outside-in specs

using BDD & Selenium

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ThoughtWorks

```
foo = Foo.new
```

foo.bar
= ?

```
a = foo.bar
print a
```

```
if a == 42
    print “ok”
else
    print “FAIL”
```

```
if a == 42
    print “ok”
else
    print “FAIL”
```

```
if a == 42
    print “ok”
else
    raise Fail
```

```
if a != 42
    raise Fail
```

```
unless a == 42
raise Fail
```

```
raise Fail unless a == 42
```

```
def assert expr
    raise Fail unless expr
```

```
assert foo.bar == 42
```

class Asserts
module Asserts

...

Test::Unit

```
assert foo.bar == 42
```

```
ensure foo.bar == 42
```

enforce foo.bar == 42

```
verify foo.bar == 42
```

```
check foo.bar == 42
```

foo.bar == 42

input
processing
output

input → _____

processing → _____

output → _____

input → given

processing → _____

output → _____

input → given

processing → when

output → _____

input → given
processing → when
output → then

given foo
when bar
then ____ == 42

open classes & literate programming

foo.bar._____ == 42

```
foo.bar.assert == 42
```

```
foo.bar.ensure == 42
```

```
foo.bar.must == 42
```

foo.bar.is == 42

```
foo.bar.should == 42
```

```
foo.bar.should == 42
```

```
foo.bar.should be(42)
```

foo bar should be 42

...

RSpec

foo bar should be 42

should

MoSCoW

must

should

could

won’t

petitio principii

“bar should be 42.”
“should it?”

“bar should be 42.”
“should it? why?”

why?

as a _____
I want _____
so that _____

as a _____

I want _____

so that _____

as a hungry kid
I want to buy cookies
so that _____

as a → given
I want → when
so that → then

given hungry kid
when she buys cookies
then ____

Cucumber

k = hungry_kid
b = k.buy_cookies
b.should ____

web

customer → browser

browser?

go to url

click
type
check
select

find

id
name
class
link text
xpath

google search

given an open browser
and I go to ‘google.com’

when I find ‘q’
and type ‘qcon’

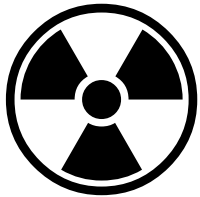
and I find ‘btnG’
and click it

then the title should be ‘qcon — Results’

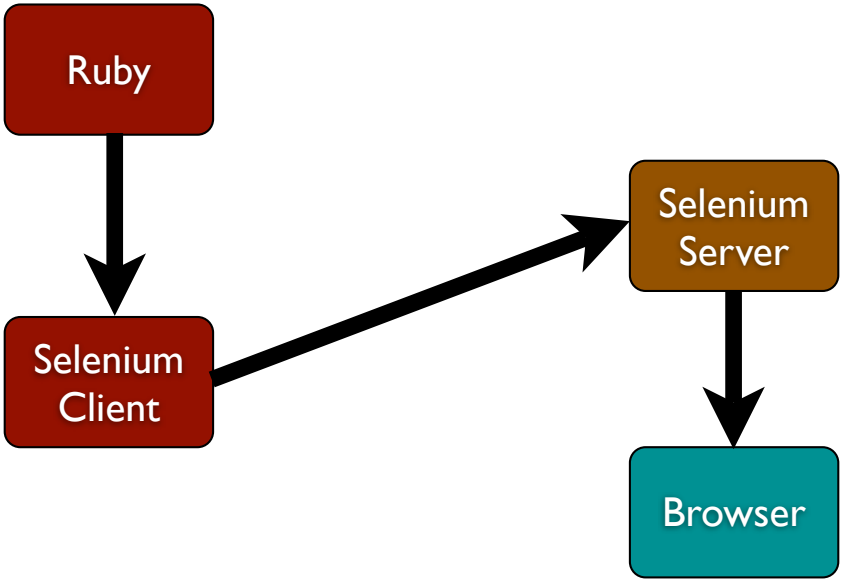
go to ‘google.com’
find ‘q’, type ‘qcon’
find ‘btnG’, click it
title should be ‘Results’

```
go_to ‘google.com’
find(‘q’).type ‘qcon’
find(‘btnG’).click
title.should be(‘Results’)
```

```
go_to ‘google.com’
find(‘q’).type ‘qcon’
find(‘btnG’).click
title.should be(‘Results’)
```



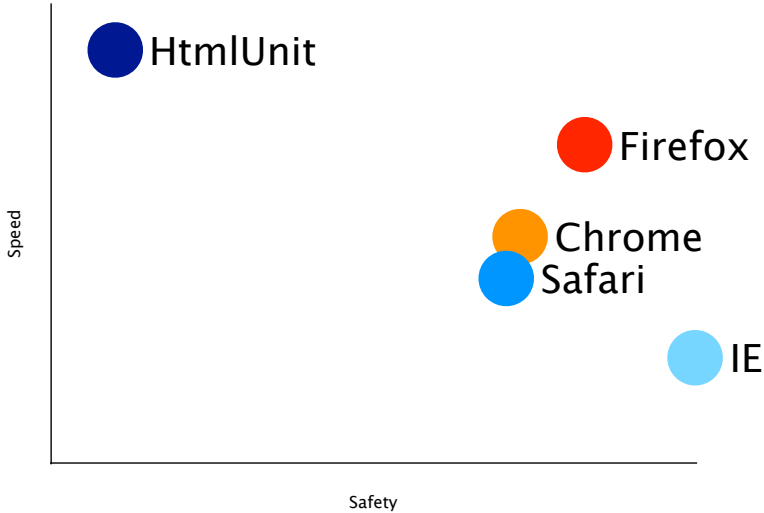
Selenium


Ruby
Selenium Client
Selenium Server
Browser

speed

safety

speed vs safety


HtmlUnit
Firefox
Chrome
Safari
IE
Speed
Safety

evolution

script

```
go_to ‘google.com’
find(‘q’).type ‘qcon’
find(‘btnG’).click
title.should be(‘Results’)
```

10 GO TO ‘Google’
20 TYPE ‘q’, ‘qcon’
30 CLICK ‘btnG’
40 TITLE? ‘Results’

procedural

objects

page objects

```
class MyApp::Page
    def menu
    def search_form
    def ...
```

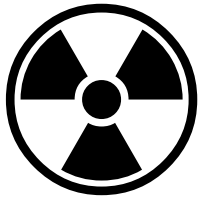
```
module Google
    class Home < Page
```

```
g = Google::Home.new
r = g.search_for ‘qcon’
r.title.should be...
```

```
g = Google::Home.new
r = g.search_for ‘qcon’
r.title.should be...
```

```
def search_for term
    find('q').type term
    find('btnG').click
    Results.new ...
end
```

```
class Results < ...
    def initialize
        title.should ...
```



test code

test code

code

solution

test code

understanding

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