

PYTHON

Pytest unit testing

Objective:

Create test cases using pytest

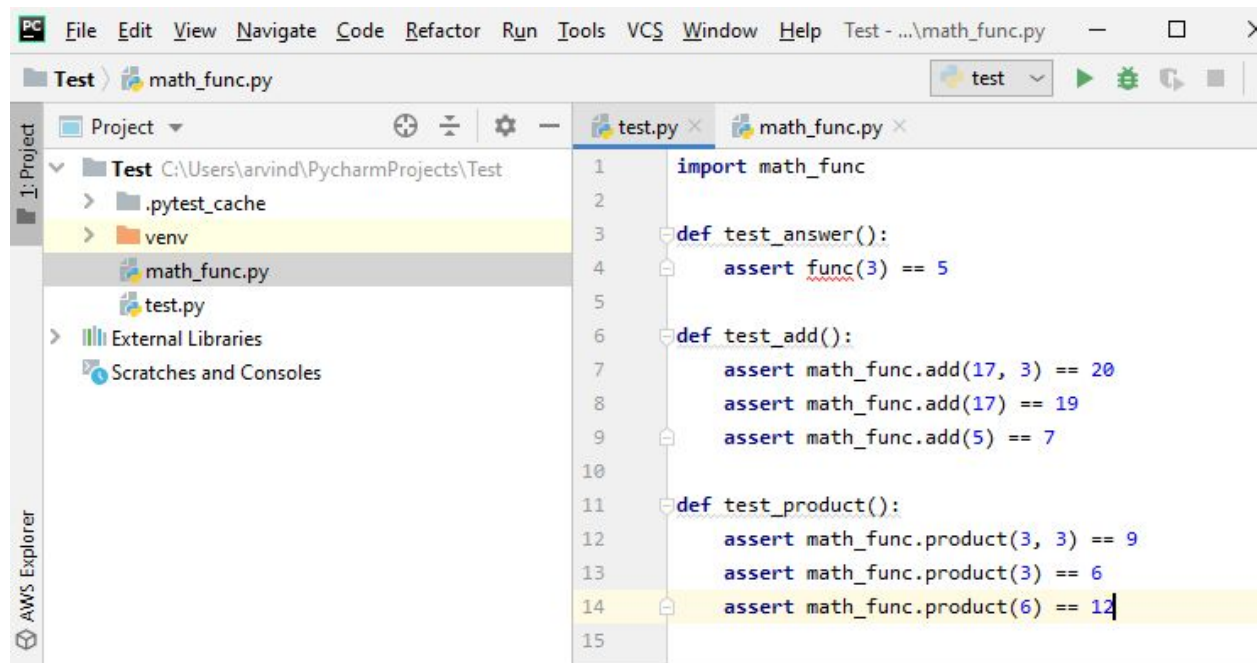
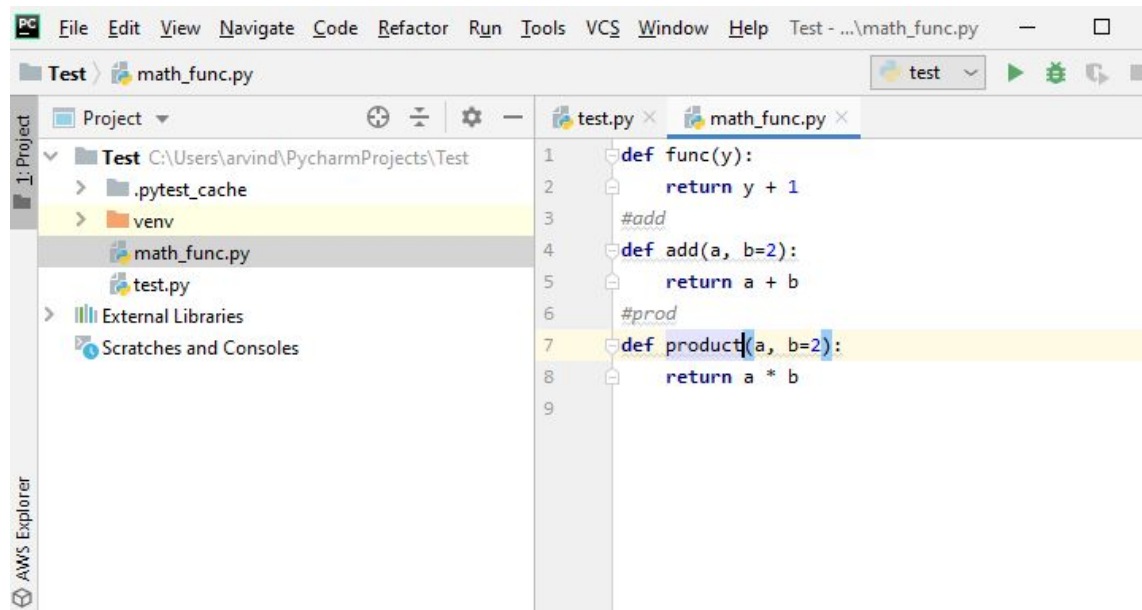
## Install Pytest

```
Command Prompt
C:\>easy_install -U pytest
Searching for pytest
Reading https://pypi.org/simple/pytest/
Downloading https://files.pythonhosted.org/packages/19/cf/711f1d887cb92c5155c9a1eb338f1b5d2411b50e4492a3b20e4a188a22
pytest-5.3.2-py3-none-any.whl#sha256=e41d489ff43948babd0fad7ad5e49b8735d5d55e26628a58673c39ff61d95de4
Best match: pytest 5.3.2
Processing pytest-5.3.2-py3-none-any.whl
Installing pytest-5.3.2-py3-none-any.whl to c:\users\arvind\appdata\local\programs\python\python38-32\lib\site-packa
writing requirements to c:\users\arvind\appdata\local\programs\python\python38-32\lib\site-packages\pytest-5.3.2-py3
egg\EGG-INFO\requires.txt
Adding pytest 5.3.2 to easy-install.pth file
Installing py.test-script.py script to c:\users\arvind\appdata\local\programs\python\python38-32\Scripts
Installing py.test.exe script to c:\users\arvind\appdata\local\programs\python\python38-32\Scripts
Installing py.test.exe.manifest script to c:\users\arvind\appdata\local\programs\python\python38-32\Scripts
Installing pytest-script.py script to c:\users\arvind\appdata\local\programs\python\python38-32\Scripts
Installing pytest.exe script to c:\users\arvind\appdata\local\programs\python\python38-32\Scripts
Installing pytest.exe.manifest script to c:\users\arvind\appdata\local\programs\python\python38-32\Scripts
Installed c:\users\arvind\appdata\local\programs\python\python38-32\lib\site-packages\pytest-5.3.2-py3.8.egg
Processing dependencies for pytest
Searching for wcwidth
Reading https://pypi.org/simple/wcwidth/
Downloading https://files.pythonhosted.org/packages/7e/9f/526a6947247599b084ee5232e4f9190a38f398d7300d866af3ab571a5b
cwidth-0.1.7-py2.py3-none-any.whl#sha256=f4ebe71925af7b40a864553f761ed559b43544f8f71746c2d756c7fe788ade7c
Best match: wcwidth 0.1.7
Processing wcwidth-0.1.7-py2.py3-none-any.whl
Installing wcwidth-0.1.7-py2.py3-none-any.whl to c:\users\arvind\appdata\local\programs\python\python38-32\lib\site-
ages
Adding wcwidth 0.1.7 to easy-install.pth file
```

```
Command Prompt
Adding pyparsing 2.4.6 to easy-install.pth file

Installed c:\users\arvind\appdata\local\programs\python\python38-32\lib\site-packages\pyparsing-2.4.6-py3.8.e
gg
Finished processing dependencies for pytest
C:\>
```

