TEST::CLASS::MOOSE

Write your tests as Moose classes

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WHY TEST?

Large applications have complicated test suites

Long .t files are horrible

What can we do about that?

Test code is production code!

Production code has classes

```
package Person;
use Moose;

has name => (
    is       => 'ro',
    required => 1,
);

has age => (
    is       => 'ro',
    isa      => 'Int',
    required => 1,
    writer   => '_write_age',
);

sub birthday {
    my ($self) = @_;

    $self->_write_age( $self->age + 1 );
}
```

The tests can have classes too!

```
package TestsFor::Person;
use Test::Class::Moose;
use Person;

sub test_birthday {
    my ($test) = @_;

    my $bob = Person->new( name => 'Bob', age => '20' );
    is $bob->age, 20, 'Bob starts with the right age';
    $bob->birthday;
    is $bob->age, 21, 'Bob is a year older after their birthday';
}

1;
```

We need a way to load it.

```
use Test::Class::Moose::Load 't/lib';
use Test::Class::Moose::Runner;
Test::Class::Moose::Runner->new->runtests;
```

What does this look like now?

```
julien@horst:~/code/private/talks $ tree test-class-moose
test-class-moose
├── lib
│   └── Person.pm
└── t
    ├── lib
    │   └── TestsFor
    │       └── Person.pm
    └── tests.t
```

Let's run it!

```
julien@horst:~/code/private/talks/test-class-moose $ prove -lv t
t/tests.t ..
1..1
#
# Running tests for TestsFor::Person
#
    # Subtest: TestsFor::Person
    1..1
    # TestsFor::Person->test_birthday()
        # Subtest: test_birthday
        ok 1 - Bob starts with the right age
        ok 2 - Bob is a year older after their birthday
        1..2
    ok 1 - test_birthday
ok 1 - TestsFor::Person
ok
All tests successful.
Files=1, Tests=1,
1 wallclock secs ( 0.02 usr  0.00 sys +  0.33 cusr  0.03 csys =  0.38
Result: PASS
```

Let's add another test

```
sub test_constructor {
    my ($test) = @_;

    dies_ok { my $bob = Person->new( name => 'Bob' ) }
        'Creating Bob without an age blows up';
}
```

```
#
# Running tests for TestsFor::Person
#
    # Subtest: TestsFor::Person
    1..2
    # TestsFor::Person->test_birthday()
        # Subtest: test_birthday
        ok 1 - Bob starts with the right age
        ok 2 - Bob is a year older after their birthday
        1..2
    ok 1 - test_birthday
    # TestsFor::Person->test_constructor()
        # Subtest: test_constructor
        ok 1 - Creating Bob without an age blows up
        1..1
    ok 2 - test_constructor
ok 1 - TestsFor::Person
```

Overview

- one test class for each class
- one `test_` sub for each test case or method

WHAT ELSE CAN WE DO?

The tests are Moose classes, so they can have attributes.

```
package TestsFor::Foo;
use Test::Class::Moose;
use DBI;

has dbh => (
  is => 'ro',
  default => sub {
    DBI->connect( '...' );
  }
);

sub test_frobnicate {
  my ($test) = @_;

  my $sth = $test->dbh->prepare( '...' );
}
```

Tag tests to organize them into logical unit

```
sub test_save_poll_data : Tags(api network) {
    ...
}
```

And then filter by tags in the runner config

```
Test::Class::Moose::Runner->new(
    include_tags => [qw/api database/],
    exclude_tags => 'deprecated',
)->runtests;
```

Only run specific test classes.

```
Test::Class::Moose::Runner->new(
    test_classes => [qw/TestsFor::Specific::Class/],
)->runtests;
```

Test::Class::Moose gives you Test::Most

- strict
- warnings
- Test::More
- Test::Exception
- Test::Difference
- Test::Deep
- Test::Warn

Remember it's Moose!

- subclass your tests
- use roles to load test features (like a mocked database)

TEST::CLASS::MOOSE

written by Ovid

current maintainer Dave Rolsky

https://metacpan.org/pod/Test::Class::Moose