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Programming for IT – Final Project Plan

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I have decided to make a simple Tic-Tac-Toe program with a GUI window rather than text based. GUI was not something that we had covered in the class, but I want to start making programs with more interactive functionality. The user will play against a computer and the computer will attempt to stop you or try to win. I will be importing tkinter, which is a native GUI module for Python. Additionally, I am adding the time module and random module to try and give the computer some “human” characteristics. The computer will hang for a random time from 1 to 2 seconds, to make it seem like the machine is thinking. Random will also be used to pick a random spot if the computer can’t determine a winning move for itself or blocking a winning move of the user.

Pseudocode:

Import modules (tkinter, time, random)

Create window (with window.mainloop() at the end of code)

Draw buttons

User clicks button of their choice (there will always be a check for win loop as computer and user choose)

Increment plays by 1 (once this number has hit 8, the board is full and considered a tie)

Check for win

Computer checks for winning move

Computer checks for opponents winning move

If neither can be found, choose random button

Increment plays by 1 (once this number has hit 8, the board is full and considered a tie)

Check for win

(The colored text above will be an endless loop)

If computer wins, bring up a dialogue box saying “You’ve lost!”

If user wins, bring up a dialogue box saying “You’ve won!”