Presentation On
Testing Automation
Project for Systers
During
Google Summer of Code 2014

What and how?

- → The objective of this project will be to create, maintain, and execute automated tests for desktop, web, mobile, and client server software applications
- It aims to create reusable and automated scripts for regression testing.
- The Project involves setting up of a java based test framework using Selenium

Tools and Technologies

- Framework: Selenium (Junit test framework) a portable software testing framework for web applications.
- Language: Java
- Build automation tools: Ant
- IDE: Eclipse

Requirements

- Web Browser
- Selenium IDE
- Eclipse IDE
- JUnit

Selenium

- Developed by Jason Huggins in 2004
- It is a portable testing framework for web applications
- Can be used with various languages like Java,
 C#, Groovy, Perl, PHP, Python, Ruby
- Compatible with Windows, Linux and Macintosh platforms
- Its an open source software that is freely available, released under the Apache 2.0 licence

How to install Selenium IDE?

- Go to the link:
 http://docs.seleniumhq.org/download/
 and download the IDE as instructed on the page
- Also get Selenium Client & WebDriver
 Language Bindings for the language you intend
 to use for writing testcases, from the same
 page

Changing the format for selenium tests

- 1. open selenium IDE
- 2. open options dialog
- 3. check off "enable experimental features"
- 4. close options dialog
- 5. go back to options menu, select format, choose Java/Junit/Webdriver
- 6. Get started

Steps for getting started with selenium testing

- 1. create new test case within selenium IDE
- 2. tell it to record
- open login url http://systers.org/systers-dev/doku.php/gsocstuden
- 4. enter the username/password
- 5. look in the selenium IDE window, and it should have created a @Test function with all that
- 6. So within eclipse, create a new workspace and set it up for JUnit

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- 7. and copy/paste the selenium ide code into a java file in eclipse
- 8. once it's in eclipse, you want to check things like "driver.findElement(By.cssSelector("fieldset > input.button")).click();"

Links to important websites

- Install selenium: http://docs.seleniumhq.org/download/
- Install Eclipse: http://www.eclipse.org/downloads/
- DevEnvironment for project development setup: https://github.com/systers/DevEnvironments
- Github Repository for automated testing: https://github.com/systers/automated-testing
- Portal website on test server: http://systersportal-demo.herokuapp.com/

Work available so far...

- Check the link for git repository: https://github.com/systers/automated-testing
- Contains the test cases for the most stable features of the Portal
- Flexible to be used for similar web application testing by making tiny changes in the Helper folder that can be mirrored into other test code automtically
- Also contains the test cases for DB testing for selenium interacting with the website

Future of the Project

- To develop a more generic test framework which can be used in automated testing for other projects of Systers
- Create more specific test cases for the other features of portal upon its completion
- Implement the DB tests for Portal

Thank You!!!