

IT314 - Software Engineering

Lab 5 - Static Analysis

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Static Analysis:

To perform the above analysis I have used python files from github repository and used pylint to do static analysis for the files.

Repository that i have used for static analysis:

<https://github.com/ShivamKansagara/qxresearch-event-1>

Pylint

It's been around for 13 years, and over that time it has included features like coding standards, error detection and refactoring by detecting duplicated code.

Out of the box Pylint is easy to set up, requiring a minimal amount of configuration, but it's fully customizable if you want it to be — by editing a file you can select which errors and conventions are most relevant to you.

Most of the messages here will be self-explanatory.

Pylint is an incredibly useful tool for static code analysis. It provides a simple score out of 10, a detailed output on what to fix, and the ability to ignore things you do not believe in.

This is part one of three of a series I am doing on how I use pylint in my projects.

Part 1: Executing with Command Line vs Programmatically

Part 2: Pylint Runner Script with Changeable Threshold

Part 3: A Github Action for Failing Builds under a Pylint Threshold

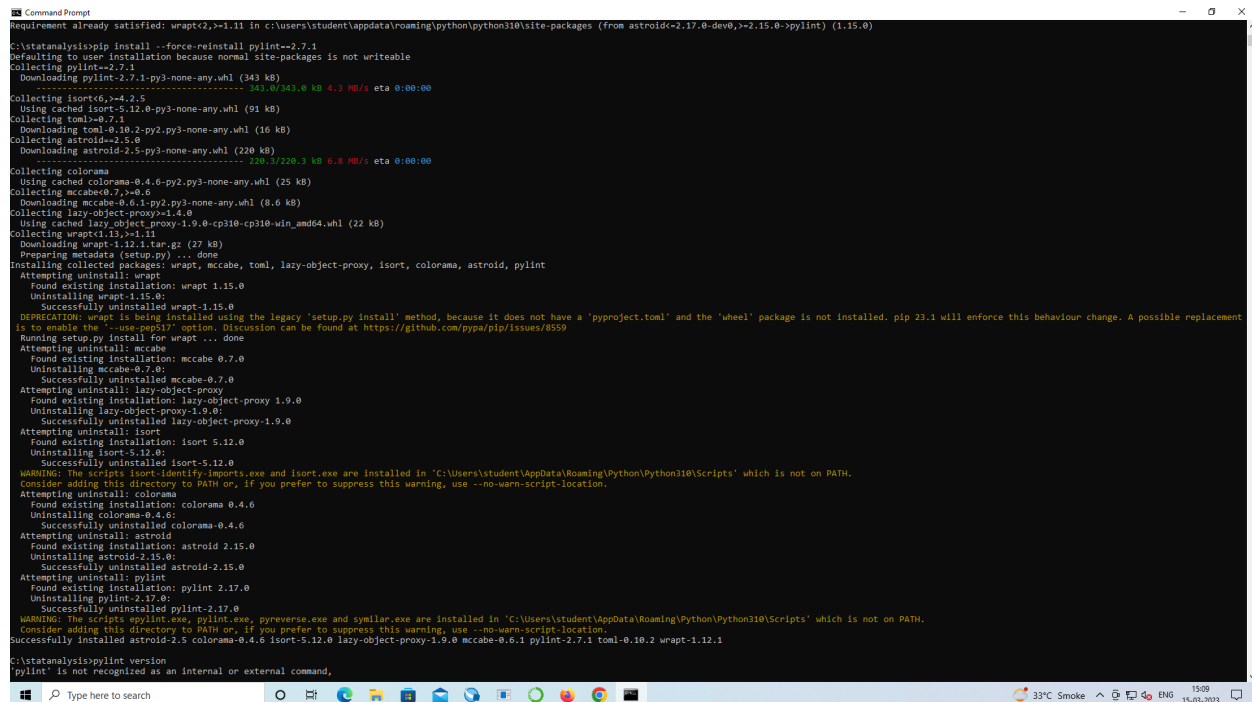
```
$ pip install pylint
```

This should give you confirmation it is installed.

```
$ pylint src/ or py -m pylint file.py
```

Which should give you some output from the static code analysis followed by a score!

