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Tutor: **Testing World InfoTech**

Reference: **UDEMY**

Course: **Step by Step Rest API Testing using Python + Pytest +Allure**

Content: **Testing Framework - PyTest**

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1. Course URL: https://www.udemy.com/course/api-testing-python/
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Softwares:

1. Programming language - **Python**
    a. https://www.python.org/downloads/
2. IDE - **PyCharm**
    a. https://www.jetbrains.com/pycharm/download/#section=mac
3. **PIP** (Package Installation Manager of Python)
    a. To install packages
4. Package:
    a. **Requests** (API testing)
    b. **JSONPath** (To parse JSON)
    c. **PyTest** (Testing framework)
    d. **PyTest-HTML** (HTML Report)

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1. **Learnings from Course (UDEMY - TWI - API testing using Python-PyTest-Allure)**
    a. **Links:**
        i. The Testing World:
            1. https://www.thetestingworld.com/
        ii. JSON Path:
            1. https://jsonpath.com/
        iii. API testing:
            1. https://reqres.in/
            2. https://httpbin.org/

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iv. Help in resolving problems faced during the course:
   1. https://stackoverflow.com/questions/35998992/py-test-command-not-found-but-library-is-installed

v. PyTest:
   1. https://docs.pytest.org/en/stable/how-to/mark.html
   2. https://pytest-html.readthedocs.io/en/latest/user_guide.html

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b. PyTest:

i. ***Unit Testing framework*** for Python programming language

ii. Execution of test cases (with file name):

   1. python3 -m pytest PyTest_Basics/01_Prefix_Test_MustForPyTest.py
      a. ***PyTest_Basics*** is a ***folder*** name
      b. 01_Prefix_Test_MustForPyTest.py is the ***file*** name

   2. Method name should start with **'test_'**
      a. It is required for ***PyTest*** to understand that this method is a Test case.

iii. Execution of test cases (present inside a folder/directory):

   1. python3 -m pytest PyTest_Basics
      a. ***PyTest_Basics*** is a folder name
      b. NOTE:
         i. Foldername should also start with '**test_**'

iv. Execution Using verbose (-v):

   1. python3 -m pytest -v PyTest_Basics
   2. This will show the details
      a. Which test case got passed/failed/skipped

v. Execution Using (-s):

   1. python3 -m pytest -v -s PyTest_Basics
   2. This will show the print statements in the console

vi. Decorators:

   1. To skip the test case:
      a. **@pytest.mark.skip('Skipping this test case intentionally……')**
   2. To skip the test case on the basis of condition:
      a. @pytest.mark.skipif(num1>99, reason='Skipping this test case intentionally……')

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vii. **Execute a specific test case:**

1. **Full name of test case**
    a. **python3 -m pytest -v -s -k test_login_API PyTest_Basics/**
        i. **test_login_API -** test case name
        ii. **PyTest_Basics/ -** test case is present under this directory
2. **Partial name of test case**
    a. **python3 -m pytest -v -s -k login_API PyTest_Basics/**

viii. **TAGGING/GROUPING:**

1. **python3 -m pytest -v -s -m Smoke PyTest_Basics**
    a. **PyTest_Basics-** test cases are present under this directory
    b. **Smoke - Tagging name**
    c. **NOTE:**
        i. These tag names (Smoke, Sanity) are User-defined.

2. **Execution for Tagged test cases (condition):**
    a. **python3 -m pytest -v -s -m "not Regression" PyTest_Basics**
        i. Execute the test cases which are not tagged as Regression
    b. **python3 -m pytest -v -s -m "Smoke and Regression" PyTest_Basics**
        i. Execute the test cases which are tagged as both Smoke and Regression

3. **How to disable Warnings (getting on Console):**
    a. **2 Approaches:**
        i. **Approach #1 ->** --disable-pytest-warnings
            1. **python3 -m pytest -v -s --disable-pytest-warnings -m "Smoke" PyTest_Basics**
        ii. **Approach #2 ->**
            1. Register the custom Marker (using **Pytest.ini** file)

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4. **PyTest Fixtures:**
    a. Test Level
        i. **@pytest.fixture()**
        ii. Before -> Test1 -> After
            Before -> Test2 -> After
            Before -> Test3 -> After
            Before -> Test4 -> After
    b. Module level
        i. @pytest.fixture(scope="module")
        ii. Before -> Test1 -> Test2 -> Test3 -> Test4 -> After

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c. **Commands:**
    i. **To execute the Python program**
        1. Right-click -> Run ‘FILE_NAME’
        2. Terminal ->
            a. python3 FILE_NAME.py
    ii. pip install requests
        1. To install requests package using PIP
        2. requests package is used for API automation
    iii. **pip show requests- Not Working**
        python3 -m pip show requests - Working
        1. To know the details about any installed package
    iv. pip install -U requests
        1. To upgrade any installed package
    v. pip install jsonpath
        1. To install requests package using PIP
        2. jsonpath package is used for JSON parsing
    vi. pip install pytest
        1. To install pytest package using PIP
        2. This package is Unit Testing framework for Python programming language
    vii. **pip install pytest-html**
        1. To install **pytest-html** package using PIP
    viii. **python3 -m pytest -v -s PyTest_Basics --html=report.html**
        1. Execute the test cases

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=========Section 12: PyTest : Unit Testing Framework for Python=========

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—--------85. PyTest Introduction —--------------

1. PyTest is one of the ***Unit Testing frameworks*** for the Python programming language

2. **Why PyTest?**
    a. Options to conditionally execute the test cases
    b. Setup for Pre-Requisite and Post Script
        i. Before and After the test execution,
            1. If you want to get an operation done, we can do using these
    c. Assertions
        i. Actual result vs Expected result
    d. Report Generation

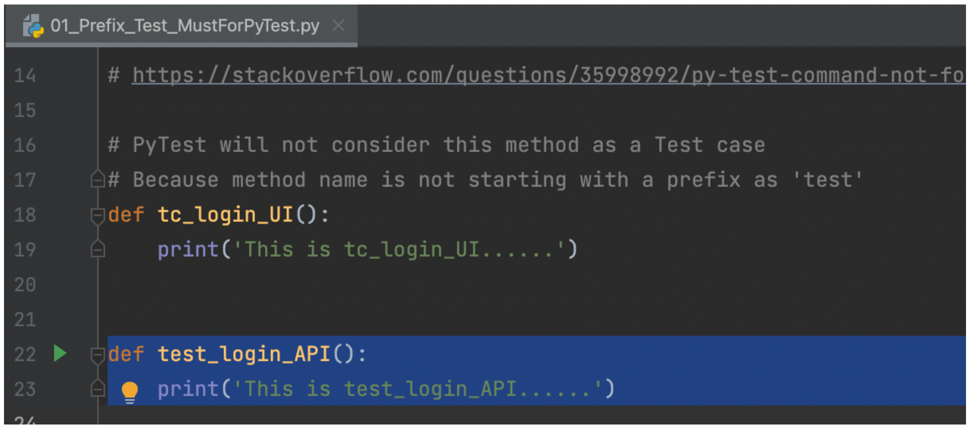
3. Other Unit testing frameworks for Python are:
    a. UnitTest
    b. Nose

—--------86. Pytest Installation: pip install pytest —--------------

1. **pip install pytest**

—--------87. Write Test Case in Pytest format —--------------

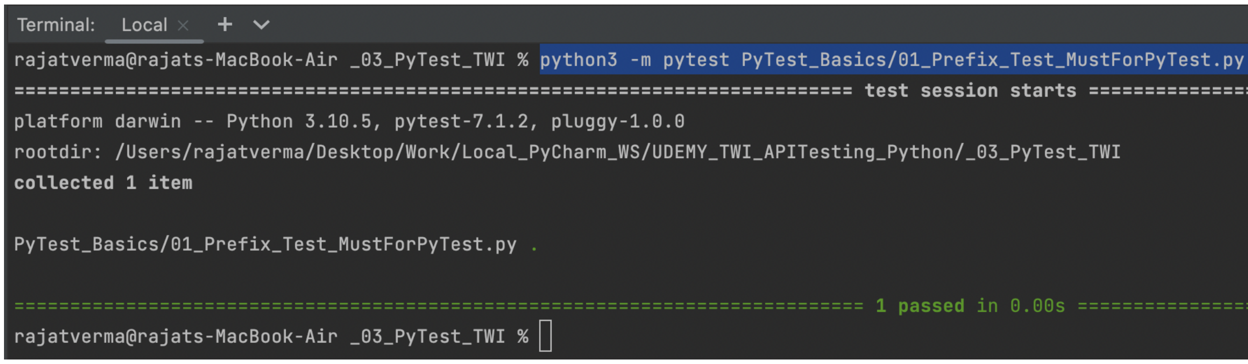
1. Method name should start with **'test_'**
    a. It is required for ***PyTest*** to understand that this method is a Test case.
    b. There is no annotation like
        i. @Test -> We have for TestNG framework (when we work with Java programming language)

