Javier Perez

CS 457

Project 2

Design Document

Tuples Stored in Tables:

My program stores the tuples in the tables as a new line appended to the bottom of the tables associated text file. In this case, the header will describe the values category along with their data type, however every value in the tuple is stored as a string. Moreover, those values are not stored in the program's memory, instead the values must be accessed during runtime by opening and creating a copy of the table's contents.

High-Level Descriptions:

INSERTION:

The insertion functionality is implemented by processing the new values and including them into the tables mapping for values then appending those values to the bottom of the table file using a space to separate the values.

DELETE:

The delete functionality is implemented by opening and copying the target files contents into a list. This list of entries is then iterated through and compared against the parameters associated with the "where" function. If the line matches the "where" conditions, this line is not outputted, otherwise it will be printed using a '|' character to separate the values.

UPDATE:

The update functionality is implemented by opening and copying the target files contents so that each entry is saved as a list of strings. This list is then iterated through and tested against the conditions outlined by the "where" parameter. If a line matches, then we update the entry using the "set" functions arguments which will be used to update the corresponding values. In either case, once the entry is processed, it will then be written to the file by overwriting its previous version.

SELECT:

The select/query functionality is implemented by processing the commands desired table selection, accessing that tables path and file contents, and then iterating through the appropriate attributes by row and then printing those attributes values and types by column.