

Activity: Jupyter Notebook Activity

The following task involves experimenting with pytest using the Python programming language. The pytest question should be completed in a Jupyter

Notebook Remember to save your work to your GitHub repository.

Copy the following code into a file named wallet.py:

```
# code source: https://semaphoreci.com/community/tutorials/testing-python-
applications-with-pytest
# wallet.py
class InsufficientAmount(Exception):
    pass

class Wallet(object):
    def __init__(self, initial_amount=0):
        self.balance = initial_amount

    def spend_cash(self, amount):
        if self.balance < amount:
            raise InsufficientAmount('Not enough available to spend
{}'.format(amount))
        self.balance -= amount

    def add_cash(self, amount):
        self.balance += amount
```

Copy the following code into a file named test_wallet.py:

```
# code source: https://semaphoreci.com/community/tutorials/testing-python-
applications-with-pytest
# test_wallet.py
import pytest
from wallet import Wallet, InsufficientAmount

def test_default_initial_amount():
    wallet = Wallet()
    assert wallet.balance == 0

def test_setting_initial_amount():
    wallet = Wallet(100)
    assert wallet.balance == 100

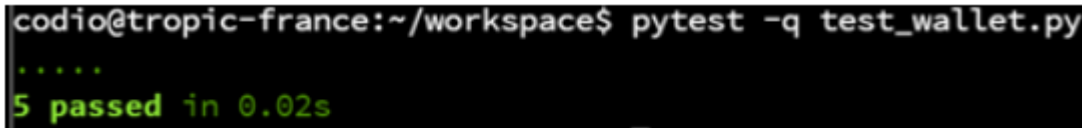
def test_wallet_add_cash():
    wallet = Wallet(10)
    wallet.add_cash(90)
    assert wallet.balance == 100

def test_wallet_spend_cash():
    wallet = Wallet(20)
    wallet.spend_cash(10)
    assert wallet.balance == 10

def test_wallet_spend_cash_raises_exception_on_insufficient_amount():
    wallet = Wallet()
```

```
with pytest.raises(InsufficientAmount):
    wallet.spend_cash(100)
```

Run the tests using the command: `$ pytest -q test_wallet.py` You should see the following output:

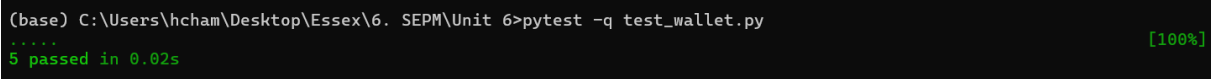


```
codio@tropic-france:~/workspace$ pytest -q test_wallet.py
.....
5 passed in 0.02s
```

Amend the code so that the tests fail.

Here is the repository for this exercise: https://github.com/hchamane/Activity_pytest

When I ran the original code; this was the result as expected:



```
(base) C:\Users\hcham\Desktop\Esex\6. SEPM\Unit 6>pytest -q test_wallet.py
..... [100%]
5 passed in 0.02s
```

Then I changed the code in wallet.py as shown below:

```
class InsufficientAmount(Exception):
    pass

class Wallet(object):
    def __init__(self, initial_amount=0):
        self.balance = initial_amount

    def spend_cash(self, amount):
        if self.balance < amount:
            raise InsufficientAmount('Not enough available to spend
{}'.format(amount))
            self.balance -= amount

    def add_cash(self, amount):
        self.balance += amount
```

And this was the output:

```
===== FAILURES =====
----- test_wallet_add_cash -----

def test_wallet_add_cash():
    wallet = Wallet(10)
    wallet.add_cash(90)
> assert wallet.balance == 100
E     assert -80 == 100
E     + where -80 = <wallet.Wallet object at 0x000001C86CA70D00>.balance

test_wallet.py:18: AssertionError
----- test_wallet_spend_cash -----

def test_wallet_spend_cash():
    wallet = Wallet(20)
    wallet.spend_cash(10)
> assert wallet.balance == 10
E     assert 30 == 10
E     + where 30 = <wallet.Wallet object at 0x000001C86CA72380>.balance

test_wallet.py:24: AssertionError
===== short test summary info =====
FAILED test_wallet.py::test_wallet_add_cash - assert -80 == 100
FAILED test_wallet.py::test_wallet_spend_cash - assert 30 == 10
2 failed, 3 passed in 0.18s
```