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Current Module: Network Programming with Python
Project Name: Thunderdome

Project Goals:

The goal of the project is to demonstrate an understanding of network programming with python accessing an SQL database.

Considerations:

What will happen when a new type is seen.
What will happen when neither opponent is dealing damage
Does the database exist
Can the database be connected to

Initial Design:

Initially I attempted to utilize SQL queries to build the functions in the stats.py program. However it became apparent that my knowledge of SQL is insufficient to do that. Instead I created a python class to store the combatants in the tournament and all the relevant data pertaining to them. I feel that this is not an optimal solution as it necessitates copying the database almost entirely. Unfortunately, I do not have the experience with SQL to inplement a better solution.

Data Flow:

The make_dudes.py file contains mechanism to connect to the database as well as the necessary classes for store all of the data in a useful manner. The tournament function creates an instance of DudeList and populates it with the information from the database. All dudes in the database will “fight” each other and the results are stored back in the database. The stats class connects to the database, and loads all of the data in the same way that the tournament function does. It then enters a loop where it asks the user what stat to display and displays the chosen statistic. The reset function connects to the database and clears the fight table.

Communication Protocol:

CMD line options:

All programs require the database name be provided as a CMD line option

Signals handled:

None.

Potential Pitfalls:

The programs require making a copy of the database. This will work fine for small applications, however it is not ideal (or likely feasible) for a large database.

Test Plan:

User Test / Test Cases:

Input invalid database name
Database is empty
Database exists but is not the correct type
Multiple command line arguments.

Expected Result:

I expect the behavior outlined in the initial design to be appropriately implemented. The program will not seg-fault.

Conclusion:

The program works as intended, kind of. It does not make use of SQL to actually search and manipulate the database other than to fetch large quantities of data. However we were instructed to ‘make sure it works’ and to ‘let python do the work for you’ I would in the future rather use SQL to avoid copying the data as much as possible.