Labwork 12, PyTest

Exercise 1

```
Last login: Sat Dec 21 17:05:08 on console
You have new mail.
(base) maksimkolosov@MacBook-Pro-Maksim pytest_example % pytest
============================ test session starts ============================
platform darwin -- Python 3.12.4, pytest-7.4.4, pluggy-1.0.0
rootdir: /Users/maksimkolosov/Desktop/MastersStudies/ProgramEngineering/Webinar_
16_Labwork_12/pytest_example
plugins: anyio-4.2.0
collected 5 items

test/test_calculator.py .....                                        [100%]

============================ 5 passed in 0.03s ============================
(base) maksimkolosov@MacBook-Pro-Maksim pytest_example %
```

Mistake in test_add

```
(base) maksimkolosov@MacBook-Pro-Maksim pytest_example % pytest
============================ test session starts ============================
platform darwin -- Python 3.12.4, pytest-7.4.4, pluggy-1.0.0
rootdir: /Users/maksimkolosov/Desktop/MastersStudies/ProgramEngineering/Webinar_
16_Labwork_12/pytest_example
plugins: anyio-4.2.0
collected 5 items

test/test_calculator.py F....                                        [100%]

================================= FAILURES =================================
_____ test_add _____

    def test_add():
        assert calculator.add(2, 3) == 5
        assert calculator.add(-1, 1) == 0
>       assert calculator.add(-1, -1) == 2
E       assert -2 == 2
E        +  where -2 = <function add at 0x1026151c0>(-1, -1)
E        +    where <function add at 0x1026151c0> = calculator.add

test/test_calculator.py:12: AssertionError
========================= short test summary info =========================
FAILED test/test_calculator.py::test_add - assert -2 == 2
========================= 1 failed, 4 passed in 0.09s =========================
(base) maksimkolosov@MacBook-Pro-Maksim pytest_example %
```

Divide to zero:

```
======================== 1 failed, 4 passed in 0.09s ========================
[(base) maksimkolosov@MacBook-Pro-Maksim pytest_example % pytest            ]
=========================== test session starts ============================
platform darwin -- Python 3.12.4, pytest-7.4.4, pluggy-1.0.0
rootdir: /Users/maksimkolosov/Desktop/MastersStudies/ProgramEngineering/Webinar_
16_Labwork_12/pytest_example
plugins: anyio-4.2.0
collected 5 items

test/test_calculator.py ...F.                                        [100%]

================================ FAILURES ==================================
_____ test_divide _____

    def test_divide():
>       assert calculator.divide(10, 0) == 5

test/test_calculator.py:25:
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

a = 10, b = 0

    def divide(a, b):
        if b == 0:
>           raise ValueError("Cannot divide by zero")
E           ValueError: Cannot divide by zero

calculator.py:13: ValueError
========================= short test summary info ==========================
FAILED test/test_calculator.py::test_divide - ValueError: Cannot divide by zero
======================== 1 failed, 4 passed in 0.07s ========================
(base) maksimkolosov@MacBook-Pro-Maksim pytest_example % 
```

No mistakes again:

```
[(base) maksimkolosov@MacBook-Pro-Maksim pytest_example % pytest            ]
=========================== test session starts ============================
platform darwin -- Python 3.12.4, pytest-7.4.4, pluggy-1.0.0
rootdir: /Users/maksimkolosov/Desktop/MastersStudies/ProgramEngineering/Webinar_
16_Labwork_12/pytest_example
plugins: anyio-4.2.0
collected 5 items

test/test_calculator.py .....                                        [100%]

============================ 5 passed in 0.02s =============================
(base) maksimkolosov@MacBook-Pro-Maksim pytest_example % 
```

Exercise 2

```
Last login: Sat Dec 21 17:41:50 on ttys000
You have new mail.
[(base) maksimkolosov@MacBook-Pro-Maksim pytest_example2 % pytest            ]
=========================== test session starts ===========================
platform darwin -- Python 3.12.4, pytest-7.4.4, pluggy-1.0.0
rootdir: /Users/maksimkolosov/Desktop/MastersStudies/ProgramEngineering/Webinar_
16_Labwork_12/pytest_example2
plugins: anyio-4.2.0
collected 5 items

test/test_calculator.py .....                                      [100%]

============================ 5 passed in 0.02s ============================
(base) maksimkolosov@MacBook-Pro-Maksim pytest_example2 %
```