I have used a repository named qxresearch-event-1-master for stat analysis.



```
Command Prompt
Requirement already satisfied: wrapt<2,>=1.11 in c:\users\student\appdata\roaming\python\python310\site-packages (from astroid<2.17.0-dev0,>=2.15.0->pylint) (1.15.0)
C:\statanalysis>pip install --force-reinstall pylint==2.7.1
Defaulting to user installation because normal site-packages is not writeable
Collecting pylint==2.7.1
  Downloading pylint-2.7.1-py3-none-any.whl (343 kB)
----- 343.0/343.0 kB 4.3 MB/s eta 0:00:00
Collecting isort<6,>=4.2.5
  Using cached isort-5.12.0-py3-none-any.whl (91 kB)
Collecting toml<0.10.2-py2.py3-none-any.whl (16 kB)
Collecting astroid<2.15.0
  Downloading astroid-2.5-py3-none-any.whl (220 kB)
----- 220.0/220.0 kB 6.8 MB/s eta 0:00:00
Collecting colorama
  Using cached colorama-0.4.6-py2.py3-none-any.whl (25 kB)
Collecting mccabe<0.7,>=0.6
  Downloading mccabe-0.6.1-py2.py3-none-any.whl (8.6 kB)
Collecting lazy-object-proxy>=1.4.0
  Using cached lazy-object-proxy-1.9.0-cp310-cp310-win_amd64.whl (22 kB)
Collecting wrapt<1.13,>=1.11
  Downloading wrapt-1.12.1.tar.gz (27 kB)
  Preparing metadata (setup.py) ... done
Installing collected packages: wrapt, mccabe, toml, lazy-object-proxy, isort, colorama, astroid, pylint
  Attempting uninstall: wrapt
    Found existing installation: wrapt 1.15.0
    Uninstalling wrapt-1.15.0:
      Successfully uninstalled wrapt-1.15.0
  DEPRECATION: wrapt is being installed using the legacy 'setup.py install' method, because it does not have a 'pyproject.toml' and the 'wheel' package is not installed. pip 23.1 will enforce this behaviour change. A possible replacement is to enable the '--use-pep517' option. Discussion can be found at https://github.com/pypa/pip/issues/8559
  Running setup.py install for wrapt ... done
  Attempting uninstall: mccabe
    Found existing installation: mccabe 0.7.0
    Successfully uninstalled mccabe-0.7.0
  Attempting uninstall: lazy-object-proxy
    Found existing installation: lazy-object-proxy 1.9.0
    Uninstalling lazy-object-proxy-1.9.0:
      Successfully uninstalled lazy-object-proxy-1.9.0
  Attempting uninstall: isort
    Found existing installation: isort 5.12.0
    Successfully uninstalled isort-5.12.0
  WARNING: The scripts isort-identify-imports.exe and isort.exe are installed in 'C:\Users\student\AppData\Roaming\Python\Python310\Scripts' which is not on PATH.
  Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-warn-script-location.
  Attempting uninstall: colorama
    Found existing installation: colorama 0.4.6
    Successfully uninstalled colorama-0.4.6
  Attempting uninstall: astroid
    Found existing installation: astroid 2.15.0
    Successfully uninstalled astroid-2.15.0
  Attempting uninstall: pylint
    Found existing installation: pylint 2.17.0
    Uninstalling pylint-2.17.0:
      Successfully uninstalled pylint-2.17.0
  WARNING: The scripts pylint.exe, pyreverse.exe and symilar.exe are installed in 'C:\Users\student\AppData\Roaming\Python\Python310\Scripts' which is not on PATH.
  Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-warn-script-location.
Successfully installed astroid-2.5 colorama-0.4.6 isort-5.12.0 lazy-object-proxy-1.9.0 mccabe-0.6.1 pylint-2.7.1 toml-0.10.2 wrapt-1.12.1
C:\statanalysis>pylint version
'pylint' is not recognized as an internal or external command,
```

Here above attached is pylint been installed.

