]
3. Implement some kind of referential integrity, such as cascading deletes, or foreign key relationships.
4. Make a 3 to 5 minute presentation of your work in our meetup on Tuesday March 3rd. (You need to commit to making this presentation when you submit your assignment).
5. Identify at least one source of publicly available data and load it a table (or tables) in your database.
6. Write a short requirement for how to extend your database's functionality going forward.