WE NEED A BETTER TESTING FRAMEWORK

NOAM TENNE

$ WHOAMI

HACKING AROUND FOR THE PAST ~15 YEARS

VANMOOF

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NIMOY

$ FIND . –NAME | GREP TDD

DO YOU TDD?

$ FIND . –NAME | GREP BDD

DO YOU BDD?

$ WHICH BDD

SCENARIO: DESCRIPTION

GIVEN: A STATE

WHEN: AN ACTION IS PERFORMED

EXPECT: AN OUTCOME

$ VIM BEHAVE.FEATURE

```
Feature: This is behave

  Scenario: Run something
    Given we use behave
     When we write specs
     Then behave runs them
```

$ VIM STEPS/BEHAVE_STEPS.PY

```
from behave import given, when, then, step

@given('we use behave')
def step_impl(context):
    pass

@when('we write specs')
def step_impl(context):
    assert True != False

@then('behave runs them')
def step_impl(context):
    assert context.failed is False
```

$ VIM NIMOY_SPEC.PY ← End with _spec.py

```
from nimoy.specification import Specification

class ExampleSpec(Specification):

    def example_feature(self):
        with given:
            pass
        with expect:
            pass
```

Extend Specification

Contain steps using "with"

$ VIM NIMOY_SPEC.PY

```
from nimoy.specification import Specification

class ExampleSpec(Specification):

    def example_feature(self):
        with setup:
            pass
        with expect:
            pass
```

$ VIM NIMOY_SAR_SPEC.PY

```
from nimoy.specification import Specification

class ExampleSpec(Specification):

    def example_feature(self):
        with setup:
            pass
        with when:
            pass
        with then:
            pass
```

$ VIM NIMOY_SAR_SPEC.PY

```
from nimoy.specification import Specification

class ExampleSpec(Specification):

    def example_feature(self):
        with setup:
            a = 5
        with when:
            a = a + 1
        with then:
            a == 6
```

Look, mom!
No asserts!

$ FIND . –NAME | GREP DDT

DO YOU DDT?

$ WHICH DDT

SCENARIO: DESCRIPTION

GIVEN: A STATE

WHEN: AN ACTION IS PERFORMED

EXPECT: AN OUTCOME

WHERE: VARIABLES EQUAL VALUES

$ VIM TEST_PYTEST_PARAMS.PY

```python
import pytest

@pytest.mark.parametrize("script,result", [
    ("2 * 21", 42),
    ("int(0.1337 * 10000)", 1337),
])
def test_eval(script, result):
    assert eval(script) == result
```

$ VIM NIMOY_MATRIX_SPEC.PY

```
from nimoy.specification import Specification

class ExampleSpec(Specification):
    def example_feature(self, value_a, value_b):
        with given:
            a = value_a
            b = value_b
        with expect:
            (a * b % 2) == 0
        with where:
            value_a | value_b
            2       | 5
            2       | 21
```

Declare variables

Variables Provided

$ VIM NIMOY_MATRIX_SPEC.PY

```
from nimoy.specification import Specification

class ExampleSpec(Specification):
    def example_feature(self):
        with given:
            a = value_of_a
            b = value_of_b
        with expect:
            (a * b % 2) == 0
        with where:
            value_of_a | value_of_b
            2          | 5
            2          | 21
```

Inject anywhere

Declare variables

$ VIM NIMOY_LIST_SPEC.PY

```
from nimoy.specification import Specification

class ExampleSpec(Specification):
    def example_feature(self):
        with given:
            a = value_of_a
            b = value_of_b
        with expect:
            (a * b % 2) == 0
        with where:
            value_of_a = [2, 2]
            value_of_b = [5, 21]
```

$ FIND . –NAME | GREP MOCK

DO YOU MOCK?

$ VIM UNITTEST_MOCKS.PY

```python
from unittest import mock
from mock import Mock

def test_mocks():
    teh_mock = Mock()

    teh_mock.do_it()
    assert teh_mock.do_it.call_count == 1

    teh_mock.do_another.return_value = 5
    assert teh_mock.do_another() == 5
```

$ VIM NIMOY_MOCK_STAGING_RETURN_VALUE.PY

```
from nimoy.specification import Specification
from unittest.mock import Mock

class ExampleSpec(Specification):
    def example_feature(self):
        with given:
            a = Mock()
        with when:
            a.method_call() >> 5
        with then:
            a.method_call() == 5
            a.method_call() == 5
```

Constant return value

$ VIM NIMOY_MOCK_STAGING_SIDE_EFFECT.PY

```
from nimoy.specification import Specification
from unittest.mock import Mock

class ExampleSpec(Specification):
    def example_feature(self):
        with given:
            a = Mock()
        with when:
            a.method_call() << [5, 6, 7]
        with then:
            a.method_call() == 5
            a.method_call() == 6
            a.method_call() == 7
```

Side effect

$ VIM NIMOY_MOCK_SPEC.PY

```
from nimoy.specification import Specification
from unittest.mock import Mock

class ExampleSpec(Specification):
    def example_feature(self):
        with given:
            a = Mock()
        with when:
            a.method_call('argument')
        with then:
            1 * a.method_call('argument')
```

