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Assignment 1: Database Creation

For the first assignment of the semester I designed and created Hugo's Database, a small python program that creates and manages a database at a simplistic level. It is able to create, delete, and use databases. It is also capable of creating, deleting, altering, and selecting tables. In order to properly use this program you must type "python3 ./HugosDatabase" This will bring up the UI to begin the program. It will then ask if you want to type your commands or if you would like to read in from a file. Please do not use "python3 ./HugosDatabase<PA1_test.sql" as that will break the program. Simply start the program as explained above, press "f" to enter the file reader, and type the path of the file. The program is able to read the current databases and files stored in the database storage directory labeled "Hugo-s_Database_Directory" If the tests run do not work as expected, try deleting the database storage directory and trying again. This will cause the program to make an empty database storage directory.

The program handles multiple databases by making them directories. Databases don't hold much information that needs to be stored separately, so a directory is sufficient. When the program first starts, it reads in each database in the storage and makes a new database item based on the directory, before putting it in a list. Since users typically identify their databases with their name, a separate list is made of only the databases' names with the same index as the Database

they represent. If a database is made, it will make a new database object, append it to the list, and then create a new directory for the database.

The program handles multiple tables by making them directories. The decision was made because making reading in tables, selecting attributes, and altering tables easier. Since tables have more information and items in the list, each item is in its own file ending in extension .hit. The attributes of the table are stored in a file titled template.htb. When the program first starts, after reading in all databases it goes through each database to read in each table. Once it reads in one table, it reads in all the items in that table. Since users typically identify their tables with their name, a separate list is made of only the tables' names with the same index as the Tables they represent. If a table is made, it will make a new table object, append it to the list, and then create a new directory for the table, and make a template.htb file with the table's attributes.