**Kennedy Anukam – CS 457**

**Project Two**

**Overview:**

The purpose of this project was to further extend the functionalities of my relational database management system. This includes deleting tuples based on a condition, inserting tuples to a table, selecting from a table with conditions, and updating tuples with a condition. The change I made from the previous step was making the table name case insensitive as sqlite3 can be completely case insensitive.

**Design:**

I implemented the additional features by creating modules for each feature. This allowed higher code coherency as each functionality is grouped in its own module. The query module imports these modules and calls their functions in the main function. A set was used to hold the key query words that can be inputted and the main function uses an if statement for if the word is in the input. There is also an elif condition to check if the line has other database functionalities such as creating the database or table. The delete module works by creating a list of all the tuples in the file that do not satisfy the condition and putting them in a list. The condition was checked in string formatting by taking the logical expression and making a string out of it. The eval() function can evaluate a string. For example eval(“12.99 < 149”) would return true. In the case of the ‘=’ operator, this was replaced with ‘==’. The select module works in a similar fashion by selecting the strings that satisfy the condition and putting them in a list and printing them. If the ‘\*’ character is seen, the whole file is printed. The update module works by finding the position of the set and where attributes. The set value and replace value are acquired with string parsing. A nested for loop is used to check the positions and if they satisfy the condition. If it does, the set index is replaced with that value.