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Stevens Institute of Technology

HW05: Static Code Analysis

Course: SSW−567

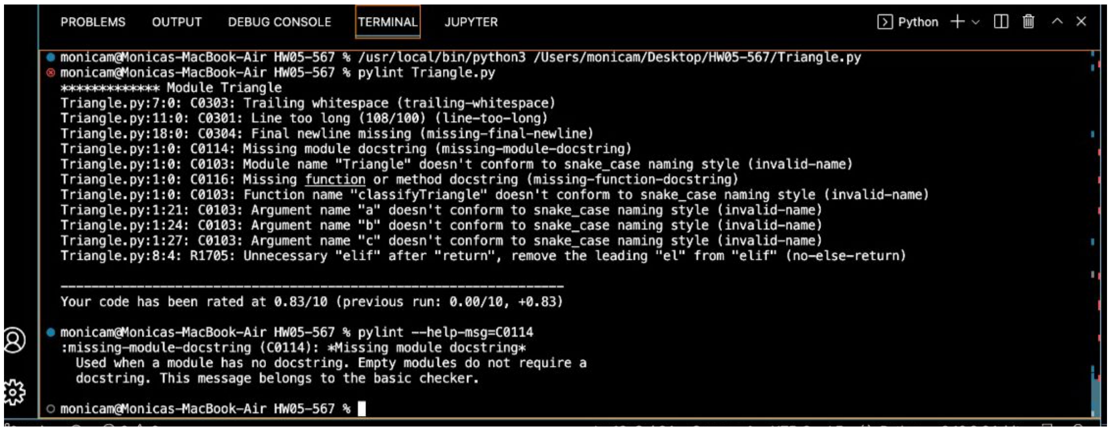
Summary:

The code was changed to make it more legible and executable by eliminating any superfluous spaces, indentation, and variable renaming after the code analyzer was performed on the original program. Once this was finished, the static value was full. Consequently, 92% of the population was covered.

1. The GitHub URL of this code which is analyzed is:
   ➔ https://github.com/Monicaprojects21/HW05-567.git

2. The name and output of the static code analyzer tool you used:
   ➔ The tool used for static code analyzer is **Pylint** and **Coverage**

Initial Output (Before making the changes to code)

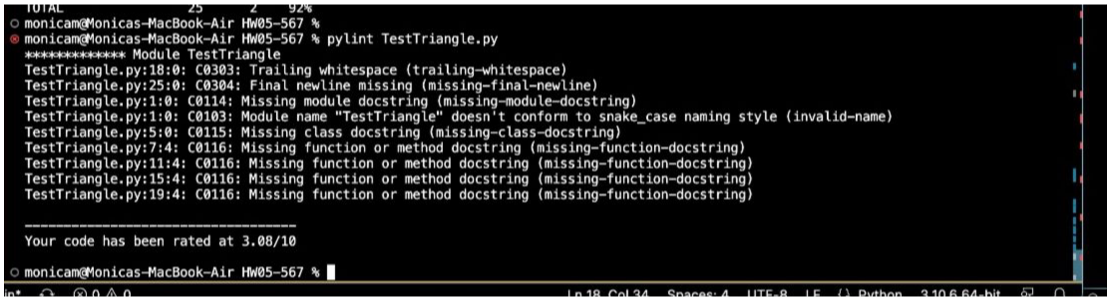


```
monicam@Monicas-MacBook-Air HW05-567 % /usr/local/bin/python3 /Users/monicam/Desktop/HW05-567/Triangle.py
monicam@Monicas-MacBook-Air HW05-567 % pylint Triangle.py
************* Module Triangle
Triangle.py:7:0: C0303: Trailing whitespace (trailing-whitespace)
Triangle.py:11:0: C0301: Line too long (108/100) (line-too-long)
Triangle.py:18:0: C0304: Final newline missing (missing-final-newline)
Triangle.py:1:0: C0114: Missing module docstring (missing-module-docstring)
Triangle.py:1:0: C0103: Module name "Triangle" doesn't conform to snake_case naming style (invalid-name)
Triangle.py:1:0: C0116: Missing function or method docstring (missing-function-docstring)
Triangle.py:1:0: C0103: Function name "classifyTriangle" doesn't conform to snake_case naming style (invalid-name)
Triangle.py:1:21: C0103: Argument name "a" doesn't conform to snake_case naming style (invalid-name)
Triangle.py:1:24: C0103: Argument name "b" doesn't conform to snake_case naming style (invalid-name)
Triangle.py:1:27: C0103: Argument name "c" doesn't conform to snake_case naming style (invalid-name)
Triangle.py:8:4: R1705: Unnecessary "elif" after "return", remove the leading "el" from "elif" (no-else-return)

------------------------------------------------------------------
Your code has been rated at 0.83/10 (previous run: 0.00/10, +0.83)

monicam@Monicas-MacBook-Air HW05-567 % pylint --help-msg=C0114
:missing-module-docstring (C0114): *Missing module docstring*
  Used when a module has no docstring. Empty modules do not require a
  docstring. This message belongs to the basic checker.

monicam@Monicas-MacBook-Air HW05-567 % 
```



```
TOTAL                  25      2    92%
monicam@Monicas-MacBook-Air HW05-567 %
monicam@Monicas-MacBook-Air HW05-567 % pylint TestTriangle.py
************* Module TestTriangle
TestTriangle.py:18:0: C0303: Trailing whitespace (trailing-whitespace)
TestTriangle.py:25:0: C0304: Final newline missing (missing-final-newline)
TestTriangle.py:1:0: C0114: Missing module docstring (missing-module-docstring)
TestTriangle.py:1:0: C0103: Module name "TestTriangle" doesn't conform to snake_case naming style (invalid-name)
TestTriangle.py:5:0: C0115: Missing class docstring (missing-class-docstring)
TestTriangle.py:7:4: C0116: Missing function or method docstring (missing-function-docstring)
TestTriangle.py:11:4: C0116: Missing function or method docstring (missing-function-docstring)
TestTriangle.py:15:4: C0116: Missing function or method docstring (missing-function-docstring)
TestTriangle.py:19:4: C0116: Missing function or method docstring (missing-function-docstring)

-----------------------------------
Your code has been rated at 3.08/10

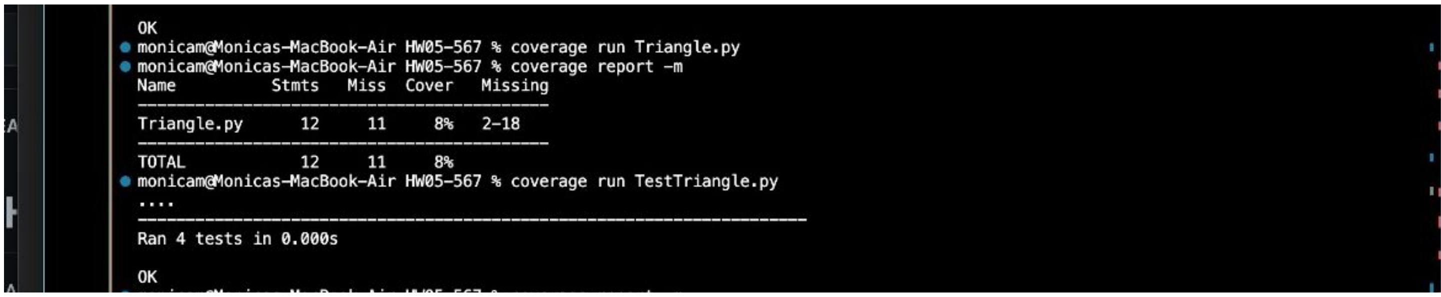
monicam@Monicas-MacBook-Air HW05-567 % 
```