2. 

```
01_Prefix_Test_MustForPyTest.py

# https://stackoverflow.com/questions/35998992/py-test-command-not-fo

# PyTest will not consider this method as a Test case
# Because method name is not starting with a prefix as 'test'
def tc_login_UI():
    print('This is tc_login_UI......')


def test_login_API():
    print('This is test_login_API......')
```

   a. We have a green icon with the method (test_login_API)

3. **Test execution using Terminal:**

   a. 

```
Terminal:  Local
rajatverma@rajats-MacBook-Air _03_PyTest_TWI % python3 -m pytest PyTest_Basics/01_Prefix_Test_MustForPyTest.py
========================================================================= test session starts =============
platform darwin -- Python 3.10.5, pytest-7.1.2, pluggy-1.0.0
rootdir: /Users/rajatverma/Desktop/Work/Local_PyCharm_WS/UDEMY_TWI_APITesting_Python/_03_PyTest_TWI
collected 1 item

PyTest_Basics/01_Prefix_Test_MustForPyTest.py .

========================================================================== 1 passed in 0.00s ==============
rajatverma@rajats-MacBook-Air _03_PyTest_TWI %
```

      i. **python3 -m pytest PyTest_Basics/01_Prefix_Test_MustForPyTest.py**

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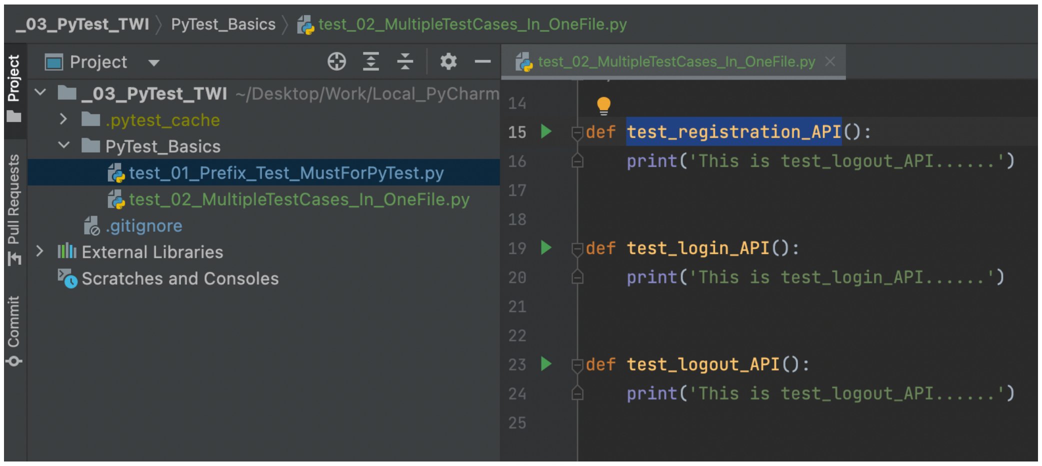
—--------88. Write Multiple Test Cases and Execute test cases together —--------

1. **Execution of test cases (present inside a folder/directory):**
   a. **python3 -m pytest PyTest_Basics**
      i. PyTest_Basics is a folder name
      ii. NOTE:
         1. Foldername should also start with **'test_'**

   b. 

```
_03_PyTest_TWI 〉 PyTest_Basics 〉 test_02_MultipleTestCases_In_OneFile.py

_03_PyTest_TWI ~/Desktop/Work/Local_PyCharm
  .pytest_cache
  PyTest_Basics
    test_01_Prefix_Test_MustForPyTest.py
    test_02_MultipleTestCases_In_OneFile.py
  .gitignore
External Libraries
Scratches and Consoles
```

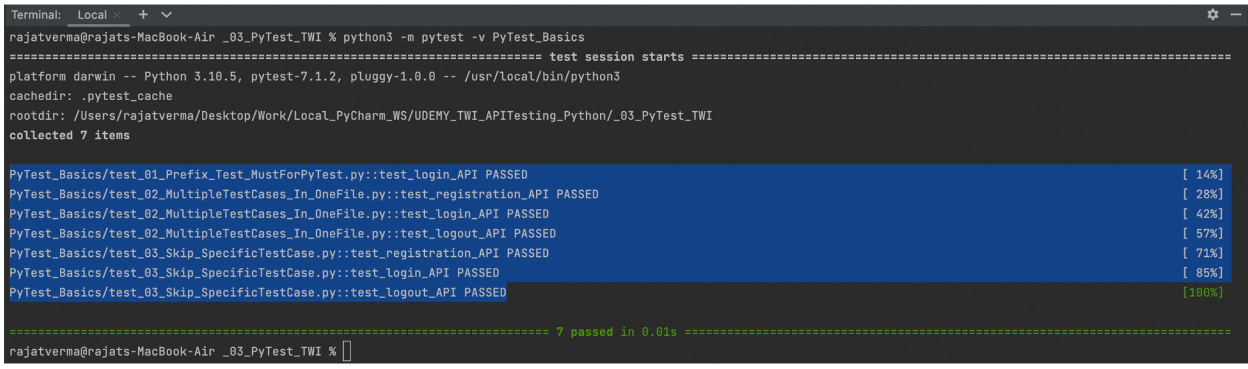
```python
def test_registration_API():
    print('This is test_logout_API......')


def test_login_API():
    print('This is test_login_API......')


def test_logout_API():
    print('This is test_logout_API......')
```

—------89. Write Multiple Test Cases in a File: Check Execution Options —-------

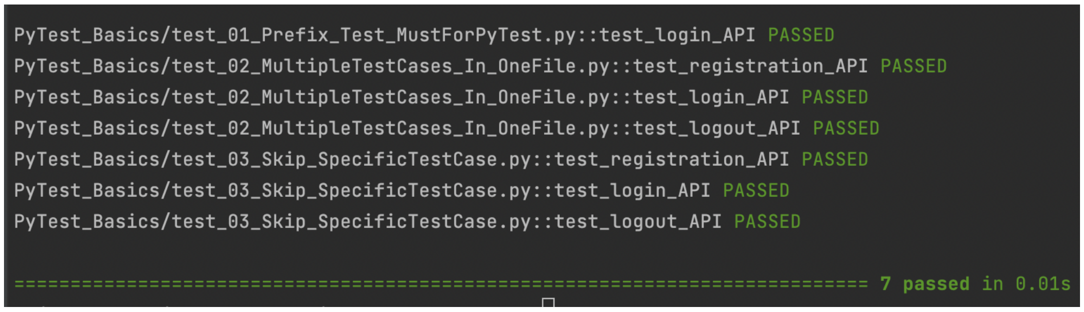
1. **Execution Using verbose (-v):**
   a. **python3 -m pytest -v PyTest_Basics**
   b. This will show the details
      i. Which test case got passed/failed/skipped

   c. 

```
rajatverma@rajats-MacBook-Air _03_PyTest_TWI % python3 -m pytest -v PyTest_Basics
============================================================================ test session starts =============================================================================
platform darwin -- Python 3.10.5, pytest-7.1.2, pluggy-1.0.0 -- /usr/local/bin/python3
cachedir: .pytest_cache
rootdir: /Users/rajatverma/Desktop/Work/Local_PyCharm_WS/UDEMY_TWI_APITesting_Python/_03_PyTest_TWI
collected 7 items

PyTest_Basics/test_01_Prefix_Test_MustForPyTest.py::test_login_API PASSED                                                                                              [ 14%]
PyTest_Basics/test_02_MultipleTestCases_In_OneFile.py::test_registration_API PASSED                                                                                    [ 28%]
PyTest_Basics/test_02_MultipleTestCases_In_OneFile.py::test_login_API PASSED                                                                                           [ 42%]
PyTest_Basics/test_02_MultipleTestCases_In_OneFile.py::test_logout_API PASSED                                                                                          [ 57%]
PyTest_Basics/test_03_Skip_SpecificTestCase.py::test_registration_API PASSED                                                                                           [ 71%]
PyTest_Basics/test_03_Skip_SpecificTestCase.py::test_login_API PASSED                                                                                                  [ 85%]
PyTest_Basics/test_03_Skip_SpecificTestCase.py::test_logout_API PASSED                                                                                                 [100%]

============================================================================= 7 passed in 0.01s ==============================================================================
rajatverma@rajats-MacBook-Air _03_PyTest_TWI %
```

d. 

```
PyTest_Basics/test_01_Prefix_Test_MustForPyTest.py::test_login_API PASSED
PyTest_Basics/test_02_MultipleTestCases_In_OneFile.py::test_registration_API PASSED
PyTest_Basics/test_02_MultipleTestCases_In_OneFile.py::test_login_API PASSED
PyTest_Basics/test_02_MultipleTestCases_In_OneFile.py::test_logout_API PASSED
PyTest_Basics/test_03_Skip_SpecificTestCase.py::test_registration_API PASSED
PyTest_Basics/test_03_Skip_SpecificTestCase.py::test_login_API PASSED
PyTest_Basics/test_03_Skip_SpecificTestCase.py::test_logout_API PASSED

============================================================================ 7 passed in 0.01s
```

