Introduction to PyTest

PyTest Basics

- Testing Framework for Python

- API Testing

- Frontend (UI) Testing

- Unit Testing

- Simple or Complex

- Learn more: https://docs.pytest.org/en/latest/contents.html#toc

PyTest Basics

- Finds tests automatically

- Test file names

    ✓ must start with '**test_*.py**'

        or

    ✓ must end with '**_test.py**'

- Finds files in current directory and subdirectories

PyTest Basics

- Test files can have just function for classes

- If class, then '__init__()' should not exist

- Functions must start with 'test_*'

      def test_foo_bar(arg1, arg2, ..):

- Class names must start with 'Test' and methods with 'test_'

    Class TestFooBar(object):

      def test_verify_something():

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PyTest Basics

```python
# smoke_test.py

def test_user_login():
    print("log in")

def test_user_register():
    print("log in")

def test_user_logout():
    print("log in")
```

```python
# smoke_test.py

Class TestUserSmoke(object):

    def test_user_login():
        print("log in")

    def test_user_register():
        print("log in")

    def test_user_logout():
        print("log in")
```

PyTest Basics

To run the test

```
$ pytest  <options>
```

or

```
$ pytest  <options>  /path/to/test/files
```

or

```
$ py.test  <options>  /path/to/test/filesc
```

or

```
$ python  –m  pytest  <options>  /path/to/test/files
```

Selecting Specific Tests (Markers)

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Selecting Tests by Markers

```python
# smoke_test.py

import pytest


@pytest.mark.smoke
def  test_user_login():
    print("log in")


@pytest.mark.regression
def  test_user_register():
    print("register")
```

```python
# smoke_test.py

import pytest


@pytest.mark.smoke
Class TestUserSmoke(object):

    def  test_user_login():
        print("log in")


    def  test_user_register():
        print("register")
```

Selecting Tests by Markers

```python
# smoke_test.py

import pytest

pytestmark = pytest.mark.smoke

def  test_user_login():
    print("log in")


def  test_user_register():
    print("register")
```

```python
# smoke_test.py

import pytest

pytestmark = [pytest.mark.smoke,
              pytest.mark.fe]

Class TestUserSmoke(object):

    def  test_user_login():
        print("log in")


    def  test_user_register():
        print("register")
```

Selecting Tests by Markers

```python
# smoke_test.py

import pytest


@pytest.mark.smoke
@pytest.mark.fe
def test_user_login():
    print("log in")


def test_user_register():
    print("register")
```

PyTest Basics

To run the test

```
$ pytest  -m  smoke
```

```
$ pytest  -m  "smoke or regression"  ./tests
```

```
$ pytest  -m  "smoke and regression"  ./tests
```

```
$ pytest  -m  "not prod"  ./tests
```