Now I will check for 6 different files for stat analysis

File 1 -> passpdf

```
Command Prompt
Successfully uninstalled colorama-0.4.6
Attempting uninstall: astroid
Found existing installation: astroid 2.15.0
Uninstalling astroid-2.15.0:
Successfully uninstalled astroid-2.15.0
Attempting uninstall: pylint
Found existing installation: pylint 2.17.0
Uninstalling pylint-2.17.0:
Successfully uninstalled pylint-2.17.0
WARNING: The scripts epylint.exe, pylint.exe, pyreverse.exe and symilar.exe are installed in 'C:\Users\student\AppData\Roaming\Python\Python310\Scripts' which is not on PATH.
Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-warn-script-location.
Successfully installed astroid-2.5 colorama-0.4.6 isort-5.12.0 lazy-object-proxy-1.9.0 mccabe-0.6.1 pylint-2.7.1 toml-0.10.2 wrapt-1.12.1

C:\statanalysis>pylint version
'pylint' is not recognized as an internal or external command,
operable program or batch file.

C:\statanalysis>pylint --version
'pylint' is not recognized as an internal or external command,
operable program or batch file.

C:\statanalysis>py -m pylint passpdf.py
***** Module passpdf
passpdf.py:18:45: C0303: Trailing whitespace (trailing-whitespace)
passpdf.py:1:0: C0114: Missing module docstring (missing-module-docstring)
passpdf.py:1:0: E0401: Unable to import 'PyPDF2' (import-error)
passpdf.py:2:0: C0411: standard import "import getpass" should be placed before "from PyPDF2 import PdfFileWriter, PdfFileReader" (wrong-import-order)

Your code has been rated at 3.33/10

C:\statanalysis>
```

here pylint have given us error

alarmtiming.py:3:0: C0411: standard import "import winsound" should be placed before "from playsound import playsound" (wrong-import-order)

File 2 -> alarmtiming

```
Command Prompt
operable program or batch file.

C:\stataanalysis>py -m pylint passpdf.py
***** Module passpdf
passpdf.py:18:49: C0403: Trailing whitespace (trailing-whitespace)
passpdf.py:1:0: C0114: Missing module docstring (missing-module-docstring)
passpdf.py:1:0: E0401: Unable to import 'PyPDF2' (import-error)
passpdf.py:2:0: C0411: standard import 'import getpass' should be placed before 'from PyPDF2 import PdfFileWriter, PdfFileReader' (wrong-import-order)

Your code has been rated at 3.33/10

C:\stataanalysis>py -m pylint alarmtiming.py
***** Module alarmtiming
alarmtiming.py:32:0: C0301: Line too long (127/100) (line-too-long)
alarmtiming.py:40:0: C0304: Final newline missing (missing-final-newline)
alarmtiming.py:1:0: C0114: Missing module docstring (missing-module-docstring)
alarmtiming.py:2:0: E0401: Unable to import 'playsound' (import-error)
alarmtiming.py:11:0: C0103: Constant name 'alarm_time' doesn't conform to UPPER_CASE naming style (invalid-name)
alarmtiming.py:16:0: C0103: Constant name 'alarm_hour' doesn't conform to UPPER_CASE naming style (invalid-name)
alarmtiming.py:17:0: C0103: Constant name 'alarm_minute' doesn't conform to UPPER_CASE naming style (invalid-name)
alarmtiming.py:18:0: C0103: Constant name 'alarm_period' doesn't conform to UPPER_CASE naming style (invalid-name)
alarmtiming.py:3:0: C0411: standard import 'import winsound' should be placed before 'from playsound import playsound' (wrong-import-order)

Your code has been rated at 5.19/10

C:\stataanalysis>py -m pylint alarmtiming.py
```

calendar.py:1:0: W0614: Unused import enum from wildcard import (unused-wildcard-import)

calendar.py:1:0: W0614: Unused import sys from wildcard import (unused-wildcard-import)

calendar.py:1:0: W0614: Unused import types from wildcard import (unused-wildcard-import)

all of the error are related to unused-wildcard-import.

