CIS30A Project Documentation Guide

In the documentation, provide 1 – 2 pages (single-space) that contains the following components of your course project. Total 100 points

1. Your name : Tyla Robertson

2. Project Information and details: (60 points)
    - What problems are you solving in this project?

A key logger can be used in many ways… For example:
- Hackers can gather emails, usernames, passwords, bank details from a victim.
- Parents can monitor a child's computer activities.
- Schools can monitor a student's computer activities to make sure that the computer is being used appropriately.
- Workplaces can monitor an employee's computer activities to make sure that the employee is on task during work hours.
- Developers can use it to debug their programs. If an error/bug occurs, they can check to see if certain keyboard inputs caused it.

    - What solutions are you implementing in the project?

- Usage of the library called "Pynput" gives me functions that allow me to easily listen for key presses and mouse movements.

    - Provide explanation of algorithm implementation.

Pynput has a built-in function that seems to be a loop that is always checking for key presses. All I have to do is collect what it detects then feed it into a .txt file and check if the Esc key is pressed to stop the program.

    - What are the program objectives?

Upon running the program, it should start listening for all keypresses from the keyboard and put it into a text file.

    - Explain how your program is interacting with the user and its purpose.

- User has to run the .py file through a text editor
- User can press the esc key to terminate the keylogger program.

    - What are the limitations of the program?

- User has to voluntarily activate the keylogger through running the .py file. Consequently, they can view the source code as well.
- User is aware that the keylogger is running.
- Data collected is saved locally on the user's computer rather than sent to the attacker's computer.
- Anti-Virus may detect and block it

    - Provide recommendations on improving the limitations of the program.

- use pyinstaller library to easily convert the program into an executable.

- use winreg library to add the executable to the windows startup application registry so that it automatically runs on boot up (only works on Windows OS).
- Give the keylogger an inconspicuous name so that the user cannot easily identify it in the Task Manager.
- Import socket and socketserver to send data from client to attacker's server over TCP.

3. Pseudocode. (40 points)
    - Write the pseudocode for the program, from start to finish. Be sure to include decision-making branching, and/or iteration.

import pynput library

import sys library

Function: writeToFile(key)

    Variable: keyData = str(key) //to store key presses into this variable momentarily

    IF key press is the escape key

        THEN raise the escape exception that will terminate the program

    ELSE

        open the log.txt file and add the recorded key press to the file

Function: printFile()

    open the log.txt file

    read from the log.txt file

    print what we read from the log.txt file to the console

//MAIN

Print to console explaining to user that program is running and how to stop it

use keyboard.Listener() function from pynput library that always listens for key presses, it will take my writeToFile() as an input for instructions on how to handle the way it records key presses / where to store them

    error handling: try: built in pynput library function called listener.join()

    except: print to console that the program is terminating

        print to console the data from the logs.txt file

        force program to stop