# Course : IT314

## Lab 5 -  Static Analysis

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Topic : Static analysis

Steps to analyze the python :

- First we install the pylint in windows using command `pip3 install pylint`

- Then check the version of pylint using pylint --version

- Now to check error in our files we will use pylint tool

- We will run the command py -m pylint maingame.py

- Now we will see , what are errors , some errors which I found were undefined variable , constant name .

Repository used by me to download to check error
   ● First file i checked error is mygame.py its rating was 5.07 /10

```
C:\Users\student\Desktop\game>pylint maingame.py
'pylint' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\student\Desktop\game>py -m pylint maingame.py
************** Module maingame
maingame.py:169:0: C0303: Trailing whitespace (trailing-whitespace)
maingame.py:9:0: W0622: Redefining built-in 'exit' (redefined-builtin)
maingame.py:8:0: E0401: Unable to import 'pygame' (import-error)
maingame.py:10:0: E0401: Unable to import 'pygame.locals' (import-error)
maingame.py:10:0: W0401: Wildcard import pygame.locals (wildcard-import)
maingame.py:11:0: W0401: Wildcard import gameRole (wildcard-import)
maingame.py:35:0: C0103: Constant name "filename" doesn't conform to UPPER_CASE naming style (inva
maingame.py:67:0: C0103: Constant name "shoot_frequency" doesn't conform to UPPER_CASE naming sty
maingame.py:68:0: C0103: Constant name "enemy_frequency" doesn't conform to UPPER_CASE naming sty
maingame.py:70:0: C0103: Constant name "player_down_index" doesn't conform to UPPER_CASE naming s
maingame.py:72:0: C0103: Constant name "score" doesn't conform to UPPER_CASE naming style (invalid
maingame.py:76:0: C0103: Constant name "running" doesn't conform to UPPER_CASE naming style (inva
maingame.py:89:12: C0103: Constant name "shoot_frequency" doesn't conform to UPPER_CASE naming sty
maingame.py:98:8: C0103: Constant name "enemy_frequency" doesn't conform to UPPER_CASE naming sty
maingame.py:138:12: C0103: Constant name "running" doesn't conform to UPPER_CASE naming style (in
maingame.py:174:23: E0602: Undefined variable 'K_w' (undefined-variable)
maingame.py:174:43: E0602: Undefined variable 'K_UP' (undefined-variable)
maingame.py:176:23: E0602: Undefined variable 'K_s' (undefined-variable)
maingame.py:176:43: E0602: Undefined variable 'K_DOWN' (undefined-variable)
maingame.py:178:23: E0602: Undefined variable 'K_a' (undefined-variable)
maingame.py:178:43: E0602: Undefined variable 'K_LEFT' (undefined-variable)
maingame.py:180:23: E0602: Undefined variable 'K_d' (undefined-variable)
maingame.py:180:43: E0602: Undefined variable 'K_RIGHT' (undefined-variable)
maingame.py:9:0: C0411: standard import "from sys import exit" should be placed before "import pyg
maingame.py:12:0: C0411: standard import "import random" should be placed before "import pygame" (
maingame.py:11:0: W0614: Unused import(s) TYPE_SMALL, TYPE_MIDDLE, TYPE_BIG and Bullet from wildca

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Your code has been rated at 5.07/10

C:\Users\student\Desktop\game>
```

We found many , unwanted errors like undefined variables .