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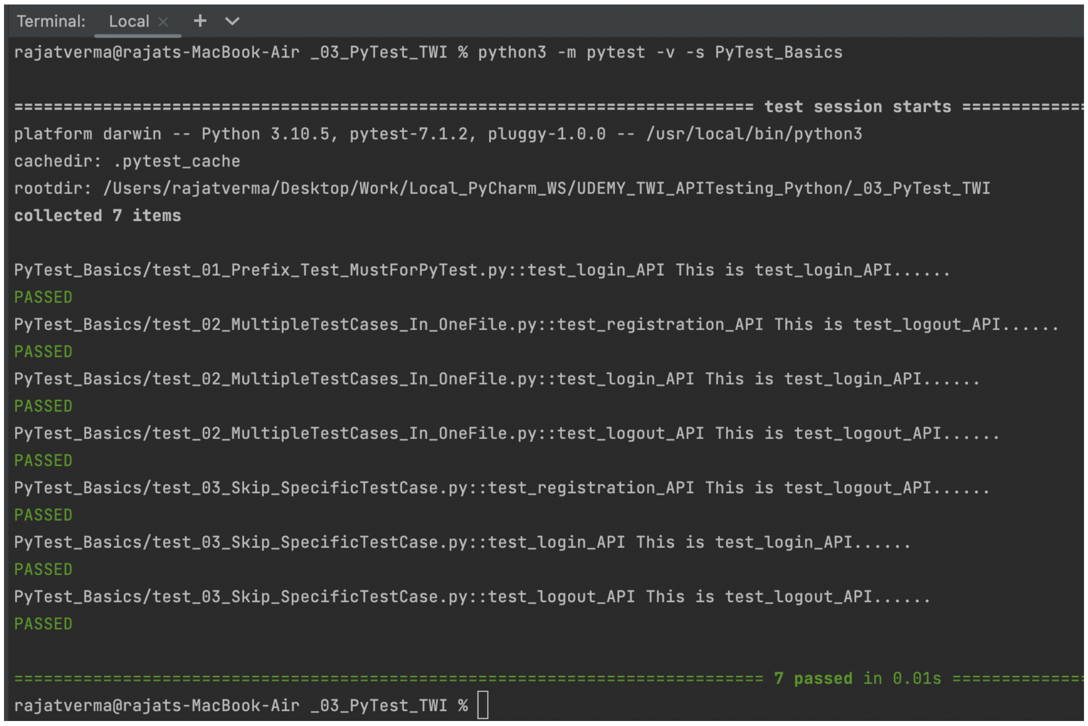
1. **Execution Using (-s):**
   a. **python3 -m pytest -v -s PyTest_Basics**
   b. This will show the print statements in console

i. 

```
Terminal:  Local  +
rajatverma@rajats-MacBook-Air _03_PyTest_TWI % python3 -m pytest -v -s PyTest_Basics

========================================================================= test session starts ============
platform darwin -- Python 3.10.5, pytest-7.1.2, pluggy-1.0.0 -- /usr/local/bin/python3
cachedir: .pytest_cache
rootdir: /Users/rajatverma/Desktop/Work/Local_PyCharm_WS/UDEMY_TWI_APITesting_Python/_03_PyTest_TWI
collected 7 items

PyTest_Basics/test_01_Prefix_Test_MustForPyTest.py::test_login_API This is test_login_API......
PASSED
PyTest_Basics/test_02_MultipleTestCases_In_OneFile.py::test_registration_API This is test_logout_API......
PASSED
PyTest_Basics/test_02_MultipleTestCases_In_OneFile.py::test_login_API This is test_login_API......
PASSED
PyTest_Basics/test_02_MultipleTestCases_In_OneFile.py::test_logout_API This is test_logout_API......
PASSED
PyTest_Basics/test_03_Skip_SpecificTestCase.py::test_registration_API This is test_logout_API......
PASSED
PyTest_Basics/test_03_Skip_SpecificTestCase.py::test_login_API This is test_login_API......
PASSED
PyTest_Basics/test_03_Skip_SpecificTestCase.py::test_logout_API This is test_logout_API......
PASSED

========================================================================== 7 passed in 0.01s ============
rajatverma@rajats-MacBook-Air _03_PyTest_TWI %
```

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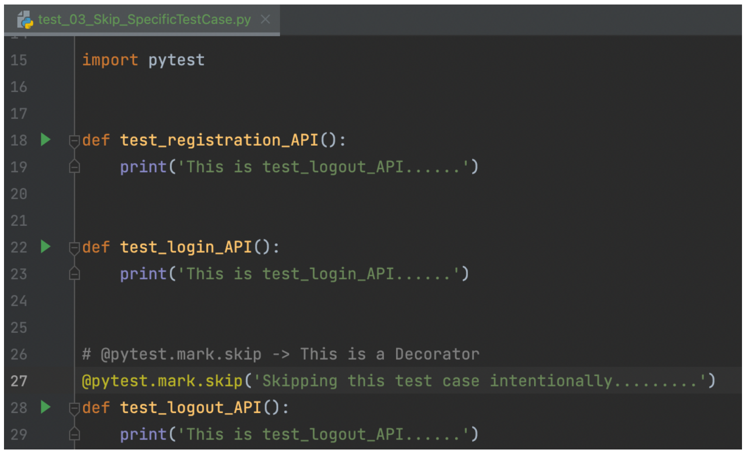
—--------90. Skip Test Cases | Execute test cases conditionally —-------------

1. To skip a Test case, we have to use the Decorator - **skip**:
   a. **@pytest.mark.skip('Skipping this test case intentionally……')**
   b. 

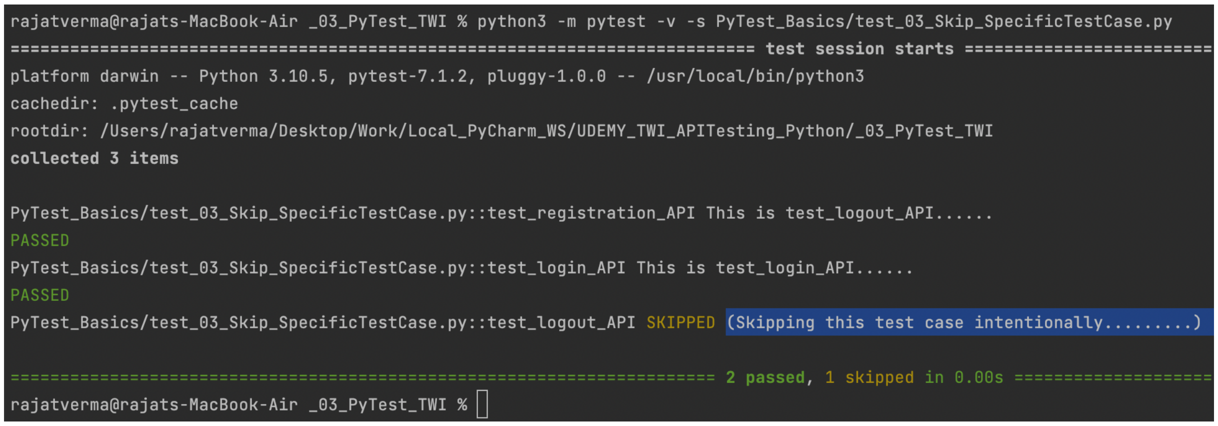
```
test_03_Skip_SpecificTestCase.py

import pytest


def test_registration_API():
    print('This is test_logout_API......')


def test_login_API():
    print('This is test_login_API......')


# @pytest.mark.skip -> This is a Decorator
@pytest.mark.skip('Skipping this test case intentionally.........')
def test_logout_API():
    print('This is test_logout_API......')
```

   c. 

```
rajatverma@rajats-MacBook-Air _03_PyTest_TWI % python3 -m pytest -v -s PyTest_Basics/test_03_Skip_SpecificTestCase.py
=========================================================================== test session starts ========================
platform darwin -- Python 3.10.5, pytest-7.1.2, pluggy-1.0.0 -- /usr/local/bin/python3
cachedir: .pytest_cache
rootdir: /Users/rajatverma/Desktop/Work/Local_PyCharm_WS/UDEMY_TWI_APITesting_Python/_03_PyTest_TWI
collected 3 items

PyTest_Basics/test_03_Skip_SpecificTestCase.py::test_registration_API This is test_logout_API......
PASSED
PyTest_Basics/test_03_Skip_SpecificTestCase.py::test_login_API This is test_login_API......
PASSED
PyTest_Basics/test_03_Skip_SpecificTestCase.py::test_logout_API SKIPPED (Skipping this test case intentionally.........)

====================================================================== 2 passed, 1 skipped in 0.00s ===================
rajatverma@rajats-MacBook-Air _03_PyTest_TWI %
```

