

Software Engineering

Lab 5

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HOW TO USE PYLINT

Steps for Static Analysis

For the exercise we are using PyLint for performing the static analysis:

Installation & Analysis

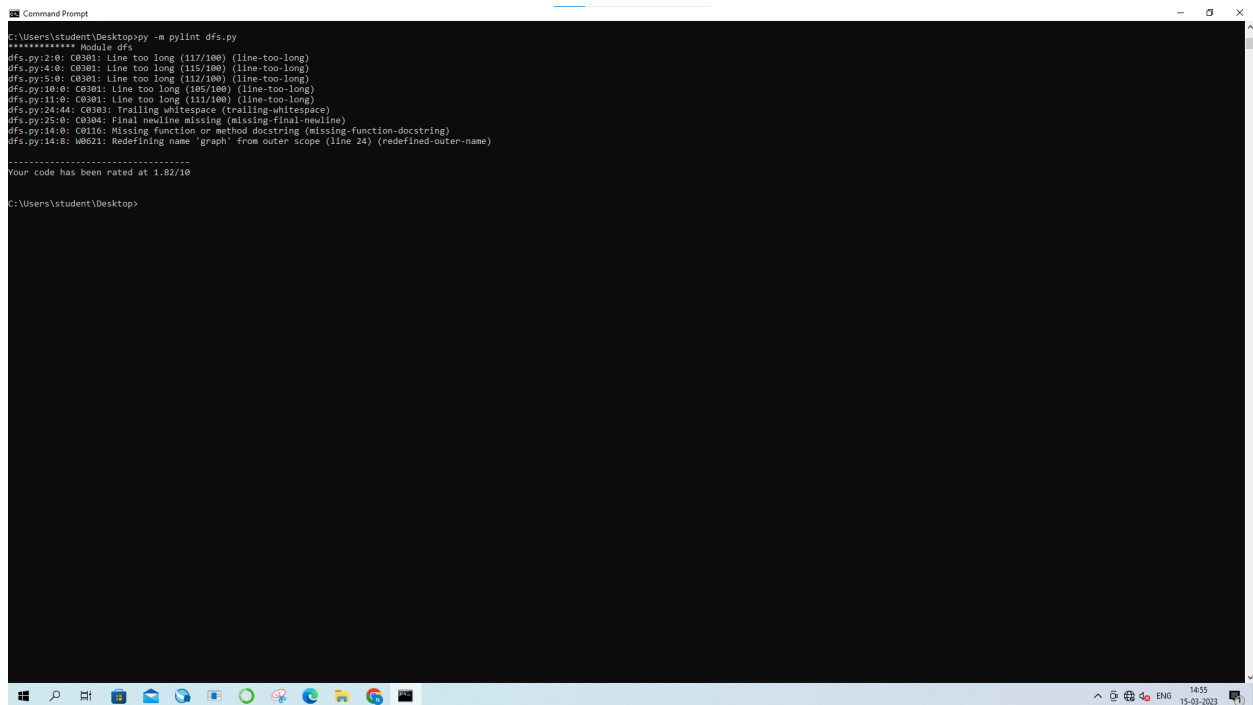
- First run the command prompt
- Enter the command “ pip install pylint”
- After successful installation of pylint, change the directory to the folder with all the files which have to be static analyzed.
- Run the files with the help of command prompt by entering the command “py -m pylint filename.py”

GITHUB:

<https://github.com/anantkaushik/Data-Structures-and-Algorithms>

ANALYSIS:

1) Running static analysis on file dfs.py



```
Command Prompt
C:\Users\student\Desktop>py -m pylint dfs.py
***** Module dfs
dfs.py:2:0: C0301: Line too long (117/100) (line-too-long)
dfs.py:4:0: C0301: Line too long (115/100) (line-too-long)
dfs.py:5:0: C0301: Line too long (112/100) (line-too-long)
dfs.py:10:0: C0301: Line too long (105/100) (line-too-long)
dfs.py:11:0: C0301: Line too long (111/100) (line-too-long)
dfs.py:24:44: C0303: Trailing whitespace (trailing-whitespace)
dfs.py:25:0: C0304: Final newline missing (missing-final-newline)
dfs.py:14:0: C0110: Missing function or method docstring (missing-function-docstring)
dfs.py:14:18: W0221: Redefining name 'graph' from outer scope (line 24) (redefined-outer-name)

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Your code has been rated at 1.82/10

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

2) Running static analysis on file linear-search.py

```
Command Prompt
C:\Users\student\Desktop>py -m pylint linear-search.py
***** Module linear-search
linear-search.py:4:0: C0301: line too long (105/100) (line-too-long)
linear-search.py:6:0: C0301: line too long (119/100) (line-too-long)
linear-search.py:23:0: C0304: Final newline missing (missing-final-newline)
linear-search.py:1:0: C0103: Module name "linear-search" doesn't conform to snake_case naming style (invalid-name)
linear-search.py:15:0: C0110: Missing function or method docstring (missing-function-docstring)
linear-search.py:15:0: C0103: Function name "linearSearch" doesn't conform to snake_case naming style (invalid-name)
linear-search.py:16:4: C0200: Consider using enumerate instead of iterating with range and len (consider-using-enumerate)

