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Class: CIS 087 Python

FINAL PROGRAMMING PROJECT

Program Purpose:

Client-server environment that allows a user to lookup information about historical NBA teams and how they performed in a given season.

Methods, tools, and strategies by chapter:

Chapter 2: Data Types and Expressions, do some Math

This program utilizes the character strings, lists, dictionaries, and integer numbers.

Various expressions including string concatenation, mathematics ((yr+1) %100 is found in client\_gui.py at line 40).

A variety of functions were written and called.

Chapter 3: Control Statements, use both loops and selection

If, if-else, and if-elif-else statements and several for loops are included in the project.

Chapter 4: Strings and Text Files

All of the information passed from the server to the client is stored as string data.

The statistics for the various seasons are stored in text files in comma separated value format. These files are read and processed.

Chapter 5: Lists and Dictionaries

This project makes use of lists in several locations.

A dictionary is used to associate a team with the list of information for each season that team has played for simple lookup.

Chapter 6: Design with Functions

The project has divided the code into client and server processes. Each of these make use of functions to simplify writing and maintenance of the code.

Chapter 7: Simple Graphics and Image Processing

Simple graphics nor images were used in this project.

Chapter 8: Graphical User Interfaces

The client in the project makes use of the author’s breezypythongui.py file to implement a rudimentary graphical user interface with drop down selection boxes (combo boxes).

Chapter 9: Design with Classes.

The project has several classes. A few are little more than wrappers for a data structure (see request and response objects).

The gui frame is also a class.

Finally, the threads used on the server are implemented by extended the Thread class from the built in Python threading module.

**Chapter 10: Network Applications and Client/Server Programming. (Optional)**

**The utility implements client and server processes. The information the user requests is converted into a request that is sent to the server and read. The server checks if it knows the requested information and returns it.**

Chapter 11: Searching, Sorting, and Complexity. (Extra Credit)

The project was not in need of serious sorting or searching algorithms. The builtin Python classes, methods, and functions handle this situations admirable, so I used them when needed.