

Codio Activity - pytest

The following task involves experimenting with pytest using the Python programming language. The question is provided in the Codio workspace – pytest – where the activity should be completed. 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)
```

ran the tests using the command: `pytest -q test_wallet.py`

And got the following output:

```
codio@urgentgraph-quizturbo:~/workspace$ pytest -q test_wallet.py
..... [100%]
5 passed in 0.01 seconds
codio@urgentgraph-quizturbo:~/workspace$
```

Code was amended as below so that test fails:

terminal	test_wallet.py	×	wallet.py
1	import pytest		
2	from wallet import Wallet, InsufficientAmount		
3			
4	def test_default_initial_amount():		
5	wallet = Wallet()		
6	assert wallet.balance == 1		
7			
8	def test_setting_initial_amount():		
9	wallet = Wallet(100)		
10	assert wallet.balance == 200		
11			
12	def test_wallet_add_cash():		
13	wallet = Wallet(10)		
14	wallet.add_cash(90)		
15	assert wallet.balance == 125		
16			
17	def test_wallet_spend_cash():		
18	wallet = Wallet(20)		
19	wallet.spend_cash(10)		
20	assert wallet.balance == 12		
21			
22	def test_wallet_spend_cash_raises_exception_on_insufficient_amount():		
23	wallet = Wallet()		
24	with pytest.raises(InsufficientAmount):		
25	wallet.spend_cash(100)		

And ran the tests using the command: `pytest -q test_wallet.py`

And got the following output:

```
codio@urgentgraph-quizturbo:~/workspace$ pytest -q test_wallet.py
FFFF. [100%]
===== FAILURES =====
----- test_default_initial_amount -----

def test_default_initial_amount():
    wallet = Wallet()
>    assert wallet.balance == 1
E      assert 0 == 1
E      + where 0 = <wallet.Wallet object at 0x7f4ba4a986d0>.balance

test_wallet.py:6: AssertionError
----- test_setting_initial_amount -----

def test_setting_initial_amount():
    wallet = Wallet(100)
>    assert wallet.balance == 200
E      assert 100 == 200
E      + where 100 = <wallet.Wallet object at 0x7f4ba4cf5050>.balance

test_wallet.py:10: AssertionError
----- test_wallet_add_cash -----

def test_wallet_add_cash():
    wallet = Wallet(10)
    wallet.add_cash(90)
>    assert wallet.balance == 125
E      assert 100 == 125
E      + where 100 = <wallet.Wallet object at 0x7f4ba4d19d90>.balance

test_wallet.py:15: AssertionError
----- test_wallet_spend_cash -----

def test_wallet_spend_cash():
    wallet = Wallet(20)
    wallet.spend_cash(10)
>    assert wallet.balance == 12
E      assert 10 == 12
E      + where 10 = <wallet.Wallet object at 0x7f4ba4cf5150>.balance

test_wallet.py:20: AssertionError
4 failed, 1 passed in 0.08 seconds
codio@urgentgraph-quizturbo:~/workspace$
```