File 3 -> calendar

paint.py:1:0: W0614: Unused import TclError from wildcard import (unused-wildcard-import)
all of the error are related to unused-wildcard-import.

File 4 -> paint

```
Command Prompt
calendar.py:1:0: W0614: Unused import UNITS from wildcard import (unused-wildcard-import)
calendar.py:1:0: W0614: Unused import PAGES from wildcard import (unused-wildcard-import)

Your code has been rated at -45.20/10

C:\statanalysis\py -m pylint paint.py
***** Module paint
paint.py:65:0: C0301: Line too long (152/100) (line-too-long)
paint.py:73:0: W0111: Bad indentation. Found 8 spaces, expected 4 (bad-indentation)
paint.py:1:0: C0114: Missing module docstring (missing-module-docstring)
paint.py:1:0: W0601: Wildcard import tkinter (wildcard-import)
paint.py:26:8: C0103: Attribute name "c_" doesn't conform to snake case naming style (invalid-name)
paint.py:4:0: C0115: Missing class docstring (missing-class-docstring)
paint.py:4:0: W0205: Class "Paint" inherits from object, can be safely removed from bases in python3 (useless-object-inheritance)
paint.py:4:0: W0602: Too many instance attributes (13/7) (too-many-instance-attributes)
paint.py:32:4: C0116: Missing function or method docstring (missing-function-docstring)
paint.py:42:4: C0116: Missing function or method docstring (missing-function-docstring)
paint.py:45:4: C0116: Missing function or method docstring (missing-function-docstring)
paint.py:48:4: C0116: Missing function or method docstring (missing-function-docstring)
paint.py:52:4: C0116: Missing function or method docstring (missing-function-docstring)
paint.py:55:4: C0116: Missing function or method docstring (missing-function-docstring)
paint.py:56:8: E1101: Method "activate button" has no "config" member (no-member)
paint.py:61:4: C0116: Missing function or method docstring (missing-function-docstring)
paint.py:69:4: C0116: Missing function or method docstring (missing-function-docstring)
paint.py:69:20: W0612: Unused argument "event" (unused-argument)
paint.py:66:12: W0201: Attribute "old_x" defined outside __init__ (attribute-defined-outside-init)
paint.py:70:8: W0201: Attribute "old_x" defined outside __init__ (attribute-defined-outside-init)
paint.py:67:12: W0201: Attribute "old_y" defined outside __init__ (attribute-defined-outside-init)
paint.py:70:8: W0201: Attribute "old_y" defined outside __init__ (attribute-defined-outside-init)
paint.py:62:8: W0201: Attribute "line_width" defined outside __init__ (attribute-defined-outside-init)
paint.py:49:8: W0201: Attribute "eraser_on" defined outside __init__ (attribute-defined-outside-init)
paint.py:59:8: W0201: Attribute "eraser_on" defined outside __init__ (attribute-defined-outside-init)
paint.py:58:8: W0201: Attribute "active button" defined outside __init__ (attribute-defined-outside-init)
paint.py:1:0: W0604: Unused import enum from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import sys from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import types from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import TclError from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import re from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import wantobjects from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import TkVersion from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import TkVersion from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import READABLE from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import WRITABLE from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import EXCEPTION from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import Eventtype from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import Event from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import NoDefaultRoot from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import Variable from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import StringVar from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import IntVar from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import DoubleVar from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import BooleanVar from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import mainloop from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import getint from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import getdouble from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import getboolean from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import getint from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import Callerwrapper from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import XView from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import XView from wildcard import (unused-wildcard-import)
paint.py:1:0: W0614: Unused import Wm from wildcard import (unused-wildcard-import)
```