Create two python files “math\_func” file and test file “test.py”



Execute the functions and verify output

```
Command Prompt
C:\>cd C:\Users\arvind\PycharmProjects\Test\test.py
The directory name is invalid.

C:\>cd Users\arvind\PycharmProjects\Test\test.py
The directory name is invalid.

C:\>cd Users

C:\Users>cd arvind

C:\Users\arvind>cd PycharmProjects

C:\Users\arvind\PycharmProjects>cd Test

C:\Users\arvind\PycharmProjects\Test>cd test.py
The directory name is invalid.

C:\Users\arvind\PycharmProjects\Test>pytest test.py
===== test session starts =====
platform win32 -- Python 3.8.1, pytest-5.3.2, py-1.8.1, pluggy-0.13.1
rootdir: C:\Users\arvind\PycharmProjects\Test
collected 3 items

test.py F..

===== FAILURES =====
test_answer
> def test_answer():
>     assert func(3) == 5
E       NameError: name 'func' is not defined

test.py:4: NameError
===== 1 failed, 2 passed in 0.88s =====

C:\Users\arvind\PycharmProjects\Test>
```

From the output, 1 test failed as  
func(3) was not defined in test.py file and  
The func(3) did not return 5.  
Hence, define the func(3) in test.py file and change the correct value in the program  
and execute it again.

```
C:\Users\arvind\PycharmProjects\Test>pytest test.py
===== test session starts =====
platform win32 -- Python 3.8.1, pytest-5.3.2, py-1.8.1, pluggy-0.13.1
rootdir: C:\Users\arvind\PycharmProjects\Test
collected 3 items

test.py ...

===== 3 passed in 1.84s =====

C:\Users\arvind\PycharmProjects\Test>
```