- Then checked another file , whose rating was

```
C:\Users\student\Desktop\game>py -m pylint gamerole.py
************* Module gamerole
gamerole.py:74:0: W0311: Bad indentation. Found 7 spaces, expected 8 (bad-indentation)
gamerole.py:75:0: W0311: Bad indentation. Found 7 spaces, expected 8 (bad-indentation)
gamerole.py:76:0: W0311: Bad indentation. Found 7 spaces, expected 8 (bad-indentation)
gamerole.py:77:0: W0311: Bad indentation. Found 7 spaces, expected 8 (bad-indentation)
gamerole.py:78:0: W0311: Bad indentation. Found 7 spaces, expected 8 (bad-indentation)
gamerole.py:79:0: W0311: Bad indentation. Found 7 spaces, expected 8 (bad-indentation)
gamerole.py:80:0: W0311: Bad indentation. Found 7 spaces, expected 8 (bad-indentation)
gamerole.py:83:0: C0304: Final newline missing (missing-final-newline)
gamerole.py:8:0: E0401: Unable to import 'pygame' (import-error)
gamerole.py:18:0: C0115: Missing class docstring (missing-class-docstring)
gamerole.py:26:4: C0116: Missing function or method docstring (missing-function-docstrin
gamerole.py:18:0: R0903: Too few public methods (1/2) (too-few-public-methods)
gamerole.py:30:0: C0115: Missing class docstring (missing-class-docstring)
gamerole.py:34:8: C0200: Consider using enumerate instead of iterating with range and le
gamerole.py:43:4: C0116: Missing function or method docstring (missing-function-docstrin
gamerole.py:47:4: C0116: Missing function or method docstring (missing-function-docstrin
gamerole.py:47:4: C0103: Method name "moveUp" doesn't conform to snake_case naming style
gamerole.py:53:4: C0116: Missing function or method docstring (missing-function-docstrin
gamerole.py:53:4: C0103: Method name "moveDown" doesn't conform to snake_case naming sty
gamerole.py:59:4: C0116: Missing function or method docstring (missing-function-docstrin
gamerole.py:59:4: C0103: Method name "moveLeft" doesn't conform to snake_case naming sty
gamerole.py:65:4: C0116: Missing function or method docstring (missing-function-docstrin
gamerole.py:65:4: C0103: Method name "moveRight" doesn't conform to snake_case naming st
gamerole.py:72:0: C0115: Missing class docstring (missing-class-docstring)
gamerole.py:82:4: C0116: Missing function or method docstring (missing-function-docstrin
gamerole.py:72:0: R0903: Too few public methods (1/2) (too-few-public-methods)

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Your code has been rated at 4.74/10


C:\Users\student\Desktop\game>
```

- Get syntax error on file

```
C:\Users\student\Desktop\game>py -m pylint maingame.py
************* Module maingame
maingame.py:41:31: E0001: Parsing failed: ''(' was never closed (<unknown>, line 41)' (syntax-error)

C:\Users\student\Desktop\game>
```

- Got another error on gamr.py file

```
C:\Users\student\Desktop\game>py -m pylint maingame.py
*************** Module maingame
maingame.py:41:31: E0001: Parsing failed: ''(' was never closed (<unknown>, line 41)' (synta

C:\Users\student\Desktop\game>py -m pylint gamerole.py
*************** Module gamerole
gamerole.py:74:0: W0311: Bad indentation. Found 7 spaces, expected 8 (bad-indentation)
gamerole.py:75:0: W0311: Bad indentation. Found 7 spaces, expected 8 (bad-indentation)
gamerole.py:76:0: W0311: Bad indentation. Found 7 spaces, expected 8 (bad-indentation)
gamerole.py:77:0: W0311: Bad indentation. Found 7 spaces, expected 8 (bad-indentation)
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gamerole.py:79:0: W0311: Bad indentation. Found 7 spaces, expected 8 (bad-indentation)
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gamerole.py:26:4: C0116: Missing function or method docstring (missing-function-docstring)
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gamerole.py:30:0: C0115: Missing class docstring (missing-class-docstring)
gamerole.py:34:8: C0200: Consider using enumerate instead of iterating with range and len (c
gamerole.py:43:4: C0116: Missing function or method docstring (missing-function-docstring)
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gamerole.py:53:4: C0116: Missing function or method docstring (missing-function-docstring)
gamerole.py:53:4: C0103: Method name "moveDown" doesn't conform to snake_case naming style (
gamerole.py:59:4: C0116: Missing function or method docstring (missing-function-docstring)
gamerole.py:59:4: C0103: Method name "moveLeft" doesn't conform to snake_case naming style (
gamerole.py:65:4: C0116: Missing function or method docstring (missing-function-docstring)
gamerole.py:65:4: C0103: Method name "moveRight" doesn't conform to snake_case naming style
gamerole.py:72:0: C0115: Missing class docstring (missing-class-docstring)
gamerole.py:82:4: C0116: Missing function or method docstring (missing-function-docstring)
gamerole.py:72:0: R0903: Too few public methods (1/2) (too-few-public-methods)

------------------------------------------------------------
Your code has been rated at 4.74/10 (previous run: 4.74/10, +0.00)
```