[illegible]

```

C:\Program Files\Python\Python38-32\python.exe
Paint.py:110: W0614: Unused import LEFT from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import TOP from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import XIGMA from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import BOTTOM from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import FLAT from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import XING from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import GROOVE from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import SOLID from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import VERTICAL from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import NUMERIC from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import CHAR from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import WORD from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import BASELINE from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import INSIDE from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import OUTSIDE from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import SEL from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import SEL_FIRST from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import SEL_LAST from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import END from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import ENCRY from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import CURRENT from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import ANCHOR from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import ALL from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import NORMAL from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import DISABLED from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import ACTIVE from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import HIDDEN from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import CASCADE from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import CHECKBUTTON from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import COMMAND from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import RADIOBUTTON from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import SPASAPATOR from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import SINGLE from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import BROUSE from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import MULTIPLE from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import EXTENDED from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import DIALOG from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import UNDERLINE from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import PISLICE from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import CHORD from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import ARC from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import FIRST from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import LAST from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import BUTT from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import PROJECTING from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import BEVEL from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import MITER from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import NOVETO from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import SCROLL from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import UNITS from wildcard import (unused-wildcard-import)
Paint.py:110: W0614: Unused import PAGES from wildcard import (unused-wildcard-import)

Your code has been rated at -18.55/10

C:\stataanalysis\

```

```

paint.py:1:0: W0614: Unused import sys from wildcard import
(unused-wildcard-import)
paint.py:1:0: W0614: Unused import types from wildcard import
(unused-wildcard-import)
paint.py:1:0: W0614: Unused import TclError from wildcard import
(unused-wildcard-import)

```

all of the error are related to unused-wildcard-import.

