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CS 457.1001

Project Assignment 1

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Project Assignment 1 Design Document

To compile the program: *make all*

To run the program: *./main* or *./main [sql file]*

File Structure

The program creates a folder for each database, then stores each table of that

database inside the folder, with one txt file for each table. As an example, a database

named "db_1" with a table "tb_1" would look like "db_1/tb_1.txt". Similarly, a second

table named "tb_2" in the same database would look like "db_1/tb_2.txt".

Implementation

The project is written using C++, specifically the C++17 standard. Creation and

maintenance of the database file system is done using the std::filesystem library from

the C++17 standard. The project was designed with modularity in mind (as future

projects require adding on to PA1), thus, the implementation of each command exists as

separate classes all inheriting from a common ICommand interface. New commands

can be added without disruption to the existing functionality of the program. For string

processing, the standard vector and string libraries are used. Modifying a table is done using standard C++ file I/O.