Exercise 3

```
Last login: Sat Dec 21 18:59:24 on ttys000
You have new mail.
[(base) maksimkolosov@MacBook-Pro-Maksim pytest_example3 % pytest            ]
=========================== test session starts ===========================
platform darwin -- Python 3.12.4, pytest-7.4.4, pluggy-1.0.0
rootdir: /Users/maksimkolosov/Desktop/MastersStudies/ProgramEngineering/Webinar_
16_Labwork_12/pytest_example3
plugins: anyio-4.2.0
collected 11 items

test/test_calculator.py ...........                                [100%]

============================ 11 passed in 0.03s ===========================
(base) maksimkolosov@MacBook-Pro-Maksim pytest_example3 %
```

Exercise 4

```
Last login: Sat Dec 21 19:02:30 on ttys000
You have new mail.
[(base) maksimkolosov@MacBook-Pro-Maksim pytest_example4 % pytest -m "not slow"  ]
============================ test session starts =============================
platform darwin -- Python 3.12.4, pytest-7.4.4, pluggy-1.0.0
rootdir: /Users/maksimkolosov/Desktop/MastersStudies/ProgramEngineering/Webinar_
16_Labwork_12/pytest_example4
plugins: anyio-4.2.0
collected 12 items / 1 deselected / 11 selected

test/test_calculator.py ...........                                     [100%]

============================= warnings summary ==============================
test/test_calculator.py:44
  /Users/maksimkolosov/Desktop/MastersStudies/ProgramEngineering/Webinar_16_Labw
ork_12/pytest_example4/test/test_calculator.py:44: PytestUnknownMarkWarning: Unk
nown pytest.mark.slow - is this a typo?  You can register custom marks to avoid
this warning - for details, see https://docs.pytest.org/en/stable/how-to/mark.ht
ml
    @pytest.mark.slow

-- Docs: https://docs.pytest.org/en/stable/how-to/capture-warnings.html
================== 11 passed, 1 deselected, 1 warning in 0.03s ==================
(base) maksimkolosov@MacBook-Pro-Maksim pytest_example4 %
```

Exercise 5

```
[(base) maksimkolosov@MacBook-Pro-Maksim pytest_example5 % pytest
============================ test session starts =============================
platform darwin -- Python 3.12.4, pytest-7.4.4, pluggy-1.0.0
rootdir: /Users/maksimkolosov/Desktop/MastersStudies/ProgramEngineering/Webinar_
16_Labwork_12/pytest_example5
plugins: anyio-4.2.0
collected 13 items

test/test_calculator.py ............s                                   [100%]

============================= warnings summary ==============================
test/test_calculator.py:45
  /Users/maksimkolosov/Desktop/MastersStudies/ProgramEngineering/Webinar_16_Labw
ork_12/pytest_example5/test/test_calculator.py:45: PytestUnknownMarkWarning: Unk
nown pytest.mark.slow - is this a typo?  You can register custom marks to avoid
this warning - for details, see https://docs.pytest.org/en/stable/how-to/mark.ht
ml
    @pytest.mark.slow

-- Docs: https://docs.pytest.org/en/stable/how-to/capture-warnings.html
================== 12 passed, 1 skipped, 1 warning in 5.04s ==================
(base) maksimkolosov@MacBook-Pro-Maksim pytest_example5 %
```

Exercise 6

```
Last login: Sat Dec 21 19:13:11 on ttys000
You have new mail.
[(base) maksimkolosov@MacBook-Pro-Maksim pytest_example6 % pytest        ]
============================ test session starts ============================
platform darwin -- Python 3.12.4, pytest-7.4.4, pluggy-1.0.0
rootdir: /Users/maksimkolosov/Desktop/MastersStudies/ProgramEngineering/Webinar_
16_Labwork_12/pytest_example6
plugins: anyio-4.2.0
collected 13 items

test/test_calculator.py ............x                                   [100%]

============================== warnings summary ==============================
test/test_calculator.py:44
  /Users/maksimkolosov/Desktop/MastersStudies/ProgramEngineering/Webinar_16_Labw
ork_12/pytest_example6/test/test_calculator.py:44: PytestUnknownMarkWarning: Unk
nown pytest.mark.slow - is this a typo?  You can register custom marks to avoid
this warning - for details, see https://docs.pytest.org/en/stable/how-to/mark.ht
ml
    @pytest.mark.slow

-- Docs: https://docs.pytest.org/en/stable/how-to/capture-warnings.html
==================== 12 passed, 1 xfailed, 1 warning in 5.06s ====================
(base) maksimkolosov@MacBook-Pro-Maksim pytest_example6 %
```