File 5 -> random pass

[illegible]

```
Command Prompt
Program Files\Python310\lib\random.py:360:4: C0183: Argument name "b" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:380:4: C0183: Argument name "x" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:380:25: W0611: Redefining name "random" from outer scope (line 859) (redefined-outer-name)
Program Files\Python310\lib\random.py:406:4: R0914: Too many local variables (7/15) (too-many-locals)
Program Files\Python310\lib\random.py:429:4: C0183: Variable name "n" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:466:4: R0912: Too many branches (14/12) (too-many-branches)
Program Files\Python310\lib\random.py:5151:8: W0621: Redefining name "random" from outer scope (line 859) (redefined-outer-name)
Program Files\Python310\lib\random.py:5164:4: C0183: Variable name "n" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:5181:16: C0183: Variable name "a" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:539:8: C0183: Variable name "ht" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:546:4: C0183: Variable name "r" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:546:4: C0183: Argument name "b" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:559:8: C0183: Variable name "c" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:559:8: C0183: Variable name "t" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:565:12: C0183: Variable name "u" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:565:12: C0183: Variable name "v" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:574:4: C0183: Argument name "m" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:581:8: W0621: Redefining name "random" from outer scope (line 859) (redefined-outer-name)
Program Files\Python310\lib\random.py:581:12: C0183: Variable name "z1" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:584:12: C0183: Variable name "u2" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:585:12: C0183: Variable name "z" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:585:12: C0183: Variable name "z1" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:591:4: C0183: Argument name "mu" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:618:8: W0621: Redefining name "random" from outer scope (line 859) (redefined-outer-name)
Program Files\Python310\lib\random.py:618:8: C0183: Variable name "x" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:624:12: C0183: Variable name "y" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:629:4: C0183: Argument name "mu" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:654:4: C0183: Argument name "r" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:672:8: W0621: Redefining name "random" from outer scope (line 859) (redefined-outer-name)
Program Files\Python310\lib\random.py:676:8: C0183: Variable name "s" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:677:8: C0183: Variable name "d" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:680:12: C0183: Variable name "j1" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:682:12: C0183: Variable name "k" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:682:12: C0183: Variable name "l" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:684:12: C0183: Variable name "u2" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:688:8: C0183: Variable name "v" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:689:8: C0183: Variable name "f" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:690:8: C0183: Variable name "u3" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:717:28: W0621: Redefining name "random" from outer scope (line 859) (redefined-outer-name)
Program Files\Python310\lib\random.py:698:4: R0914: Too many local variables (16/15) (too-many-locals)
Program Files\Python310\lib\random.py:729:16: C0183: Variable name "u1" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:729:16: C0183: Variable name "v" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:733:16: C0183: Variable name "x" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:734:16: C0183: Variable name "y" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:735:16: C0183: Variable name "z" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:736:16: C0183: Variable name "w" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:746:16: C0183: Variable name "u" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:749:16: C0183: Variable name "v" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:750:16: C0183: Variable name "p" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:752:20: C0183: Variable name "q" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:753:20: C0183: Variable name "r" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:755:16: C0183: Variable name "u1" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:698:4: R0912: Too many branches (13/12) (too-many-branches)
Program Files\Python310\lib\random.py:785:8: C0183: Variable name "y1" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:794:8: C0183: Variable name "u" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:806:8: C0183: Variable name "v" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:810:3: R0904: Too many public methods (21/20) (too-many-public-methods)
Program Files\Python310\lib\random.py:831:8: C0183: Variable name "x" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:840:9: W0613: Unused argument "args" (unused-argument)
Program Files\Python310\lib\random.py:840:9: W0613: Unused argument "kwargs" (unused-argument)
Program Files\Python310\lib\random.py:886:8: C0183: Argument name "n" doesn't conform to snake_case naming style (invalid-name)
Program Files\Python310\lib\random.py:887:4: C0415: Import outside top-level (statistics.stdev, statistics.fmean) (import-outside-toplevel)
Program Files\Python310\lib\random.py:888:4: C0415: Import outside top-level (time.perf_counter) (import-outside-toplevel)
```



```
Command Prompt
C:\Program Files\Python310\lib\random.py:586:12: C0103: Variable name "z" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:591:4: C0103: Argument name "mu" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:601:8: W0611: Redefining name "random" from outer scope (line 859) (redefined-outer-name)
C:\Program Files\Python310\lib\random.py:619:8: C0103: Variable name "z" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:624:12: C0103: Variable name "z" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:639:4: C0103: Argument name "mu" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:656:4: C0103: Argument name "mu" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:672:8: W0621: Redefining name "random" from outer scope (line 859) (redefined-outer-name)
C:\Program Files\Python310\lib\random.py:676:8: C0103: Variable name "s" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:677:8: C0103: Variable name "r" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:680:12: C0103: Variable name "ul" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:681:12: C0103: Variable name "z" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:683:12: C0103: Variable name "d" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:684:12: C0103: Variable name "u2" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:688:8: C0103: Variable name "q" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:689:8: C0103: Variable name "f" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:690:8: C0103: Variable name "u3" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:717:8: W0621: Redefining name "random" from outer scope (line 859) (redefined-outer-name)
C:\Program Files\Python310\lib\random.py:698:4: R0914: Too many local variables (16/15) (too-many-locals)
C:\Program Files\Python310\lib\random.py:729:16: C0103: Variable name "u1" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:732:16: C0103: Variable name "u2" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:733:16: C0103: Variable name "v" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:734:16: C0103: Variable name "z" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:735:16: C0103: Variable name "z" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:736:16: C0103: Variable name "n" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:748:16: C0103: Variable name "d" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:749:16: C0103: Variable name "b" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:750:16: C0103: Variable name "p" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:752:20: C0103: Variable name "x" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:754:20: C0103: Variable name "x" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:698:4: R0912: Too many branches (13/12) (too-many-branches)
C:\Program Files\Python310\lib\random.py:785:8: C0103: Variable name "y" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:805:8: C0103: Variable name "u" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:103:0: R0904: Too many public methods (21/20) (too-many-public-methods)
C:\Program Files\Python310\lib\random.py:840:0: C0103: Variable name "x" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:840:0: W0613: Unused argument "args" (unused-argument)
C:\Program Files\Python310\lib\random.py:840:0: W0613: Unused argument "kuds" (unused-argument)
C:\Program Files\Python310\lib\random.py:880:0: C0103: Argument name "n" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:887:4: C0415: Import outside toplevel (statistics.stdev, statistics.fmean) (import-outside-toplevel)
C:\Program Files\Python310\lib\random.py:888:4: C0415: Import outside toplevel (time.perf_counter) (import-outside-toplevel)
C:\Program Files\Python310\lib\random.py:890:4: C0103: Variable name "is" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:892:4: C0103: Variable name "tl" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:903:0: C0103: Argument name "n" doesn't conform to snake_case naming style (invalid-name)
C:\Program Files\Python310\lib\random.py:905:4: E1101: Module "os" has no "register_at_fork" member (no-member)
C:\Program Files\Python310\lib\random.py:55:0: C0411: standard import "from itertools import accumulate as _accumulate, repeat as _repeat" should be placed before "from collections_abc import Set as _Set, Sequence as _Sequence" (wrong-import-order)
C:\Program Files\Python310\lib\random.py:56:0: C0411: standard import "from bisect import bisect as _bisect" should be placed before "from collections_abc import Set as _Set, Sequence as _Sequence" (wrong-import-order)
C:\Program Files\Python310\lib\random.py:57:0: C0411: standard import "import os as _os" should be placed before "from collections_abc import Set as _Set, Sequence as _Sequence" (wrong-import-order)

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Your code has been rated at 7.56/10

C:\stanalysis>
```