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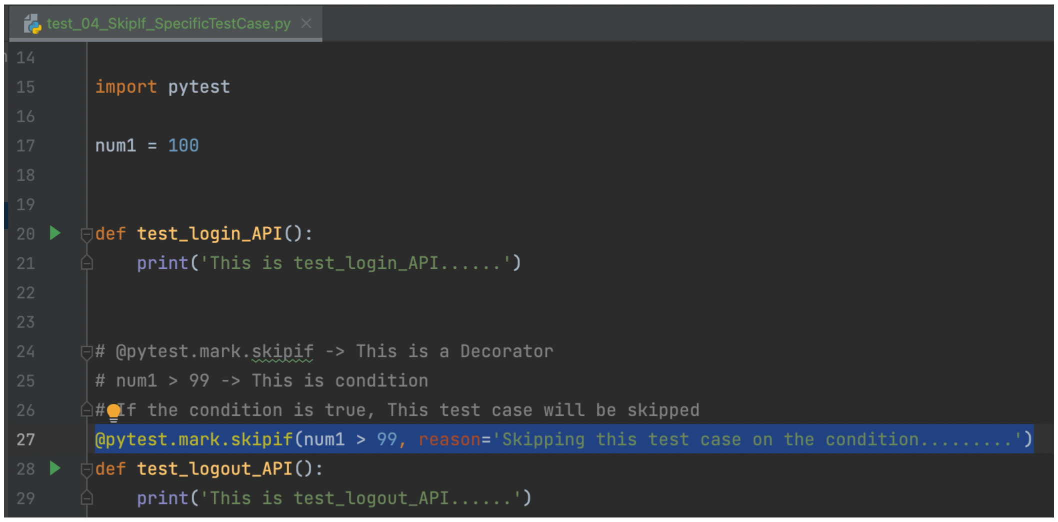
2. To skip a Test case, we have to use the Decorator - **skipif**:
   a. **@pytest.mark.skipif(num1>99, reason='Skipping this test case intentionally……')**
   b. 

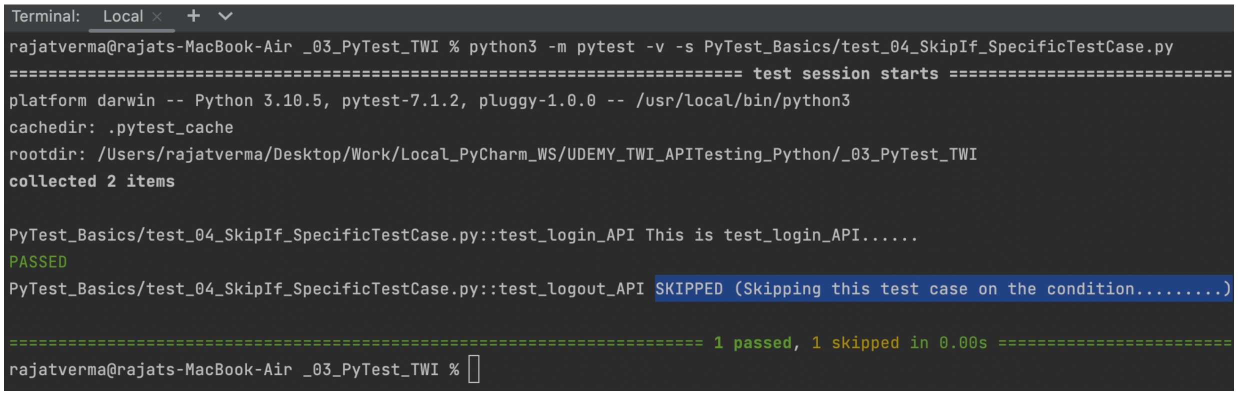
```
test_04_SkipIf_SpecificTestCase.py

import pytest

num1 = 100


def test_login_API():
    print('This is test_login_API......')


# @pytest.mark.skipif -> This is a Decorator
# num1 > 99 -> This is condition
# If the condition is true, This test case will be skipped
@pytest.mark.skipif(num1 > 99, reason='Skipping this test case on the condition.........')
def test_logout_API():
    print('This is test_logout_API......')
```

   c. 

```
Terminal:   Local
rajatverma@rajats-MacBook-Air _03_PyTest_TWI % python3 -m pytest -v -s PyTest_Basics/test_04_SkipIf_SpecificTestCase.py
========================================================================== test session starts ============================
platform darwin -- Python 3.10.5, pytest-7.1.2, pluggy-1.0.0 -- /usr/local/bin/python3
cachedir: .pytest_cache
rootdir: /Users/rajatverma/Desktop/Work/Local_PyCharm_WS/UDEMY_TWI_APITesting_Python/_03_PyTest_TWI
collected 2 items

PyTest_Basics/test_04_SkipIf_SpecificTestCase.py::test_login_API This is test_login_API......
PASSED
PyTest_Basics/test_04_SkipIf_SpecificTestCase.py::test_logout_API SKIPPED (Skipping this test case on the condition.........)

======================================================================= 1 passed, 1 skipped in 0.00s ======================
rajatverma@rajats-MacBook-Air _03_PyTest_TWI %
```

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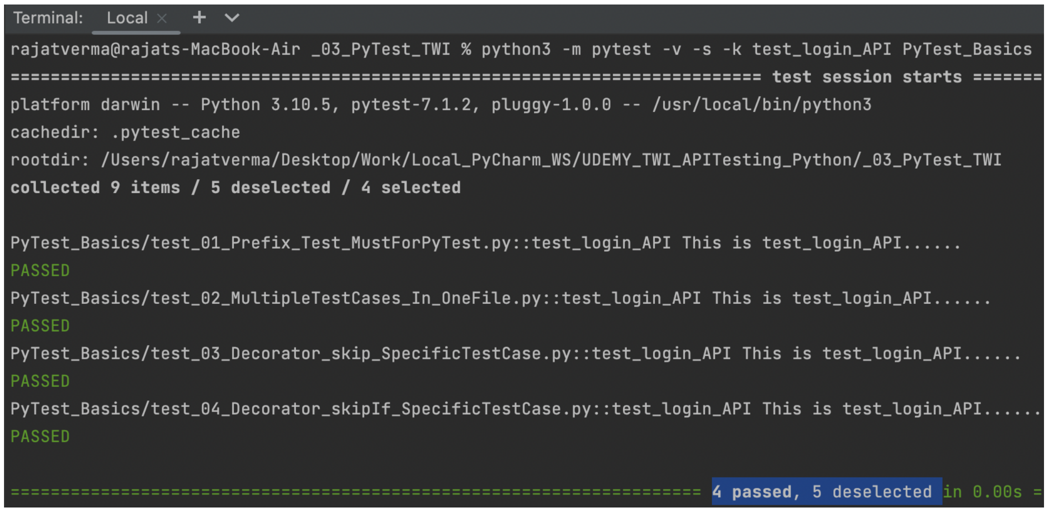
3. **Execute a specific test case:**
    a. **Full name of test case**
        i. **python3 -m pytest -v -s -k test_login_API PyTest_Basics/**
            1. **test_login_API -** test case name
            2. **PyTest_Basics/ -** test case is present under this directory
            3.