Exercise 7

```
Last login: Sat Dec 21 19:20:20 on ttys000
You have new mail.
[(base) maksimkolosov@MacBook-Pro-Maksim pytest_example7 % pytest        ]
============================ test session starts ============================
platform darwin -- Python 3.12.4, pytest-7.4.4, pluggy-1.0.0
rootdir: /Users/maksimkolosov/Desktop/MastersStudies/ProgramEngineering/Webinar_
16_Labwork_12/pytest_example7
plugins: anyio-4.2.0
collected 14 items

test/test_calculator.py ............x.                                  [100%]

============================== warnings summary ==============================
test/test_calculator.py:44
  /Users/maksimkolosov/Desktop/MastersStudies/ProgramEngineering/Webinar_16_Labw
ork_12/pytest_example7/test/test_calculator.py:44: PytestUnknownMarkWarning: Unk
nown pytest.mark.slow - is this a typo?  You can register custom marks to avoid
this warning - for details, see https://docs.pytest.org/en/stable/how-to/mark.ht
ml
    @pytest.mark.slow

-- Docs: https://docs.pytest.org/en/stable/how-to/capture-warnings.html
==================== 13 passed, 1 xfailed, 1 warning in 5.06s ====================
(base) maksimkolosov@MacBook-Pro-Maksim pytest_example7 %
```

Exercise 8

```
[(base) maksimkolosov@MacBook-Pro-Maksim pytest_example8 % pytest
============================ test session starts =============================
platform darwin -- Python 3.12.4, pytest-7.4.4, pluggy-1.0.0
rootdir: /Users/maksimkolosov/Desktop/MastersStudies/ProgramEngineering/Webinar_
16_Labwork_12/pytest_example8
plugins: anyio-4.2.0
collected 15 items

test/test_calculator.py ............x..                                  [100%]

============================= warnings summary ===============================
test/test_calculator.py:44
  /Users/maksimkolosov/Desktop/MastersStudies/ProgramEngineering/Webinar_16_Labw
ork_12/pytest_example8/test/test_calculator.py:44: PytestUnknownMarkWarning: Unk
nown pytest.mark.slow - is this a typo?  You can register custom marks to avoid
this warning - for details, see https://docs.pytest.org/en/stable/how-to/mark.ht
ml
    @pytest.mark.slow

-- Docs: https://docs.pytest.org/en/stable/how-to/capture-warnings.html
=================== 14 passed, 1 xfailed, 1 warning in 5.06s ==================
(base) maksimkolosov@MacBook-Pro-Maksim pytest_example8 %
```

Exercise 9

```
Last login: Sat Dec 21 19:34:37 on ttys000
You have new mail.
[(base) maksimkolosov@MacBook-Pro-Maksim pytest_example9 % pytest
============================ test session starts =============================
platform darwin -- Python 3.12.4, pytest-7.4.4, pluggy-1.0.0
rootdir: /Users/maksimkolosov/Desktop/MastersStudies/ProgramEngineering/Webinar_
16_Labwork_12/pytest_example9
plugins: anyio-4.2.0
collected 16 items

test/test_calculator.py ............x...                                 [100%]

============================= warnings summary ===============================
test/test_calculator.py:44
  /Users/maksimkolosov/Desktop/MastersStudies/ProgramEngineering/Webinar_16_Labw
ork_12/pytest_example9/test/test_calculator.py:44: PytestUnknownMarkWarning: Unk
nown pytest.mark.slow - is this a typo?  You can register custom marks to avoid
this warning - for details, see https://docs.pytest.org/en/stable/how-to/mark.ht
ml
    @pytest.mark.slow

-- Docs: https://docs.pytest.org/en/stable/how-to/capture-warnings.html
=================== 15 passed, 1 xfailed, 1 warning in 5.07s ==================
(base) maksimkolosov@MacBook-Pro-Maksim pytest_example9 %
```