I used certain commands for output.
monicam@Monicas-MacBook-Air HW05-567 % pylint Triangle.py

monicam@Monicas-MacBook-Air HW05-567 % pylint TestTriangle.py

The name and output of the code coverage tool you used:

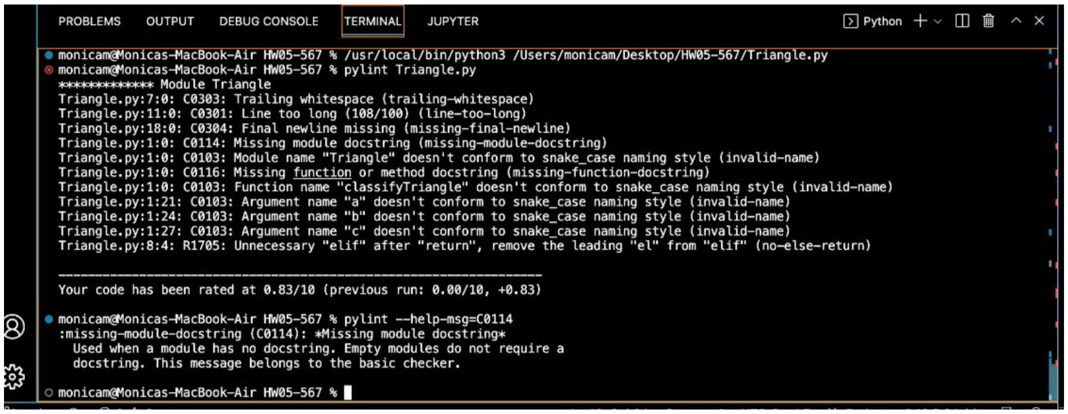
➔ The tool used is coverage.py Initial: The initial coverage was 8% for the actual code. For the command
monicam@Monicas-MacBook-Air HW05-567 % coverage run Triangle.py
monicam@Monicas-MacBook-Air HW05-567 % coverage report -m



```
OK
monicam@Monicas-MacBook-Air HW05-567 % coverage run Triangle.py
monicam@Monicas-MacBook-Air HW05-567 % coverage report -m
Name          Stmts   Miss  Cover   Missing
-------------------------------------------
Triangle.py      12     11     8%   2-18
-------------------------------------------
TOTAL            12     11     8%
monicam@Monicas-MacBook-Air HW05-567 % coverage run TestTriangle.py
....
----------------------------------------------------------------------
Ran 4 tests in 0.000s

OK
```

Final: The final coverage is 92%, covering all the test cases. For the command
monicam@Monicas-MacBook-Air HW05-567 % coverage run TestTriangle.py
monicam@Monicas-MacBook-Air HW05-567 % coverage report -m



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monicam@Monicas-MacBook-Air HW05-567 % 
```

3. Attach screen shots of the output of the static code analyzer as well as code coverage. You should show a screenshot of the analysis results both before and after any changes that you make to your programs:

> The before-and-after screenshots of the static code analysis and code coverage are sent as an attachment. Additionally, I used the git URL to publish this assignment to the new repository specified above.

4. Identify both your original test cases and new test cases that you created to achieve at least 80% code coverage.
> Our first request stated that we should make the code 100% efficient, therefore we fixed our code to be more efficient than 80%. After testing the new code against the test cases, we were able to achieve coverage of more than 92%. A 92% efficiency was attained. There was no need to develop additional test cases after I thoroughly tested the program with the Assignment's several tests cases. Making the necessary code corrections and then posting that everything was functioning properly was what I found to be effective.