Programming Assignment 2

CS 457

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Implementation

Tuple Organization

Each tuple is represented as a line of strings in the table txt file after the field information. The insert operation simply appends each tuple to the end of the text file as a new line. Again we read the text file before each new operation so the information is directly from the file and not stored in memory. Manipulations are then made in memory as detailed in Tuple management.

Tuple Management

Select has been updated here to now print both the field and tuple information. Select can now print specific columns, as well as print tuples where a specific field is not equal to a value. Update finds all indexes for the specified field where equal to the specified value. It then modifies all instances where that index is found in memory. After modification it writes to memory completing the update. Delete works similarly, indexes are found for the field and tuples that correspond. The tuples are then deleted in memory and again written out the table file.

Compilation

To compile and run the source code simply type

python3 driver.py <sql file name>

Or

python3 driver.py

For standard input. When using the standard input press enter after each individual command or series of commands delimited by semicolon. It also works for injecting a file by typing

python3 driver.py <PA2_test.sql