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Automation Functional Testing Watir-based

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Outline

- ◆ What's Watir
- ◆ Why Watir
- ◆ Where can use Watir
- ◆ Where can't use Watir
- ◆ The elements of Watir
- ◆ A example
- ◆ Your first script
- ◆ Some notes
- ◆ Some resource for Watir
- ◆ Q&A

What's Watir

- ◆ WATIR stands for "Web Application Testing in Ruby".
- ◆ Watir is a free, open-source functional testing tool for automating browser-based tests of web applications. It is pronounced *water*.

Why Watir

- ◆ It's a free open source tool. There are no costs to get it. Also, it's extensible
- ◆ Watir is easier/effective/agile than WR/QTP/Robot for Web application function testing

Where can use Watir

- ◆ The application is browser-based
- ◆ The application working with Windows and IE
- ◆ The application working with Linux and Firefox (before long)
- ◆ The user understand HTML and C/VB or other program language

Where can't use Watir

- ◆ The application based on web browser
- ◆ The user only like Record&Replay script

The elements of Watir

```
googleSearch.rb - SciTE
File Edit Search View Tools Options Language Help

# set a variable
test_site = 'http://www.google.com'

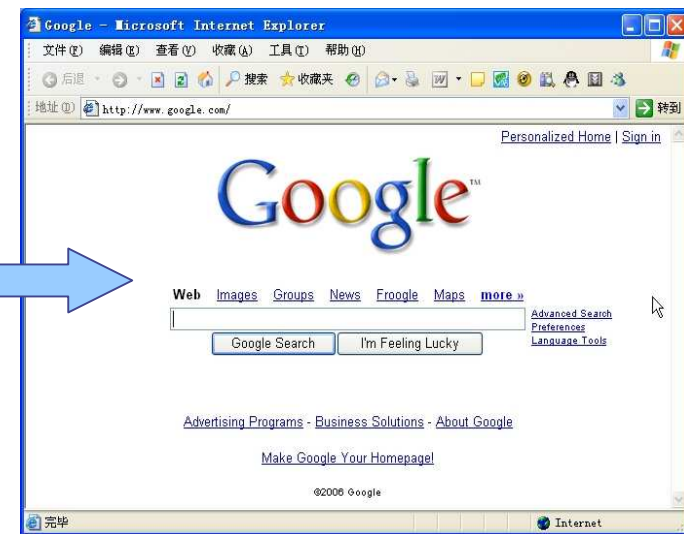
# open the IE browser
ie = Watir::IE.new

# print some comments
puts "## Beginning of test: Google search"
puts " "

puts "Step 1: go to the test site: " + test_site
ie.goto(test_site)
puts " Action: entered " + test_site + " in the address bar."

puts "Step 2: enter 'pickaxe' in the search text field"
ie.text_field(:name, "q").set("pickaxe") # q is the name of the search fi
puts " Action: entered pickaxe in the search field"
```

WIN32OLE Interface





A example

```
require 'watir'           # the watir controller
ie = Watir::IE.new        # create a IE browser window

ie.goto ('http://www.google.com') # Step 1: go to the test site: http://www.google.com

ie.text_field(:name, "q").set("pickaxe") # Step 2: enter 'pickaxe' in the search text
                                         # field. "q" is the name of the search field

ie.button(:name, "btnG").click # Step 3: click the 'Google Search' button.
                              # "btnG" is the name of the Search button

if ie.contains_text("Programming Ruby")
  puts "Test Passed. Found the test string: 'Programming Ruby'. Actual
Results match Expected Results."
else
  puts "Test Failed! Could not find: 'Programming Ruby'"
end
# Expected Result: Check that the 'Programming Ruby' link appears on
the results page
# End of test: Google search
```


Your first script

- ◆ **Build your environment for Watir**
 - Windows 2000/XP + IE 5.5 or later
 - Download and install Ruby (1.8.2-14 or later)
 - Download and install Watir (1.4.0 or 1.4.1)

- ◆ **Write your test script flow or test case**
 - Business flow-based and UI-based

- ◆ **Map your web application**
 - Map file format
 - Use Firefox DOM Viewer
 - What's DOM?

Your first script (cont.)

◆ Write your code

- Use SciTE editor
- First, type your test steps
- require 'watir'
- Open IE and go to your website
- Add your actions
- validate test results

◆ Debug and execute your script

◆ Use IRB

- interactive programming
- Find page objects

Your first script (cont.)

- ◆ Parameterize your script
- ◆ Data drive & Keyword drive
- ◆ Output test log information
- ◆ Use comments

Use comments can improve readable for
your code



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Some notes

◆ The “watir” library is necessary

◆ Match case

ie = watir::IE.new (×)

ie = Watir::IE.new (✓)

Require 'Watir' (×)

require 'watir' (✓)

Some resource for Watir

◆ Watir home page

- <http://wtr.rubyforge.org/>

◆ Watir source code

- `<Watir_home_dir>\examples*.rb`
- `<Watir_home_dir>\unitTests*.rb`

◆ MSDN Library

- http://msdn.microsoft.com/library/default.asp?url=/library/en-us/dnanchor/html/anch_webdev.asp

◆ My blog in cnblogs.com

- <http://jackei.cnblogs.com/>



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QA &



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*Thank
You*