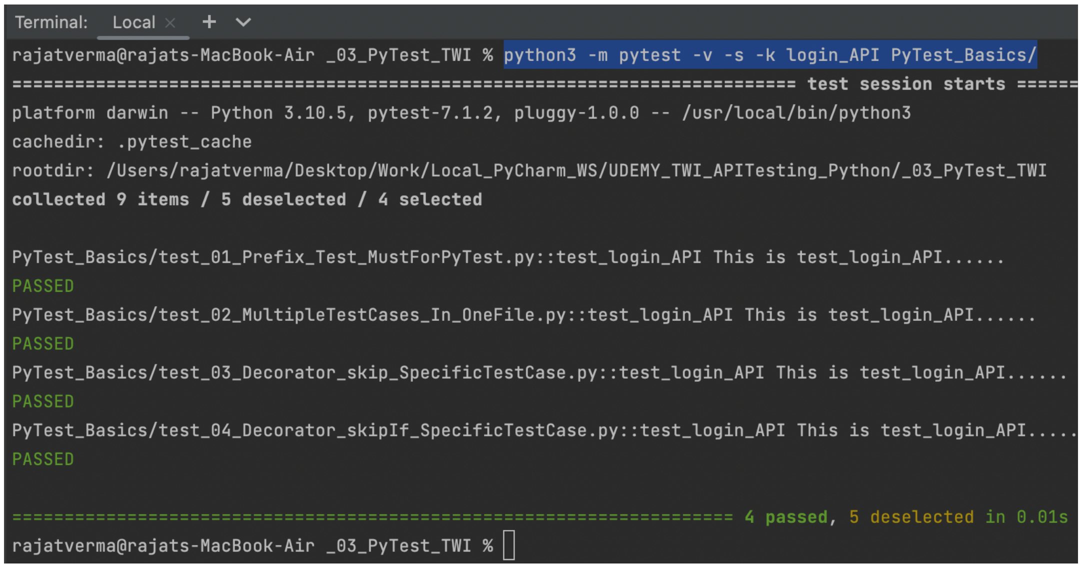


```
Terminal:   Local ×   +  ⌄
rajatverma@rajats-MacBook-Air _03_PyTest_TWI % python3 -m pytest -v -s -k test_login_API PyTest_Basics
============================================================================ test session starts =======
platform darwin -- Python 3.10.5, pytest-7.1.2, pluggy-1.0.0 -- /usr/local/bin/python3
cachedir: .pytest_cache
rootdir: /Users/rajatverma/Desktop/Work/Local_PyCharm_WS/UDEMY_TWI_APITesting_Python/_03_PyTest_TWI
collected 9 items / 5 deselected / 4 selected

PyTest_Basics/test_01_Prefix_Test_MustForPyTest.py::test_login_API This is test_login_API......
PASSED
PyTest_Basics/test_02_MultipleTestCases_In_OneFile.py::test_login_API This is test_login_API......
PASSED
PyTest_Basics/test_03_Decorator_skip_SpecificTestCase.py::test_login_API This is test_login_API......
PASSED
PyTest_Basics/test_04_Decorator_skipIf_SpecificTestCase.py::test_login_API This is test_login_API......
PASSED

====================================================================== 4 passed, 5 deselected in 0.00s =
```

    b. **Partial name of test case**
        i. **python3 -m pytest -v -s -k login_API PyTest_Basics/**
        ii.



```
Terminal:   Local ×   +  ⌄
rajatverma@rajats-MacBook-Air _03_PyTest_TWI % python3 -m pytest -v -s -k login_API PyTest_Basics/
============================================================================ test session starts ======
platform darwin -- Python 3.10.5, pytest-7.1.2, pluggy-1.0.0 -- /usr/local/bin/python3
cachedir: .pytest_cache
rootdir: /Users/rajatverma/Desktop/Work/Local_PyCharm_WS/UDEMY_TWI_APITesting_Python/_03_PyTest_TWI
collected 9 items / 5 deselected / 4 selected

PyTest_Basics/test_01_Prefix_Test_MustForPyTest.py::test_login_API This is test_login_API......
PASSED
PyTest_Basics/test_02_MultipleTestCases_In_OneFile.py::test_login_API This is test_login_API......
PASSED
PyTest_Basics/test_03_Decorator_skip_SpecificTestCase.py::test_login_API This is test_login_API......
PASSED
PyTest_Basics/test_04_Decorator_skipIf_SpecificTestCase.py::test_login_API This is test_login_API.....
PASSED

===================================================================== 4 passed, 5 deselected in 0.01s
rajatverma@rajats-MacBook-Air _03_PyTest_TWI %
```

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—--------91. Grouping Test Cases: Tagging and Execute using tags —--------------

1. **Tagging/Grouping:**
   a. Example:
      i. We have 500 test cases
         1. Now, we only want to execute 100 test cases which covers critical functionalities of the application
            a. Those can be tagged/grouped as **SMOKE.**
      ii. With PyTest,
         1. We can tag/group the test cases and execute accordingly.

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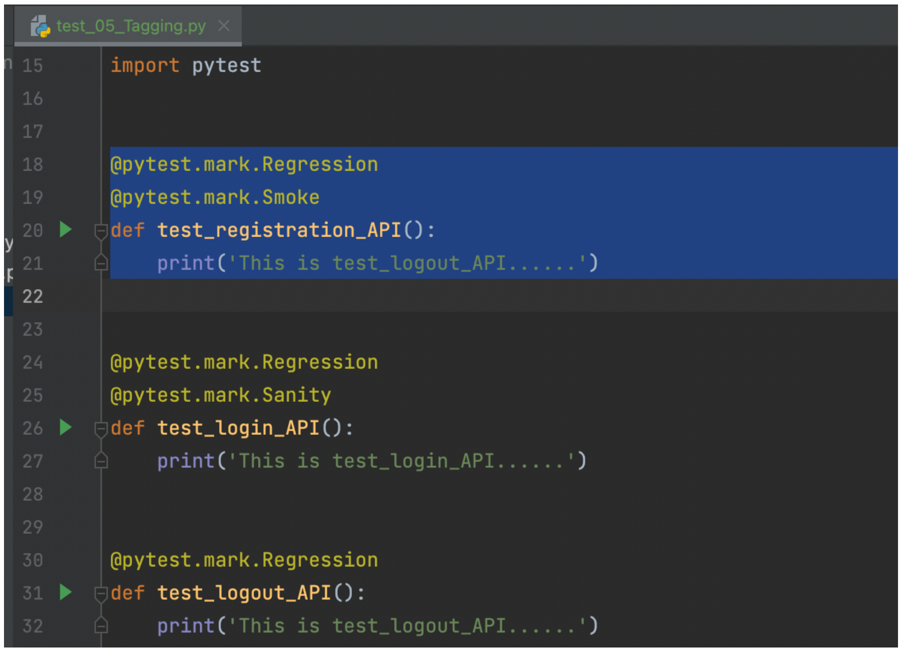
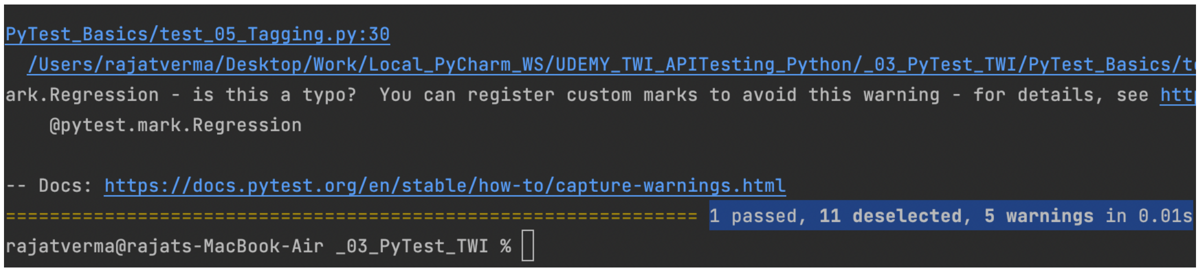
2. **Execution for Tagged test cases:**

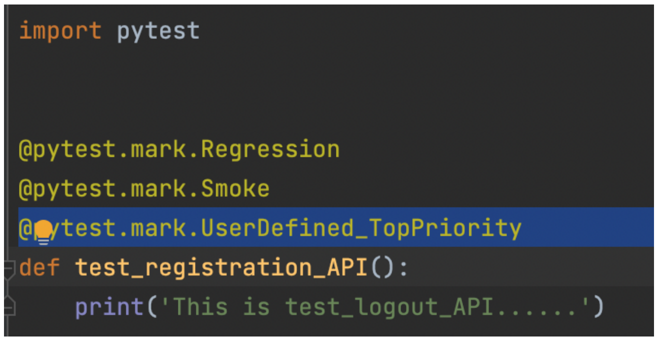
a. 

```
import pytest


@pytest.mark.Regression
@pytest.mark.Smoke
def test_registration_API():
    print('This is test_logout_API......')


@pytest.mark.Regression
@pytest.mark.Sanity
def test_login_API():
    print('This is test_login_API......')


@pytest.mark.Regression
def test_logout_API():
    print('This is test_logout_API......')
```

b. 

```
PyTest_Basics/test_05_Tagging.py:30
  /Users/rajatverma/Desktop/Work/Local_PyCharm_WS/UDEMY_TWI_APITesting_Python/_03_PyTest_TWI/PyTest_Basics/t
ark.Regression - is this a typo?  You can register custom marks to avoid this warning - for details, see htt
    @pytest.mark.Regression

-- Docs: https://docs.pytest.org/en/stable/how-to/capture-warnings.html
================================================================ 1 passed, 11 deselected, 5 warnings in 0.01s
rajatverma@rajats-MacBook-Air _03_PyTest_TWI %
```

   i. **python3 -m pytest -v -s -m Smoke PyTest_Basics**
      1. **PyTest_Basics-** test cases are present under this directory
      2. **Smoke - Tagging name**
   ii. **NOTE:**
      1. These tag names (Smoke, Sanity) are User-defined.

