Python TUTORIAL

Python assertIn()

Summary: in this tutorial, you'll learn how to use the Python `assertIn()` method to test if a member is in a container.

Introduction to the Python assertIn() method

The `assertIn()` is a method of the `TestCase` class of the unittest (https://www.pythontutorial.net/python-unit-testing/python-unittest/) module. The `assertIn()` method tests if a member is in a container:

```
assertIn(member, container, msg=None)
```

If the member is in the container, the test will pass. Otherwise, it'll fail. The `msg` is optional. It'll be displayed in the test result when the test fails.

Internally, the `assertIn()` method uses the `in` operator to check:

```
member in container
```

Python assertIn() method examples

The following example uses the `assertIn()` method to test if a number is in a list (https://www.pythontutorial.net/python-basics/python-list/) and a string is in another string:

```
import unittest


class TestIn(unittest.TestCase):
    def test_in_list(self):
        self.assertIn(1, [1, 2, 3])

    def test_in_string(self):
        self.assertIn('python', 'python tutorial')
```

Run the test:

```
python -m unittest -v
```

Output:

```
test_in_list (test_in.TestIn) ... ok
test_in_string (test_in.TestIn) ... ok

----------------------------------------------------------------------
Ran 2 tests in 0.001s

OK
```

Python assertNotIn() method

The `assertNotIn()` method is the opposite of the `assertIn()` method. The `assertNotIn()` method tests if a member is not in a container:

```
assertNotIn(member, container, msg=None)
```

For example:

```
import unittest


class TestNotIn(unittest.TestCase):
    def test_not_in_list(self):
        self.assertNotIn(0, [1, 2, 3])

    def test_not_in_string(self):
        self.assertNotIn('java', 'python tutorial')
```

Run the test:

```
python -m unittest -v
```

Output:

```
test_not_in_list (test_not_in.TestNotIn) ... ok
test_not_in_string (test_not_in.TestNotIn) ... ok

----------------------------------------------------------------------
Ran 2 tests in 0.000s

OK
```

Summary

- Use the `assertIn()` method to test if a member is in a container.
- Use the `assertNotIn()` method to test if a member is not in a container.