

# Oxygen Functional Testing Framework

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## Why Oxygen?

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- **Simplicity** - Capable of writing scripts based on the features of the application, rather than based on the tool
- **Higher Productivity in writing scripts**
  - Using features like, Auto complete, Refactoring etc.,
  - Development of scripts, even before a working app is available.
- **Portability** - Capability to run the oxygen scripts against different tools / programming languages.

## About Oxygen

- Uses open-source (or freely available) tools / software
- Scripts are more readable hence helps all stakeholders in the project
- Shorter learning curve
- Used successfully in a couple of projects within Thoughtworks

Tool	Programming Language	IDE	Reporting Tool	Integrate with Build
Selenium RC	Java	Eclipse	JUnit	Ant
WatiJ				
Selenium RC	.NET	Visual Studio Express (Free Download)	NUnit	NAnt
WatiN				
Selenium RC	Ruby	Eclipse	RUnit	Rake
WatiR				

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## Scripting using open-source Tools

### Selenium RC (Java)

```
import com.thoughtworks.selenium.*;
import org.openqa.selenium.server.*;
import junit.framework.*;

public class seleniumTest
{
    String url = "http://localhost/SampleApp.html"
    private static Selenium sel;

    @BeforeClass static public void classSetup()
    {
        SeleniumServer sel_server;
        sel_server = new SeleniumServer();
        sel_server.start();
        sel = new DefaultSelenium("localhost", 4444,
            "firefox", url);
        sel.start();
        sel.open(url);
    }
}
```

```
@Test void loginTest()
{
    sel.type("userName", "admin");
    sel.type("passWord", "admin");
    sel.click("signIn");
    sel.waitForPageToLoad(10000);

    Assert.assertFalse("Login Failed",
        sel.isElementPresent("signIn"));
}
```

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## Scripting using open-source Tools

### WatiJ

```
import watij.runtime.ie.*;

public class watiJTests
{
    String url = "http://localhost/SampleApp.html"
    private static IE wat;
    protected watij.finders.Finder finder;

    @BeforeClass static public void classSetup()
    {
        wat= new IE();
        wat.start(url);
    }
}
```

```
@Test loginTest()
{
    finder= watij.finders.FinderFactory.attribute
        ("name", "userName");
    wat.textField(finder).set("admin");

    finder= watij.finders.FinderFactory.attribute
        ("name", "passWord");
    wat.textField(finder).set("admin");

    finder= watij.finders.FinderFactory.attribute
        ("name", "signIn");
    wat.button(finder).click();
    wat.waitForReady();

    Assert.assertFalse("Login Failed",
        wat.button(finder).exists());
}
}
```

## Scripting using Oxygen Framework

```
import business.*;
import org.junit.*;
import framework.*;
import framework.Assert;

public class oxygenTests
{
    private static MyApp mp;

    @BeforeClass static public void classSetup()
    {
        mp = new MyApp
            ("myAppInstance");
    }
}
```

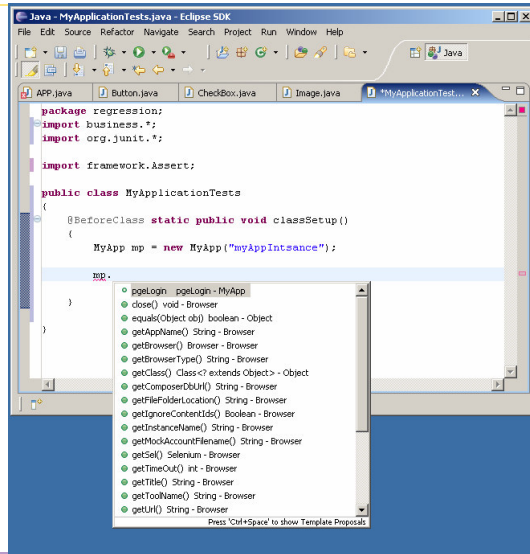
```
@Test void loginTest()
{
    mp.pgeLogin.tbxUsername.type("admin");

    mp.pgeLogin.tbxPassword.type("admin");

    mp.pgeLogin.btnSignIn.clickAndWait();

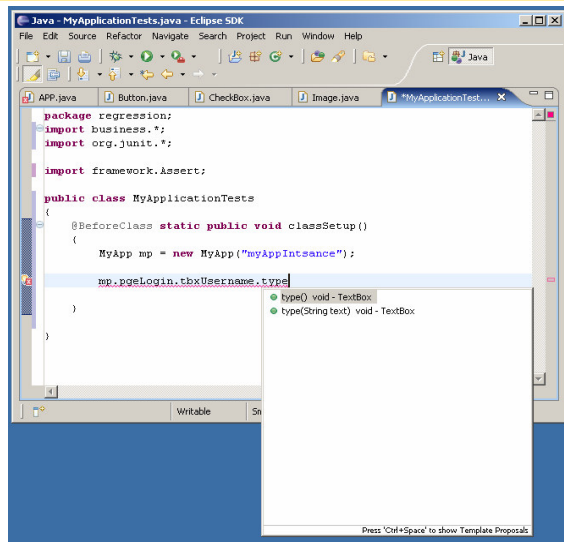
    Assert.assertFalse("Login Failed",
        sampleApp.loginPage.signIn.exists());
}
}
```

## Higher Productivity achieved through Auto-complete



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## Higher Productivity achieved through Auto-complete (contd..)



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## Demo

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## Future Plans

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- Extend Oxygen Framework for commercial tools
  - like QTP, SilkTest etc.,
- Enhance the Oxygen framework to execute scripts in parallel.

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# Q & A