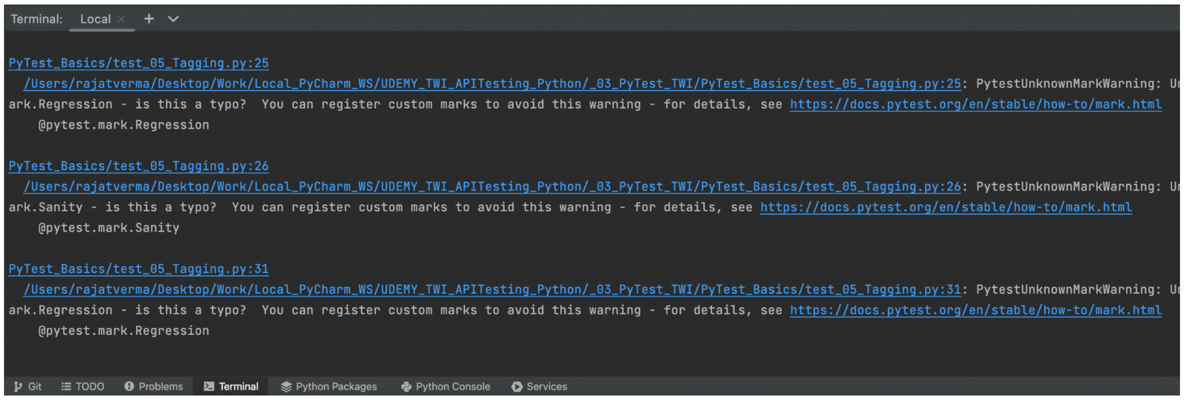


2.
```python
import pytest


@pytest.mark.Regression
@pytest.mark.Smoke
@pytest.mark.UserDefined_TopPriority
def test_registration_API():
    print('This is test_logout_API......')
```

—---------------

1. **Execution for Tagged test cases (condition):**
   a. **python3 -m pytest -v -s -m "not Regression" PyTest_Basics**
      i. Execute the test cases which are not tagged as Regression
   b. **python3 -m pytest -v -s -m "Smoke and Regression" PyTest_Basics**
      i. Execute the test cases which are tagged as both Smoke and Regression

—---------------

1. **How to disable Warnings (getting on Console):**
   a. 

```
Terminal:  Local

PyTest_Basics/test_05_Tagging.py:25
  /Users/rajatverma/Desktop/Work/Local_PyCharm_WS/UDEMY_TWI_APITesting_Python/_03_PyTest_TWI/PyTest_Basics/test_05_Tagging.py:25: PytestUnknownMarkWarning: U
ark.Regression - 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.html
    @pytest.mark.Regression

PyTest_Basics/test_05_Tagging.py:26
  /Users/rajatverma/Desktop/Work/Local_PyCharm_WS/UDEMY_TWI_APITesting_Python/_03_PyTest_TWI/PyTest_Basics/test_05_Tagging.py:26: PytestUnknownMarkWarning: U
ark.Sanity - 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.html
    @pytest.mark.Sanity

PyTest_Basics/test_05_Tagging.py:31
  /Users/rajatverma/Desktop/Work/Local_PyCharm_WS/UDEMY_TWI_APITesting_Python/_03_PyTest_TWI/PyTest_Basics/test_05_Tagging.py:31: PytestUnknownMarkWarning: U
ark.Regression - 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.html
    @pytest.mark.Regression
```

   b. We are getting these warnings because
      i. We are using User-Defined Tags (Smoke/Sanity/Regression)

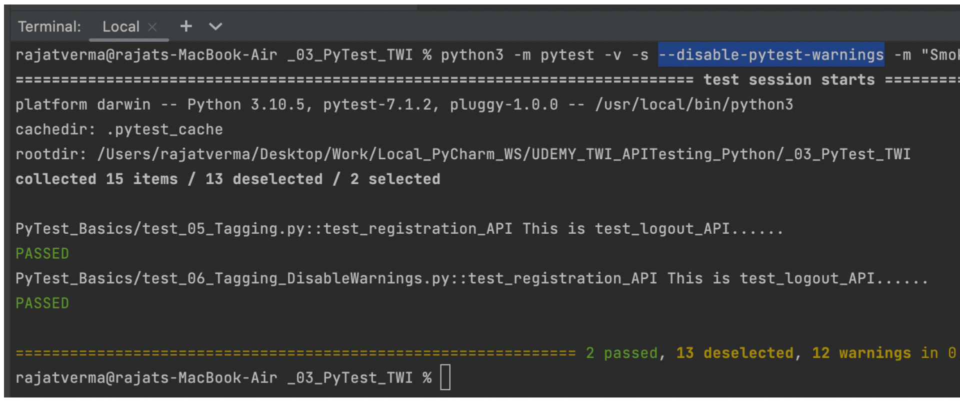
—---------------

—-----------------

c. **2 Approaches:**

i. **Approach #1 ->** --disable-pytest-warnings

1. **python3 -m pytest -v -s --disable-pytest-warnings -m "Smoke" PyTest_Basics**

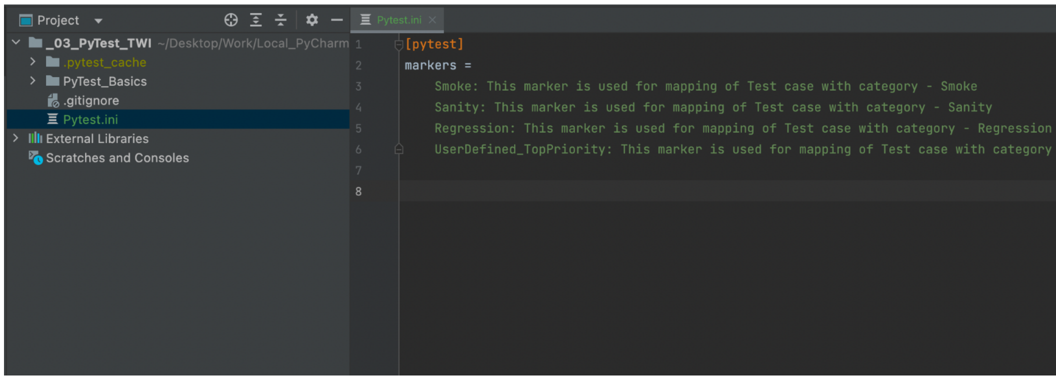
a. 

```
Terminal:   Local  ×   +  ⌄
rajatverma@rajats-MacBook-Air _03_PyTest_TWI % python3 -m pytest -v -s --disable-pytest-warnings -m "Smo
============================================================ test session starts ========
platform darwin -- Python 3.10.5, pytest-7.1.2, pluggy-1.0.0 -- /usr/local/bin/python3
cachedir: .pytest_cache
rootdir: /Users/rajatverma/Desktop/Work/Local_PyCharm_WS/UDEMY_TWI_APITesting_Python/_03_PyTest_TWI
collected 15 items / 13 deselected / 2 selected

PyTest_Basics/test_05_Tagging.py::test_registration_API This is test_logout_API......
PASSED
PyTest_Basics/test_06_Tagging_DisableWarnings.py::test_registration_API This is test_logout_API......
PASSED

=========================================================== 2 passed, 13 deselected, 12 warnings in 0
rajatverma@rajats-MacBook-Air _03_PyTest_TWI % 
```

—-----------

ii. **Approach #2 ->**

1. Register the custom Marker (using **Pytest.ini** file)

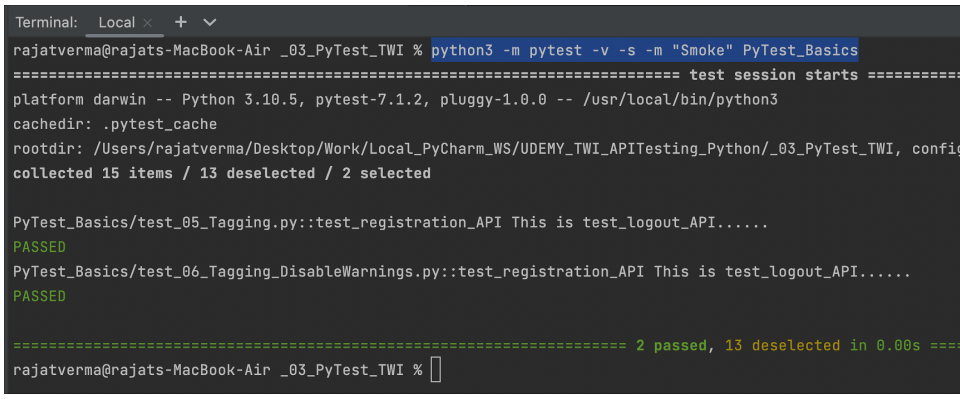
2. 

```
[pytest]
markers =
    Smoke: This marker is used for mapping of Test case with category - Smoke
    Sanity: This marker is used for mapping of Test case with category - Sanity
    Regression: This marker is used for mapping of Test case with category - Regression
    UserDefined_TopPriority: This marker is used for mapping of Test case with category
```

