

8 Test Cases: Setup/Teardown

Setup and Teardown

Test cases may consist of many test methods. To reduce repeated code the `TestCase` base class includes setup and teardown methods. These methods are run before each test allowing tests to use shared resources.

This is commonly used to set up connections to external services such as databases.

```
1 import unittest
2 import sqlite3
3 class TestSetupTeardown(unittest.TestCase):
4     def setUp(self):
5         ''' Actions to take before running each test. '''
6         # Create a connection to a SQLite database.
7         # This instance is an in-memory only instance.
8         #
9         # Each time a connection is created the database will be
10        self.db_connection = sqlite3.connect(':memory:')
11        #
12        curs = self.db_connection.cursor()
13        # Create a database table named greeting with a single
14        curs.execute("CREATE TABLE greeting (name text);")
15        # Commit to the changes.
16        self.db_connection.commit()
17    def tearDown(self):
18        ''' Actions to take after running each test. '''
19        # Close the connection to the database.
20        # Which may be superfluous for an in-memory database.
21        self.db_connection.close()
22    def test_row_insert(self):
23        expect = 'Hello'
24        # setUp runs before this method and binds the database
25        curs = self.db_connection.cursor()
```

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```
22 def test_row_insert(self):  
23     expect = 'Hello'  
24     # setUp runs before this method and binds the database  
25     curs = self.db_connection.cursor()  
26     # Insert the word 'Hello' into the name column of the g  
27     curs.execute("INSERT INTO greeting VALUES (?);", (expect  
28     # Commit to the changes.  
29     self.db_connection.commit()  
30     # Fetch the newly inserted row and extract the first (a  
31     actual = curs.execute("SELECT name FROM greeting;").fet  
32     # Assert that the greeting returned is the same as the  
33     self.assertTrue(expect == actual)  
34     def test_starts_empty(self):  
35     # setUp runs before this method and binds the database  
36     curs = self.db_connection.cursor()  
37     # The fetchone method will return None if no data is re  
38     self.assertIsNone(curs.execute("SELECT name FROM greeti  
39 if __name__ == '__main__':  
40     unittest.main()
```

Instructions

1. Arrange the `test_assertion.py` file to match the code above.
2. Run `test_assertion.py` in the IDEs terminal pane.

```
1 python3 cloudacademy/test_assertion.py
```

🌟 Proceed to the next step 🌟

✓ Validations

☐ On Track
Ensure your lab environment is on-track

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