

TCSS502\_Assignment4 ~/PyCharm

- src
  - Circle.py
  - DrawingProgram.py
  - DrawingProgramIterator.py
  - DrawingProgramMain.py
  - Rectangle.py
  - Shape.py
  - ShapeFactory.py
  - Square.py
  - Triangle.py
- tst
  - DrawingProgram\_tests.py
  - DrawingProgramIterator\_tests.py
  - ShapeFactory\_tests.py
  - Shapes\_tests.py
- venv
  - bin
  - lib
  - .gitignore
  - .Python
  - pyvenv.cfg

```
1 import unittest
2
3 from src.DrawingProgram import DrawingProgram
4 from src.ShapeFactory import ShapeFactory
5
6 new *
7 class DrawingProgramIteratorTest(unittest.TestCase):
8     """
9     This class tests functionality DrawingProgramIterator class.
10    """
11    new *
12    def test_iterator_no_shapes(self):
13        """Test created DrawingProgram can be looped through for no shape case"""
14        drawing_program = DrawingProgram()
15        iter_1 = drawing_program.__iter__()
16        for item in drawing_program:
17            self.assertEqual(item, next(iter_1), "test for loop through drawing_program not equal expected next item")
18
19 DrawingProgramIteratorTest > test_iterator_no_shapes()
```

Run: Python tests for DrawingProgramIterator\_tests.Drawing... x

Tests passed: 3 of 3 tests - 0ms

Test Results 0ms

/Users/candice/PycharmProjects/TCSS502\_Assignment4/venv/bin/python /Applications/PyCharm CE.app/Contents/plugins/python-test/PythonTestRunner.py -m unittest DrawingProgramIterator\_tests.DrawingProgramIteratorTest in /User

Testing started at 12:53 PM ...

Launching unittests with arguments python -m unittest DrawingProgramIterator\_tests.DrawingProgramIteratorTest in /User

Ran 3 tests in 0.001s

OK

The screenshot displays the PyCharm IDE interface. On the left, the Project Explorer shows a project named 'TCSS502\_Assignment4' with a 'src' directory containing various Python files and a 'tst' directory containing test files. The 'DrawingProgram\_tests.py' file is selected. The main editor shows the code for 'DrawingProgramTests', which imports 'unittest' and 'DrawingProgram', and defines a test class with a test method 'test\_init\_default\_list'. The bottom panel shows the 'Run' output, indicating that 18 tests passed in 0.004s.

```
1 import unittest
2 from _ctypes_test import func
3 from unittest.mock import patch
4
5 from src.DrawingProgram import DrawingProgram
6 from src.ShapeFactory import ShapeFactory
7
8
9 class DrawingProgramTests(unittest.TestCase):
10     """
11     This class tests a great deal of the functionality provided by the DrawingProgram class.
12     """
13
14     def test_init_default_list(self):
15         """Tests to see the default list is empty"""
16         drawing_program = DrawingProgram()
17         self.assertEqual([], drawing_program.list_of_shapes, "default list not set to empty list")
```

Run: Python tests for DrawingProgram\_tests.DrawingProgra... x

Tests passed: 18 of 18 tests – 0 ms

Test Results 0ms

/Users/candice/PycharmProjects/TCSS502\_Assignment4/venv/bin/python /Applications/PyCharm CE.app/Contents/plugins/python-test/PythonTestRunner.py --junit4 /Users/candice/PycharmProjects/TCSS502\_Assignment4/tst/DrawingProgram\_tests.py

Testing started at 12:53 PM ...

Launching unittests with arguments python -m unittest DrawingProgram\_tests.DrawingProgramTests in /Users/candice/PycharmProjects/TCSS502\_Assignment4

Ran 18 tests in 0.004s

OK

The screenshot displays the PyCharm IDE interface. On the left, the Project Explorer shows a project named 'TCSS502\_Assignment4' with a virtual environment 'venv'. The 'src' directory contains files for shapes and a drawing program, while the 'tst' directory contains test files. The 'ShapeFactory\_tests.py' file is selected and open in the editor.

```
1 import unittest
2
3 from src.Circle import Circle
4 from src.Rectangle import Rectangle
5 from src.ShapeFactory import ShapeFactory
6 from src.Square import Square
7 from src.Triangle import Triangle
8
9
10 new *
11 class ShapeFactoryTests(unittest.TestCase):
12     """
13     This class tests functionality ShapeFactory class.
14     """
15     new *
16     def test_create_circle_with_valid_argument(self):
17         """Test created circle with valid argument should succeed"""
18         circle_one = ShapeFactory.create_shape("Circle", 1.0)
19         self.assertTrue(isinstance(circle_one, Circle))
20
```

Below the editor, the Run tool window shows the execution of the tests. The status bar indicates 'Tests passed: 9 of 9 tests - 0 ms'. The Test Results pane shows the output of the tests, including the command used to launch unittests and the final result: 'Ran 9 tests in 0.002s' and 'OK'.

Run: Python tests for ShapeFactory\_tests.ShapeFactoryTests

Tests passed: 9 of 9 tests - 0 ms

Test Results 0ms

/Users/candice/PycharmProjects/TCSS502\_Assignment4/venv/bin/python /Applications/PyCharm CE.app/Contents/plugins/python-test/python-test.py

Testing started at 12:54 PM ...

Launching unittests with arguments python -m unittest ShapeFactory\_tests.ShapeFactoryTests in /Users/candice/PycharmProjects/TCSS502\_Assignment4

Ran 9 tests in 0.002s

OK

