



9 Specific Patches

Specific Patches

Specific types of patches exist for select use cases. Patch includes callables for [patching dictionaries](#), [class attributes and methods](#), and [multiple attributes](#). These specific patch callables can be used as context managers and decorators.

```
1 import unittest
2 from unittest.mock import call, patch
3 ##### Patching Class Attributes & Methods #####
4 class KeepingItClassy:
5     class_attribute = print
6     @classmethod
7     def class_method(cls, *args):
8         ...
9 # Patch class: attributes & methods
10 with patch.object(KeepingItClassy, 'class_method') as class_met
11     # The class method has been replaced by a magic mock.
12     KeepingItClassy.class_method(1, 2, 3)
13     class_method_mock.assert_called_with(1, 2, 3)
14 with patch.object(KeepingItClassy, 'class_attribute') as class_
15     # The class attribute has been replaced by a magic mock.
16     KeepingItClassy.class_attribute('hello')
17     class_attr_mock.assert_called_with('hello')
18 ##### Patching Dictionaries #####
19 # Dictionary containing fake configuration data.
20 config = { 'hostname': 'prod.server.addr', 'port': 5001 }
21 # patch.dict can replace values in a dictionary for the scope o
22 with patch.dict(config, {'hostname': 'test.server.addr'}) as co
23     assert config['hostname'] == 'test.server.addr'
24     # This value remains unchanged.
25     assert config['port'] == 5001
26 ##### Patching Multiple Attributes #####
27 from unittest.mock import DEFAULT
```

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```
26 ##### Patching Multiple Attributes #####
27 from unittest.mock import DEFAULT
28 import sqlite3
29 hostname = 'prod.server.addr'
30 database = sqlite3
31 if __name__ == '__main__':
32     with patch.multiple('__main__', hostname=':memory:', databa
33         # patch.multiple returns a dictionary.
34         # Keys match the names of the patched attributes.
35         database_mock = replacements['database']
36         # Host name is replaced with a new str for the scope of
37         assert hostname == ':memory:'
38         # DEFAULT creates a mock using the default mock type.
39         database_mock.connect(hostname)
40         # Confirm that connect was called.
41         database_mock.connect.assert_called_with(hostname)
42 #####
43 print('No assertion errors')
```

Instructions

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

```
1 python3 cloudacademy/playground.py
```

```
No assertion errors
```

★ Proceed to the next step ★

✓ Validations

☐ On Track - Specific Patches

Ensure your lab environment is on-track

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