3. **Now, Terminal:**

a. **python3 -m pytest -v -s -m "Smoke" PyTest_Basics**

i. No warnings will be there

b. 

```
Terminal:   Local  ×   +  ⌄
rajatverma@rajats-MacBook-Air _03_PyTest_TWI % python3 -m pytest -v -s -m "Smoke" PyTest_Basics
================================================================= test session starts ==========
platform darwin -- Python 3.10.5, pytest-7.1.2, pluggy-1.0.0 -- /usr/local/bin/python3
cachedir: .pytest_cache
rootdir: /Users/rajatverma/Desktop/Work/Local_PyCharm_WS/UDEMY_TWI_APITesting_Python/_03_PyTest_TWI, confi
collected 15 items / 13 deselected / 2 selected

PyTest_Basics/test_05_Tagging.py::test_registration_API This is test_logout_API......
PASSED
PyTest_Basics/test_06_Tagging_DisableWarnings.py::test_registration_API This is test_logout_API......
PASSED

================================================================== 2 passed, 13 deselected in 0.00s ===
rajatverma@rajats-MacBook-Air _03_PyTest_TWI % 
```

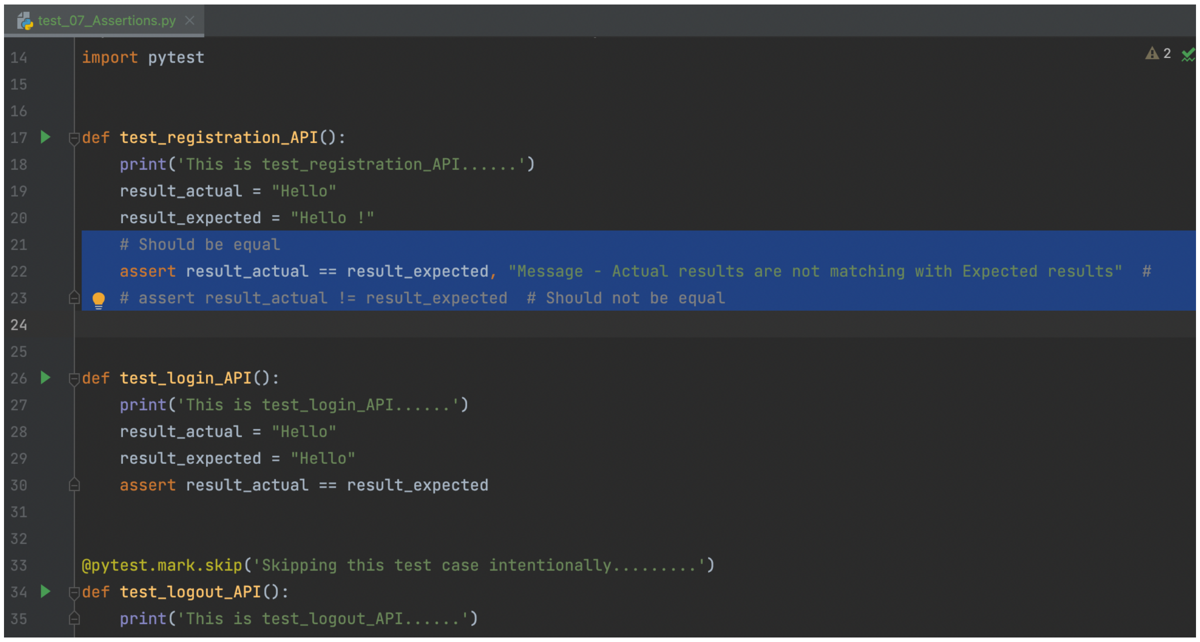
—--------92. Assertions: Compare Actual Result with Expected Result —--------

1. **Assertions:**
   a. Compare actual results with expected results
      i. Data to be the same
      ii. Data not to be same
      iii. Compare data and customized message in case of failure

—----------

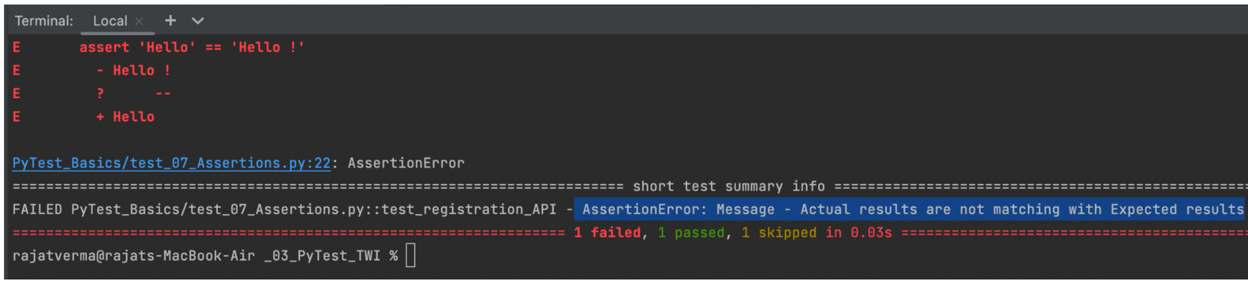
2. **Assertions:**

a.



```
test_07_Assertions.py

import pytest


def test_registration_API():
    print('This is test_registration_API......')
    result_actual = "Hello"
    result_expected = "Hello !"
    # Should be equal
    assert result_actual == result_expected, "Message - Actual results are not matching with Expected results"  #
    # assert result_actual != result_expected  # Should not be equal


def test_login_API():
    print('This is test_login_API......')
    result_actual = "Hello"
    result_expected = "Hello"
    assert result_actual == result_expected


@pytest.mark.skip('Skipping this test case intentionally.........')
def test_logout_API():
    print('This is test_logout_API......')
```

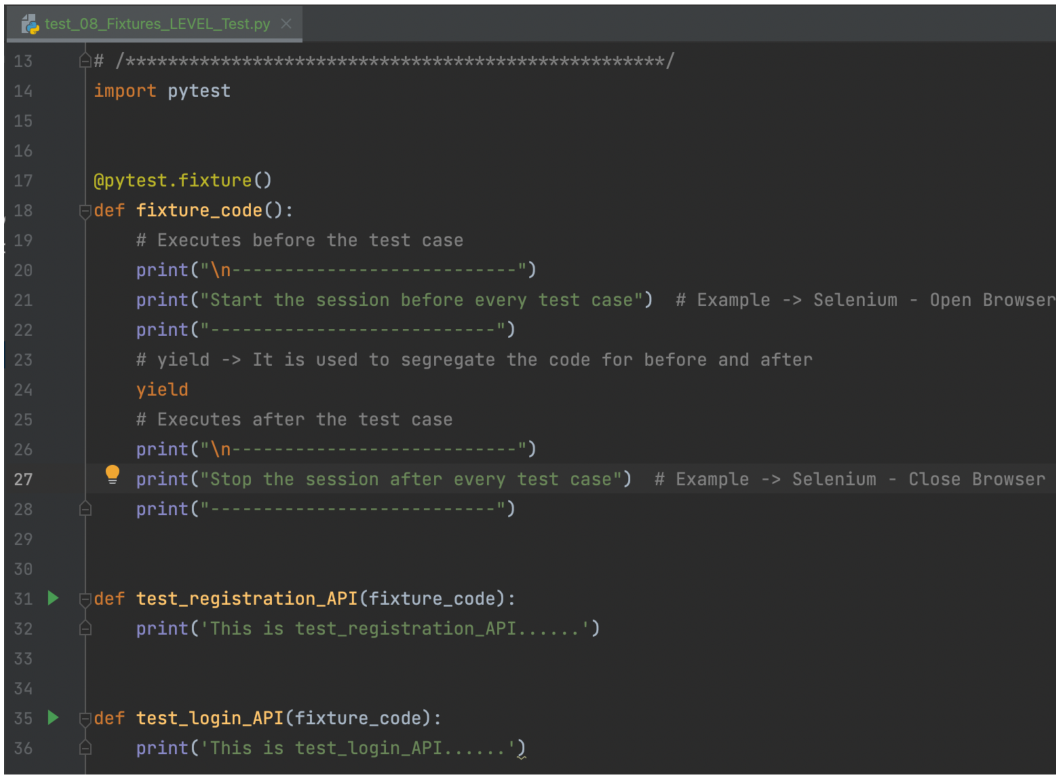
b.



```
Terminal:   Local

E       assert 'Hello' == 'Hello !'
E         - Hello !
E         ?      --
E         + Hello

PyTest_Basics/test_07_Assertions.py:22: AssertionError
================================================================== short test summary info ================================================
FAILED PyTest_Basics/test_07_Assertions.py::test_registration_API - AssertionError: Message - Actual results are not matching with Expected results
============================================================ 1 failed, 1 passed, 1 skipped in 0.03s ========================================
rajatverma@rajats-MacBook-Air _03_PyTest_TWI %
```

