Project: 3

Project 3: Keylogger Implementation (For Educational Purposes Only)

Statement:

Understanding how keyloggers work helps develop better security measures.

Objective:

Create a simple keylogger using Python for ethical and educational demonstration only.

This keylogger is developed only for educational and ethical security research purposes. Unauthorized use of keyloggers to monitor someone else's activity without consent is illegal and unethical.

Implementation

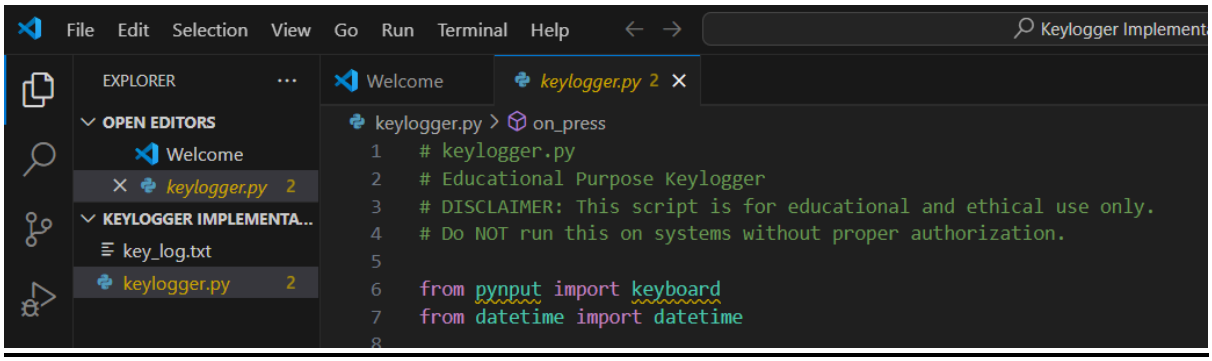
Install Required Library

Use pip to install the pynput library: pip install pynput

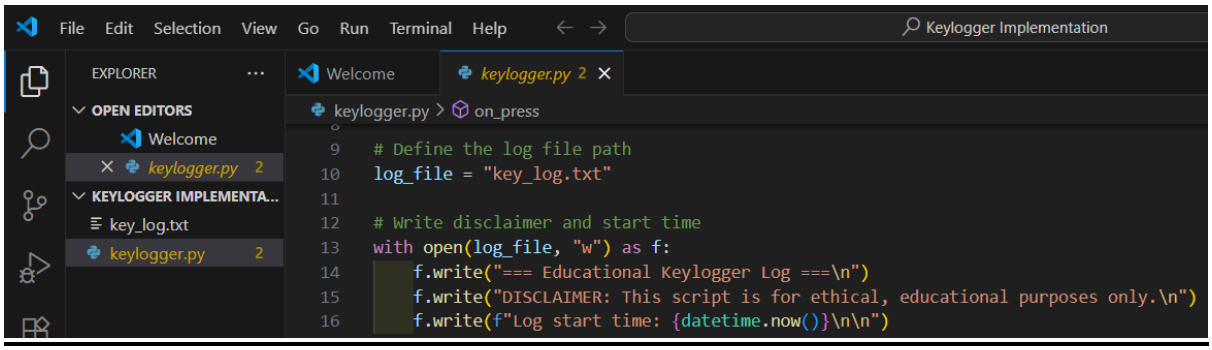
Create Your Python File

Create a new Python file, e.g: keylogger.py

Import Required Modules

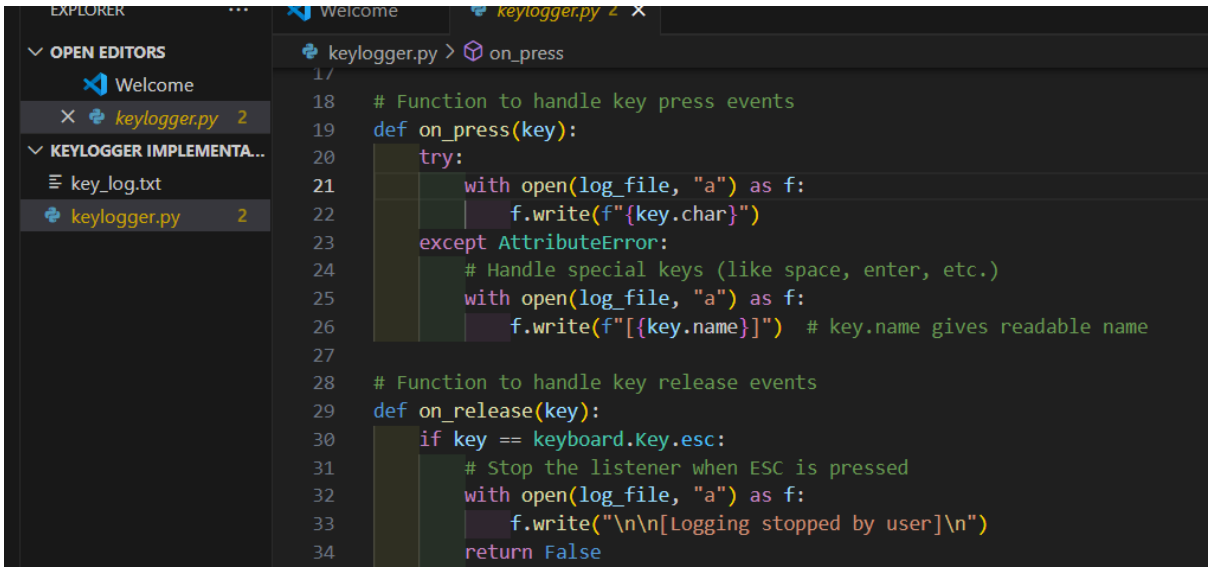


Set Up Log File



Define Callback Functions

These functions handle what to do when keys are pressed or released



Set Up the Listener

This uses pynput.keyboard.Listener

```
35
36  # Start the keylogger
37  print("Keylogger started. Press ESC to stop.")
38  with keyboard.Listener(on_press=on_press, on_release=on_release) as listener:
39      listener.join()
40
```

Run the Program

python keylogger.py

```
PS C:\Users\neeti\OneDrive\Desktop\projects\Keylogger Implementation> python keylogger.py
Keylogger started. Press ESC to stop.
```

- The script will listen for keystrokes and log them to key_log.txt.
- Press **ESC** to stop logging.

pynput usage

Working with listeners and background tasks

File I/O in Python

Event-driven programming

Ethical programming principles

A keylogger:

- Captures **every keystroke** you make (letters, numbers, special keys).
- Stores them in a **log file**, which could be:
  - Saved locally on your device
  - Sent remotely to another server (in malicious cases)
- Can capture sensitive data like:
  - Passwords
  - Credit card numbers
  - Messages
  - Login activity