this file had much less errors compared to other files I analysed.

File 6 -> source-code

```
Command Prompt
C:\Program Files\Python310\lib\random.py:56:0: C0411: standard import "from bisect import bisect as _bisect" should be placed before "from collections_abc import Set as _Set, Sequence as _Sequence" (wrong-import-order)
C:\Program Files\Python310\lib\random.py:57:0: C0411: standard import "import os as _os" should be placed before "from collections_abc import Set as _Set, Sequence as _Sequence" (wrong-import-order)

-----
Your code has been rated at 7.56/10

C:\stanalysis>py -m pylint source-code.py
***** Module source-code
source-code.py:43:0: W0311: Bad indentation. Found 8 spaces, expected 4 (bad-indentation)
source-code.py:44:0: C0301: line too long (110/100) (line-too-long)
source-code.py:44:0: W0311: Bad indentation. Found 12 spaces, expected 8 (bad-indentation)
source-code.py:110: C0103: Module name "source-code" doesn't conform to snake_case naming style (invalid-name)
source-code.py:163:0: E0401: Unable to import "pyaudio" (import-error)
source-code.py:19:0: E0401: Unable to import "numpy" (import-error)
source-code.py:20:0: E0401: Unable to import "matplotlib.pyplot" (import-error)
source-code.py:25:0: W0104: Statement seems to have no effect (pointless-statement)
source-code.py:80:0: C0103: Constant name "frame_count" doesn't conform to UPPER_CASE naming style (invalid-name)
source-code.py:17:0: W0611: Unused import os (unused-import)
source-code.py:17:0: C0411: standard import "import os" should be placed before "import pyaudio" (wrong-import-order)
source-code.py:18:0: C0411: standard import "import struct" should be placed before "import pyaudio" (wrong-import-order)
source-code.py:21:0: C0411: standard import "import time" should be placed before "import pyaudio" (wrong-import-order)
source-code.py:22:0: C0411: standard import "from tkinter import TclError" should be placed before "import pyaudio" (wrong-import-order)

-----
Your code has been rated at 4.47/10

C:\stanalysis>
```

source-code.py:44:0: W0311: Bad indentation. Found 12 spaces, expected 8 (bad-indentation)

source-code.py:1:0: C0103: Module name "source-code" doesn't conform to snake_case naming style (invalid-name)

error related to above 2 bad indentation and invalid name can be resolved easily.