No. Of invocations

Target mock

Expected arguments

$ VIM NIMOY_MOCK_SPEC.PY

```
from nimoy.specification import Specification
from unittest.mock import Mock

class ExampleSpec(Specification):
    def example_feature(self):
        with given:
            a = Mock()
        with when:
            a.method_call('argument')
        with then:
            _ * a.method_call('argument')
```

Any no. of invocations

$ VIM NIMOY_MOCK_SPEC.PY

```
from nimoy.specification import Specification
from unittest.mock import Mock

class ExampleSpec(Specification):
    def example_feature(self):
        with given:
            a = Mock()
        with when:
            a.method_call('argument')
        with then:
            _ * a.method_call(_)
```

Any arg value

$ FIND . –NAME | GREP SUGAR

JUST SHOWING OFF

$ VIM EXPECTING_EXCEPTIONS.PY

```
from nimoy.specification import Specification

class MySpec(Specification):

    def my_feature_method(self):
        with given:
            # Setup
        with when:
            raise Exception('Whaaaaaat')
        with then:
            err = thrown(Exception)
            str(err[1]) == 'Whaaaaaat'
```

$ VIM REGEX.PY

```
from nimoy.specification import Specification

class MySpec(Specification):

    def regex_assertion(self):
        with given:
            exp = 'The quick brown fox'
        with expect:
            exp @ '.+brown.+'
```

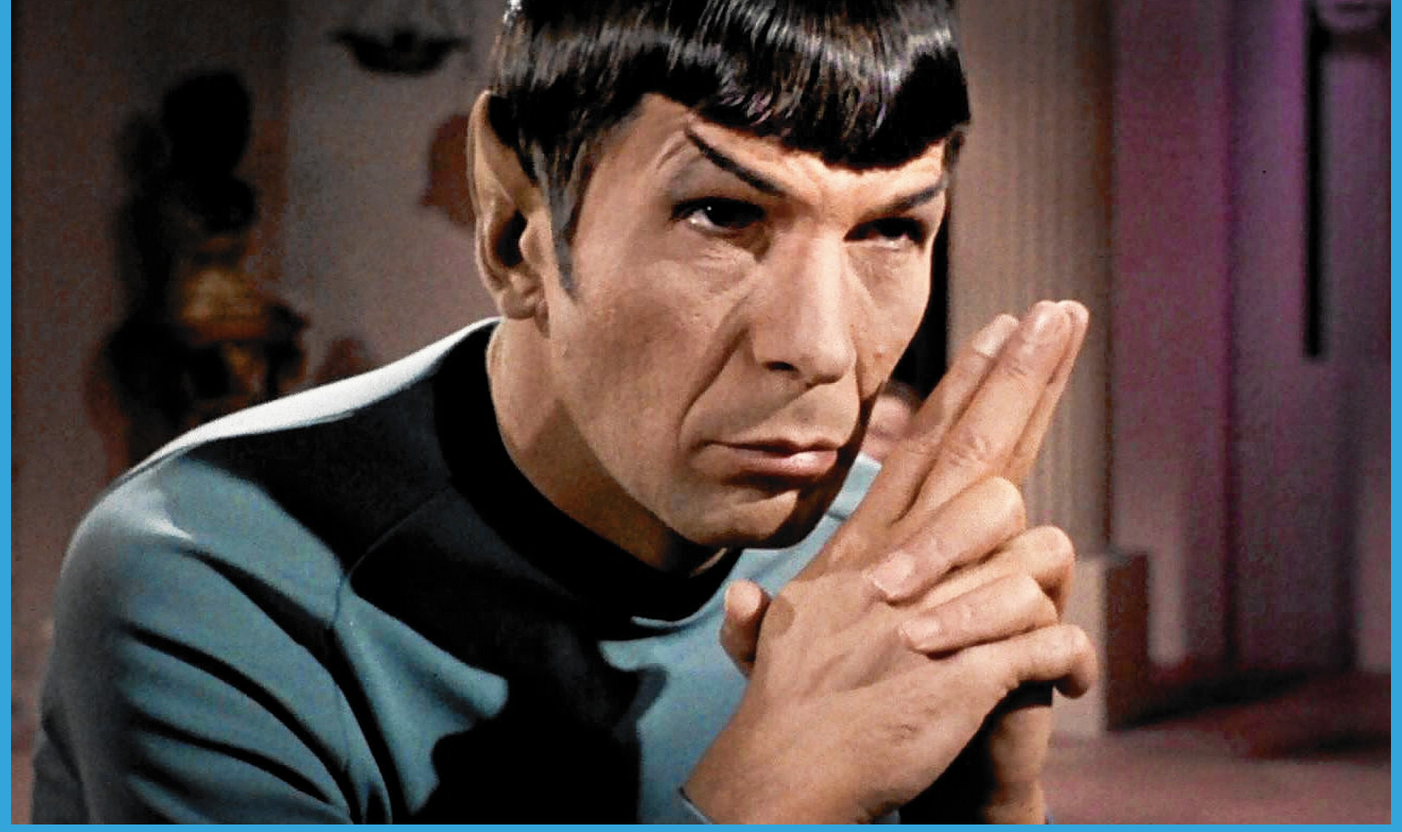
This is a valid regex evaluation

$ WHICH NIMOY

PYTHON 3

UNITTEST

AST



github.com/browncoat-ninjas/nimoy

Version: 0.0.1b7

Search Medium for “Building Nimoy”

QUESTIONS?

THANKS!