ISTM6200 – Python Programming With Database Applications

Semester Project 2 – Database Processing

Fall 2018

**Academic Integrity Issues –** Same as Project 1

**Database Processing Description**

The database processing project will parse a text file and use the data to load data into relational tables in SQLite3. It will provide functions to execute SQL queries as described below. The table structures are the same as they were in TableDefs2.txt. A raw data test file is provided as well as the raw data test file layout.

* Then create the following functions and connect them to the GUI:
* Developer’s Name: same as Project 1
* Current Semester: Same as Project 1
* Load File: I will provide the name of the text file with the input data. It will be the same format as the file provided on Blackboard although the rows may be different. You must parse the data and load it into appropriate tables in an SQLite3 database which you should call LastName.db. Count the number of input rows. (Note: The file on Blackboard is a full dataset which may take several minutes to parse. You may want to take a smaller subset to test your program on.) Once the input file is parsed, put a message such as “File Parsed” in the line edit box below the button.
* Show Input Row Count: When this button is pressed, display the number of input rows.
* Table Row Count: I will provide a table name for which you will provide the number of rows
* List Table: I will provide a table name and you will list all the rows in the table in the Python IDLE shell. Provide column headers and list one row per line.
* Customer SQL Test: I will type an SQL Query into the test box which you will execute and print the results in the Python IDLE shell.
* Distinct Values: I will provide a table name and a column name in the form Tablename,ColumnName (e.g. Soups,Type) You must determine the number of unique values for the ColumnName in the TableName (e.g. How many unique values for the column type are there in the Soups table). Once you are finished counting, put a message “xx unique values” in the line edit box below the button.

**Preventing Software Reuse**

You must use the GUI from Project1. In addition, I have several input files with the columns in a different order. So, a project from a previous semester probably won’t work on this semester’s input file.

**Turning it in**

Your functions and graphical user interface should all be in a single file with your name followed by a 2 as the file name and a py or pyw extension. (For example, if I were turning it in, my file would be Artz2.py) Email your file to me by the beginning of the final exam. Do not zip the file. Late projects will not be accepted.