—------------------

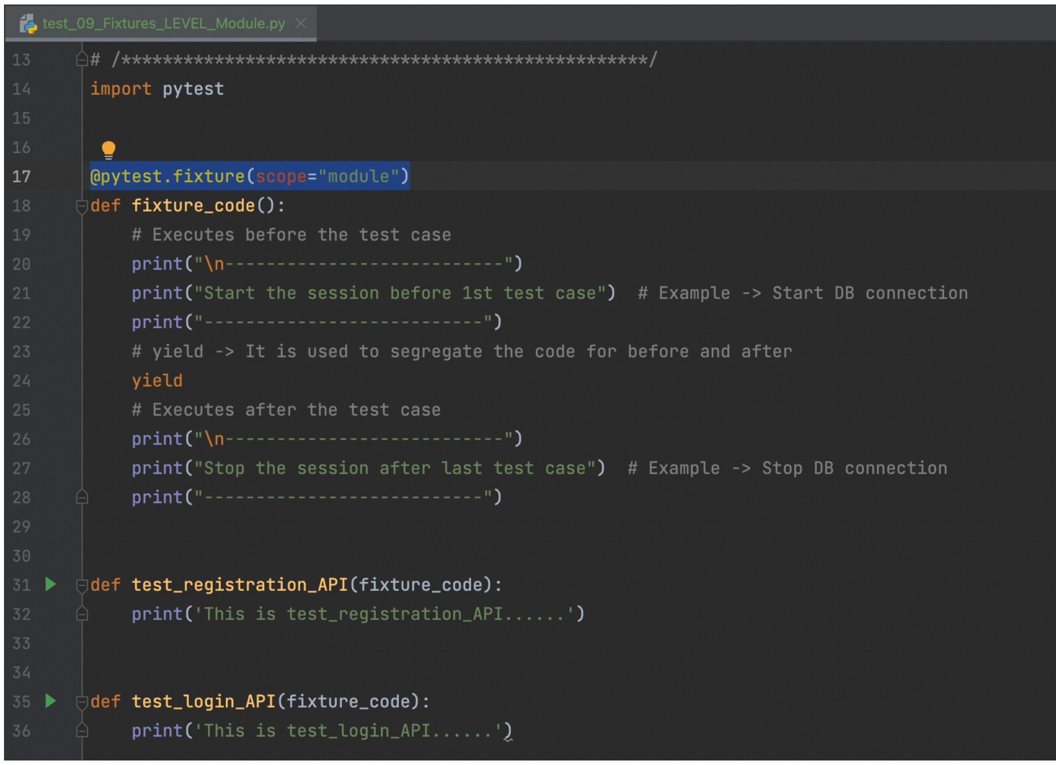
—--------93. Fixtures : Execute Code Before and After Test Case —--------------

1. PyTest Fixtures:
    a. Levels:
        i. **Test case Level**
            1. **@pytest.fixture()**
            2. Execute something before and after each test case
            3. Before -> Test 1 -> After
               Before -> Test 2 -> After
               Before -> Test 3 -> After
               Before -> Test 4 -> After
            4. 

test_08_Fixtures_LEVEL_Test.py

```python
# /*************************************************/
import pytest


@pytest.fixture()
def fixture_code():
    # Executes before the test case
    print("\n--------------------------")
    print("Start the session before every test case")  # Example -> Selenium - Open Browser
    print("--------------------------")
    # yield -> It is used to segregate the code for before and after
    yield
    # Executes after the test case
    print("\n--------------------------")
    print("Stop the session after every test case")  # Example -> Selenium - Close Browser
    print("--------------------------")


def test_registration_API(fixture_code):
    print('This is test_registration_API......')


def test_login_API(fixture_code):
    print('This is test_login_API......')
```

        ii. **Module-level**
            1. Module is 1 python file
            2. Example:
                a. You have 5 test cases inside an python file and you want fixture code to execute
                    i. Before -> Test1 -> Test2 -> Test3 -> Test4 -> After
            3. **@pytest.fixture(scope="module")**

4. 
test_09_Fixtures_LEVEL_Module.py

```python
# /*****************************************************/
import pytest


@pytest.fixture(scope="module")
def fixture_code():
    # Executes before the test case
    print("\n-------------------------")
    print("Start the session before 1st test case")  # Example -> Start DB connection
    print("-------------------------")
    # yield -> It is used to segregate the code for before and after
    yield
    # Executes after the test case
    print("\n-------------------------")
    print("Stop the session after last test case")  # Example -> Stop DB connection
    print("-------------------------")


def test_registration_API(fixture_code):
    print('This is test_registration_API......')


def test_login_API(fixture_code):
    print('This is test_login_API......')
```

—--------94. Reporting in Pytest —--------------

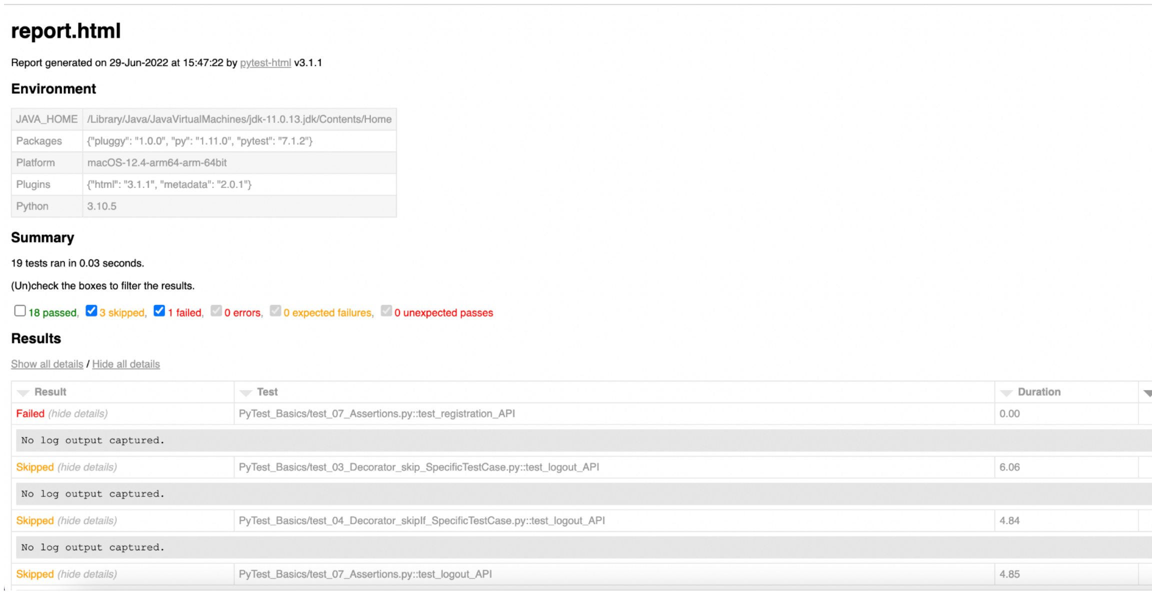
1. **Default Reporting:**
    a. No extra plugins are required
    b. This is an advanced HTML report
    c. High-level execution status in tabular format
    d. Display Graphical trend by comparing execution status with the previous build
    e. Low level information at the Test case level
    f. Clear information for the reason of failure

2. **pip install pytest-html**
    a. To install **pytest-html** package using PIP

3. Execute the test cases
    a. python3 -m pytest -v -s PyTest_Basics --html=report.html

—-----------------

—-----------------

4. Once we execute the tests,
    a. At the project level, we should see a report generated with the name: **report.html**
    b. Report:
        i. 

report.html

Report generated on 29-Jun-2022 at 15:47:22 by pytest-html v3.1.1

Environment

JAVA_HOME	/Library/Java/JavaVirtualMachines/jdk-11.0.13.jdk/Contents/Home
Packages	{"pluggy": "1.0.0", "py": "1.11.0", "pytest": "7.1.2"}
Platform	macOS-12.4-arm64-arm-64bit
Plugins	{"html": "3.1.1", "metadata": "2.0.1"}
Python	3.10.5

Summary

19 tests ran in 0.03 seconds.

(Un)check the boxes to filter the results.

☐ 18 passed, ☑ 3 skipped, ☑ 1 failed, ☑ 0 errors, ☑ 0 expected failures, ☑ 0 unexpected passes

Results

Show all details / Hide all details

Result	Test	Duration
Failed (hide details)	PyTest_Basics/test_07_Assertions.py::test_registration_API	0.00
No log output captured.		
Skipped (hide details)	PyTest_Basics/test_03_Decorator_skip_SpecificTestCase.py::test_logout_API	6.06
No log output captured.		
Skipped (hide details)	PyTest_Basics/test_04_Decorator_skipIf_SpecificTestCase.py::test_logout_API	4.84
No log output captured.		
Skipped (hide details)	PyTest_Basics/test_07_Assertions.py::test_logout_API	4.85

—------------------

1. https://pytest-html.readthedocs.io/en/latest/user_guide.html

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1. **To connect:**
    a. https://www.linkedin.com/in/rajat-v-3b0685128/
    b. https://github.com/rajatt95
    c. https://rajatt95.github.io/

===