WebDriver API Cheat Sheets

- A short set of Summary Cheat Sheets for Hands On Working With WebDriver
- Contents:
  - Basic API commands
  - Hamcrest matchers & Junit
  - IntelliJ Tips
  - CSS & Xpath Selectors
  - Contact Details

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Created to support our Selenium 2 WebDriver Training Courses

API Overview

http://www.mindmeister.com/280141421/selenium-2-webdriver-commands

WebDriver Level Basics

http://www.mindmeister.com/280141421/selenium-2-webdriver-commands

WebElement Interrogation Basics

http://www.mindmeister.com/280141421/selenium-2-webdriver-commands

WebElement Manipulation

http://www.mindmeister.com/280141421/selenium-2-webdriver-commands

Synchronisation

HTML, Web Domain

Basic API

Selenium 2 WebDriver Commands
Domain
Cookies
Interrogation
<WebDriver>.manage()
.getCookies
.getCookieNamed
Manipulation
<WebDriver>.manage()
addCookie
deleteAllCookies
deleteCookie
deleteCookieNamed
Cookie
Cookie.Builder
Windows
Interrogation
<WebDriver>
.getWindowHandle
.getWindowHandles
.manage().window()
.getSize
.getPosition
Navigation
<WebDriver>
.switchTo().window
Manipulation
<WebDriver>
.manage().window()
.maximize
.setSize
.setPosition
Frames
Navigation
.switchTo
.frame
.defaultContent
(JavascriptExecutor)
executeScript
executeAsyncScript
Alerts
Navigation
<WebDriver>
.switchTo().alert()
Interrogation
.getText
Manipulation
.dismiss
.accept
.sendKeys
Drivers
remote
chrome
firefox
opera
IE
Navigation
<WebDriver>
.get
.navigate
.to
.back
.forward
.refresh
Interrogation
or
Inspection
<WebDriver>
.getTitle
.getCurrentUrl
.getPageSource
location
<WebDriver>
<WebElement>
.findElement
.findElements
By
.id
.xpath
.cssSelector
.className
.linkText
.name
.tagName
.partialLinkText
support
ByChained
ByIdOrName
<WebElement>
.getText
.getAttribute
.getTagName
.isDisplayed
.isEnabled
.isSelected
.getSize
.getLocation
.getCssValue
support
Select
.isMultiple
.getOptions
etc.
Synchronisation
support
ExpectedConditions
lots of common Static expected condition methods
WebDriverWait
ExpectedCondition
FluentWebDriverWait
<WebDriver>.manage().timeouts().
implicitlyWait
pageLoadTimeout
setScriptTimeout
Manipulation
or
Interaction
<WebElement>
.click
.clear
.sendKeys
multiple arguments
special Keys.
RETURN
SHIFT
etc.
Keys.chord
modifiers
shift
ctrl
etc.
end with Keys.NULL
.submit
support
Select
selectByVisibleText
etc.
<Actions>
.keyDown
.keyUp
.sendKeys
.clickAndHold
.release
.click
.doubleClick
.moveToElement
.moveByOffset
.contextClick
.dragAndDrop
.dragAndDropBy
.build
to create a sequence to perform later
.perform
build and perform now

IntelliJ Tips

- Use Code Completion
- ctrl+Q for Documentation of Commands
- ctrl+click to view the method code
- Switch on AutoScroll
- Find Symbol
  - Shift + Cntrl + Alt + N
- Find Class
  - Cntrl + N
- Find File
  - Shift + Ctnrl + N

Synchronisation WebDriverWait

- ExpectedConditions static methods

```
new WebDriverWait(driver,10).until(
        ExpectedConditions.titleIs("HTML Form Elements"));
```

- Custom ExpectedCondition

```
new WebDriverWait(driver,10).until(
                optionWithValueDisplayed(By.id("combo2"),"Java") );
```

```
private ExpectedCondition<WebElement>  optionWithValueDisplayed(
                                                final String value) {

   return new ExpectedCondition<WebElement>() {

      @Override
      public WebElement apply(WebDriver webDriver) {
         return webDriver.findElement(
                      By.cssSelector("option[value='" + value + "']") );
      }
   };
}
```

SlowLoadableCompnent

- Public interface
  - get()
    - loads and waits for component to be available

```
extends SlowLoadableComponent<PageObjectClassName>
```

- Call super constructor in constructor

```
public PageObjectClassName(WebDriver driver) {
    super(new SystemClock(), 10);
    this.driver = driver;
}
```

- Implement load and isLoaded
  - isLoaded throws a new Error if not loaded
  - I often leave the 'load' part empty if I navigate to the page

Hamcrest Matchers & JUnit

e.g. assertThat(driver.getTitle(), is(not("bob"));

- is
- not
- *Number*
  - greaterThan,
  - greaterThanOrEqualTo,
  - lessThan,
  - lessThanOrEqualTo - test ordering
- *Text*
  - equalToIgnoringCase
  - equalToIgnoringWhiteSpace
  - containsString,
  - endsWith,
  - startsWith

- @Test
- @Before, @After (method level)
- @BeforeClass, @AfterClass (static)

- *Collections*
  - hasEntry,
  - hasKey,
  - hasValue - test a map contains an entry, key or value
  - hasItem,
  - hasItems - test a collection contains elements
  - hasItemInArray - test an array contains an element
- notNullValue,
- nullValue - test for null

http://code.google.com/p/hamcrest/wiki/Tutorial#A_tour_of_common_matchers

Selectors

XPATH Selectors
// - match anywhere
/ - match from root
//* - any element
//tag
//*[@attribute]
//*[@attribute="value"]
//tag[@attribute="value"]
//tag1/tag2 (child)
//tag1//tag2 (any descendant)
`//tag1/../..` `(.. to go up)`
`//*[.='element text']`
[@at1="a" and @at2="b"]
and, or, =, !=, <, >, >=, <-
Functions
contains(@a,"alu")
starts-with(@a,"v")
ends-with(@a,"e")
Indexing
//tag[1]

CSS Selectors
* - any
#id
.class
tag
[attribute]
[attribute="value"]
tag[attribute="value"]
tag[attr1='val1'][attr2='val2']
tag[att1='val1'], orThisTag
= (' or ")
*="anywhere in value"
^="start of value"
$="end of value"
~="spaceSeperatedValue"
Paths
A > B (child)
A B (any descendant)
A + B (A's B sibling)
tag:first-child

CSS References

- http://reference.sitepoint.com/css/selectorref
- http://net.tutsplus.com/tutorials/html-css-techniques/the-30-css-selectors-you-must-memorize/
- http://www.quirksmode.org/css/contents.html
- http://www.w3schools.com/cssref/css_selectors.asp

XPath References

- http://www.w3schools.com/xpath/
- http://www.simple-talk.com/dotnet/.net-framework/xpath,-css,-dom-and-selenium-the-rosetta-stone/

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Blogs and Web Sites

- SeleniumSimplified.com
- EvilTester.com
- Testing Papers and Tools
  - CompendiumDev.co.uk

Twitter: @eviltester

Online Training Courses

- Technical Web Testing 101
  - Unow.be/at/udemy101
- Intro to Selenium
  - Unow.be/at/udemystart
- Selenium 2 WebDriver API
  - Unow.be/at/udemyapi

Videos

youtube.com/user/EviltesterVideos

Books

Selenium Simplified

Unow.be/rc/selsimp