Programming Assignment 1: Metadata Management Documentation

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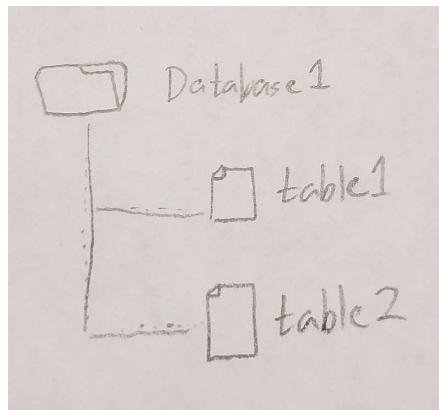
Our database management program is implemented with the programming language c++.

Databases:

Our database management program handles databases using the c++ defined class, vectors. Each database is pushed onto the vector as they are being edited. When the databases are saved, each database is saved as a separate directory included in the program directory. The databases are saved in parallel and may be nested later if needed.

Tables:

Our database management program handles tables using the c++ defined class, vectors. Each table is pushed onto the vector within the database class as they are being edited. When the tables are saved, each table is saved as a separate file included in the database directory. The tables are saved in parallel and may be nested via merging later if needed.

Implementation:

Each function contains a doxygen level comment above the function prototype in the PA1.cpp file. This contains the name of the function, the brief description, the prerequisites, the post effect, and the function type.

Two abstract structures are used to organize our database system, included in classes.h. The abstract structures created are the Table and Database classes. Each class contains a vector for the metadata and a vector for the data, either the tables for the database or the column information for the tables. The vectors expand off of each other creating a 2-D array of data for the tables, depicted below, while the database creates a 1-D array of tables as depicted above.