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Your code has been rated at 1.25/10

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

3) Running static analysis on file stack.py

```
Command Prompt
C:\Users\student\Desktop>py -m pylint stack.py
***** Module stack
stack.py:5:0: C0303: Trailing whitespace (trailing-whitespace)
stack.py:11:0: C0303: Trailing whitespace (trailing-whitespace)
stack.py:22:0: C0304: Final newline missing (missing-final-newline)
stack.py:1:0: C0114: Missing module docstring (missing-module-docstring)
stack.py:1:0: C0115: Missing class docstring (missing-class-docstring)
stack.py:3:4: C0116: Missing function or method docstring (missing-function-docstring)
stack.py:6:4: C0116: Missing function or method docstring (missing-function-docstring)
stack.py:7:4: R1705: Unnecessary "else" after "return", remove the "else" and de-indent the code inside it (no-else-return)
stack.py:6:4: R1710: Either all return statements in a function should return an expression, or none of them should. (inconsistent-return-statements)
stack.py:12:4: C0116: Missing function or method docstring (missing-function-docstring)

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Your code has been rated at 4.44/10

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

4) Running static analysis on file stack-using-linked-list.py

```
Command Prompt
C:\Users\student\Desktop>py -m pylint stack-using-linked-list.py
***** Module stack-using-linked-list
stack-using-linked-list.py:3:0: W0311: Bad indentation. Found 7 spaces, expected 8 (bad-indentation)
stack-using-linked-list.py:4:0: W0311: Bad indentation. Found 7 spaces, expected 8 (bad-indentation)
stack-using-linked-list.py:9:0: C0303: Trailing whitespace (trailing-whitespace)
stack-using-linked-list.py:17:0: C0303: Trailing whitespace (trailing-whitespace)
stack-using-linked-list.py:24:0: C0303: Trailing whitespace (trailing-whitespace)
stack-using-linked-list.py:30:0: C0304: Final newline missing (missing-final-newline)
stack-using-linked-list.py:1:0: C0114: Missing module docstring (missing-module-docstring)
stack-using-linked-list.py:1:0: C0103: Module name 'stack-using-linked-list' doesn't conform to snake_case naming style (invalid-name)
stack-using-linked-list.py:1:0: C0115: Missing class docstring (missing-class-docstring)
stack-using-linked-list.py:1:0: R0903: Too few public methods (0/2) (too-few-public-methods)
stack-using-linked-list.py:0: C0115: Missing class docstring (missing-class-docstring)
stack-using-linked-list.py:10:4: C0116: Missing function or method docstring (missing-function-docstring)
stack-using-linked-list.py:14:12: C0103: Variable name 'newNode' doesn't conform to snake_case naming style (invalid-name)
stack-using-linked-list.py:18:4: C0116: Missing function or method docstring (missing-function-docstring)
stack-using-linked-list.py:25:4: C0116: Missing function or method docstring (missing-function-docstring)
stack-using-linked-list.py:27:14: C0121: Comparison 'temp != None' should be 'temp is not None' (singleton-comparison)

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Your code has been rated at 5.00/10

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

5) Running static analysis on file trie.py

```
Command Prompt
C:\Users\student\Desktop>py -m pylint trie.py
***** Module trie
trie.py:2:0: C0301: Line too long (125/100) (line-too-long)
trie.py:4:0: C0301: Line too long (139/100) (line-too-long)
trie.py:5:0: C0301: Line too long (118/100) (line-too-long)
trie.py:7:0: C0301: Line too long (159/100) (line-too-long)
trie.py:8:0: C0301: Line too long (158/100) (line-too-long)
trie.py:9:0: C0301: Line too long (160/100) (line-too-long)
trie.py:10:0: C0301: Line too long (159/100) (line-too-long)
trie.py:12:0: C0301: Line too long (163/100) (line-too-long)
trie.py:13:0: C0301: Line too long (159/100) (line-too-long)
trie.py:15:0: C0301: Line too long (135/100) (line-too-long)
trie.py:16:0: C0303: Trailing whitespace (trailing-whitespace)
trie.py:18:0: C0304: Final newline missing (missing-final-newline)
trie.py:18:0: C0115: Missing class docstring (missing-class-docstring)
trie.py:23:4: C0116: Missing function or method docstring (missing-function-docstring)
trie.py:25:12: C0103: Variable name 'c' doesn't conform to snake_case naming style (invalid-name)
trie.py:31:4: C0116: Missing function or method docstring (missing-function-docstring)
trie.py:33:12: C0103: Variable name 'c' doesn't conform to snake_case naming style (invalid-name)
trie.py:43:4: C0116: Missing function or method docstring (missing-function-docstring)
trie.py:43:4: C0103: Method name 'startswith' doesn't conform to snake_case naming style (invalid-name)
trie.py:45:12: C0103: Variable name 'c' doesn't conform to snake_case naming style (invalid-name)

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Your code has been rated at 3.94/10

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

