Jonathan Spence Database Lab 2 1/27/2017

2. A superkey is a column or set of columns with a unique combination of row data. My understanding is a candidate key is a superkey, but one that requires only one column or the fewest number of columns to have a unique combination of row data. A primary key is a chosen candidate key.

3. I have chose to create a sample mapping database. The name of the table is called Locations. The first column is called name, which could be a varchar (could also be char or text), and should not be nullable, as it is most important to know a description of the location. The second column is called houseNum, and is a non nullable integer, which holds the house number for the address. The third column is streetName, which is a non nullable char. The fourth column is cityName, which is a non nullable char. The fifth column is state, which is a non nullable char. The sixth column is latitude, which is a decimal type, and is nullable. The seventh column is longitude, which is also a decimal type, and is also nullable.

4. A. The first normal form rule states that a data field can not have any structure. This means that a name, phone number, etc. should be divided into separate columns until they are as divided as possible. 1NF reduces redundancy, and makes the database easier to edit in sql.
B. The rule of accessing rows by content only exists so that a piece of data can be accessed when you know the table name, column name, and primary key value. For example, instead of trying to identify a column by the fact that it is the fifth one from the left, identify it by its name (ex. fname). Column and data field locations may change with changes to the database, but the column and table descriptions should not.
C. The “all rows must be unique” rule exists to get rid of duplicate rows, as duplicate information has no place in a relational database. A database with two duplicate rows should never exists, because that means they would share the same primary key, which should uniquely identify each row.