Selenium and Perl
Eric Johnson (@kablamo)

What is Selenium?

- Written in Java

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- Similar to Test::WWW::Mechanize

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- But tests at the browser level

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- Exercises your JavaScript

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What is Selenium?

- Written in Java
- Similar to Test::WWW::Mechanize
- But tests at the browser level
- Exercises your JavaScript
- Tests your site in any browser

Selenium IDE

- Firefox plugin

Selenium IDE

- Firefox plugin
- Designer can create tests

Selenium IDE

- Firefox plugin
- Designer can create tests
- Records your actions in the browser

Selenium IDE

Selenium IDE

- Firefox plugin
- Designer can create tests
- Records your actions in the browser
- Replays them

Demo

Problems

- Unreliable tests

Problems

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- It's not Perl (it's Selenese)

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- Lack of automation

Unreliable tests

problem: waitForPageToLoad
         does not handle ajax requests

Unreliable tests

Unreliable tests

problem: waitForPageToLoad
         does not handle ajax requests

solution: waitForTextPresent

```
                         Problems

x Unreliable tests
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```

Test::WWW::Selenium

4 ingredients

1. Perl test

4 ingredients

1. Perl test
2. Selenium server

4 ingredients

1. Perl test
2. Selenium server
3. Web browser

4 ingredients

4 ingredients

1. Perl test
2. Selenium server
3. Web browser
4. Website

```perl
use Test::Most;
use Test::WWW::Selenium;

my $s = Test::WWW::Selenium->new(
    host            => "localhost",
    port            => 4444,
    browser         => "*firefox",
    browser_url     => "http://localhost:5000",
);

$s->open_ok("/index.tt");
$s->wait_for_page_to_load_ok;
$s->type_ok(searchInput => "cat pictures");
$s->click_ok("searchButton");
$s->wait_for_page_to_load_ok;
$s->is_text_present_ok('2 bajillion results');

done_testing;
```

```perl
use Test::Most;
use Test::WWW::Selenium;

my $s = Test::WWW::Selenium->new(
    host            => "localhost",
    port            => 4444,
    browser         => "*firefox",
    browser_url     => "http://localhost:5000",
);

$s->open_ok("/index.tt");
sleep 2;
$s->wait_for_page_to_load_ok;
sleep 2;
$s->type_ok(searchInput => "cat pictures");
sleep 2;
$s->click_ok("searchButton");
sleep 2;
$s->wait_for_page_to_load_ok;
sleep 2;
$s->is_text_present_ok('2 bajillion results');

done_testing;
```

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$s->wait_for_page_to_load_ok;
$s->is_text_present_ok('2 bajillion results');

done_testing;
```

```perl
use Test::Most;
use MySelenium

my $s = MySelenium->new;

$s->open_ok("/index.tt");
$s->wait_for_page_to_load_ok;
$s->type_ok(searchInput => "cat pictures");
$s->click_ok("searchButton");
$s->wait_for_page_to_load_ok;
$s->is_text_present_ok('2 bajillion results');

done_testing;
```

```perl
package MySelenium;
use Moose;
extend 'Test::WWW::Selenium';
```

Unfortunately

Unfortunately

Can't extend non Moose libraries
with Moose

Fortunately

Fortunately

MooseX::NonMoose can extend
non Moose libraries

```
package MySelenium;
use Moose;
use MooseX::NonMoose;
extend 'Test::WWW::Selenium';
```

Unfortunately

Unfortunately

MooseX::NonMoose does not work on
    parents that use AUTOLOAD

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Fortunately

Fortunately

Test::WWW::Selenium::More

```perl
package MySelenium;
use Moose;
extends 'Test::WWW::Selenium::More';

has host       => (...);
has port       => (...);
has browser    => (...);
has browser_url => (
    is      => 'rw',
    isa     => 'Str',
    default => 'http://localhost:5000'
);

no Moose;
```

```perl
use Test::Most;
use MySelenium;

my $s = MySelenium->new;

$s->note('Are there enough cat pictures?');
$s->open_ok("/index.tt");
$s->type_ok(searchInput => "cat pictures");
$s->click_ok("searchButton");
$s->wait_for_page_to_load_ok;
$s->is_text_present_ok('2 bajillion results');

done_testing;
```

```perl
use Test::Most;
use MySelenium;

my $s = MySelenium->new;

$s->note('Are there enough cat pictures?');
$s->open_ok("/index.tt");
$s->type_ok(searchInput => "cat pictures");
$s->click_ok("searchButton");
$s->wait_for_page_to_load_ok;
$s->is_text_present_ok('2 bajillion results');

$s->note('Check results as a logged in user');
$s->login_ok('bob'); # not in the Selenium API
$s->is_text_present_ok('2 bajillion results');

done_testing;
```

```perl
package MySelenium;
use Moose;
extends 'Test::WWW::Selenium::More';

has host        => (...);
has port        => (...);
has browser     => (...);
has browser_url => (
    is      => 'rw',
    isa     => 'Str',
    default => 'http://localhost:5000'
);

sub login_ok {
    my ($self, $username, $password) = @_;
    $self->open_ok('/login.tt');
    $self->type_ok(username => $username);
    $self->type_ok(password => $password);
    $self->click_ok('login');
}

no Moose;
```

```perl
package MySelenium;
use Moose;
extends 'Test::WWW::Selenium::More';
with 'MySelenium::Roles::Authentication';

has host        => (...);
has port        => (...);
has browser     => (...);
has browser_url => (
    is      => 'rw',
    isa     => 'Str',
    default => 'http://localhost:5000'
);

no Moose;
```

```perl
package MySelenium;
use Moose;
extends 'Test::WWW::Selenium::More';
with 'MySelenium::Roles::Authentication';
with 'MySelenium::Roles::Payments';
# etc

has host        => (...);
has port        => (...);
has browser     => (...);
has browser_url => (
    is      => 'rw',
    isa     => 'Str',
    default => 'http://localhost:5000'
);

no Moose;
```

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x Unreliable tests
x It's not Perl (it's Selenese)
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x Can't easily extend Test::WWW::Selenium
- Designers can't easily write tests
- Lack of automation

Test::WWW::Selenium::More

Test::WWW::Selenium::More

- Method chaining

```perl
use Test::Most;
use MySelenium;

MySelenium->new

  ->note('Are there enough cat pictures?')
  ->open_ok("/index.tt")
  ->type_ok(searchInput => "cat pictures")
  ->click_ok("searchButton")
  ->wait_for_page_to_load_ok
  ->is_text_present_ok('2 bajillion results')

  ->note('Check results as a logged in user')
  ->login_ok('bob') # not in the Selenium API
  ->is_text_present_ok('2 bajillion results');

done_testing;
```

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Jenkins
- Written in Java

Jenkins
- Written in Java
- cron with a web interface and features

Jenkins

Jenkins
- Written in Java
- cron with a web interface and features
- The moose dev team uses it

```
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```

The End

Links

Test::WWW::Selenium::More
http://github.com/kablamo/Test-WWW-Selenium-More

Selenium reference (locators + api)
http://cavaliere.org/sandbox/selenium_api_reference

This talk
http://kablamo.github.com/talk-SeleniumAndPerl

kablamo
http://kablamo.org

Bonus slide

https://saucelabs.com/

Selenium and Perl

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