Web based testing: Chucklist and Selenium
Concerns when testing web applications
Concerns when testing web applications

• Broken links
• Information is displayed correctly
• Information is processed correctly
• Cross browser compatibilities
• Ajax and interactivity add a layer of complexity
Assignments 2 and 3

• Given a software system (Chucklist) provide the following documents:
  • Specification (30%)
  • Use Cases (60%)
  • Recommendations (10%)
Chucklist

http://chuckslist.rubyforge.org/
Running Chucklist

1. ssh into tux
2. Find out the current server's host name:
   > hostname
3. Download the tar onto tux using the following command:
   > wget www.cs.drexel.edu/~ms333/dist.tar.gz
4. Uncompress the distribution using the following command:
   > tar -zxvf dist.tar.gz
5. Go to the top level directory of the distribution:
   > cd dist
6. Set up environment variables:
   > source env.sh
7. Go into the top level rails directory:
   > cd chucklist
8. Start the web server on port 8080 (If the server does not start choose a different port number that is greater than 2000):
   > ruby script/server -p 8080
9. You can now use the application by pointing your browser to hostname:PORT_NUMBER
Notes about Chucklist

• Admin account can be accessed via:
  • location: hostname:PORT_NUMBER/admin
  • user name: admin@chuck.com
  • password: password

• Users can signup via:
  • location: hostname:PORT_NUMBER/account/signup

• Users can login via:
  • location: hostname:PORT_NUMBER/account/login
Chucklist Specification (30%)

- Create a more detailed specification document for Chucklist
- This will provide a basis for use cases and further testing
- You may need to ask more question to get to a specification document
Use Cases (60%)
Use Cases (60%)

- You will need to create several use cases that align with the provided specification.
- These use cases should capture all of the existing functionality of the system as well as any missing functionality.
Example Use Case

ID : 1
Name : Simple log in and out
Description : A user logs into the system and then logs out.
Primary Actor(s) : Any user
Precondition : When the user gets to the front page he is not logged into the system. The account already exists.
Trigger : User action to log in
Basic Flow :
1. User clicks on login button
2. Application asks for username and password
3. User inputs username and password and click "OK"
4. The application confirms that the information is valid
5. The application sets this user as logged in
6. The application displays the front page
7. The application replaces the login button with the logout button
8. User clicks on the logout button
9. The application set this user's status as logged out
10. The application displays the front page
11. The application replaces the logout button with the login button

Alternate Flows: If the provided credentials are not correct, the use case is terminated and the user is presented with an error message.
Recommendations (10%)

• Now that you have played with the application, what are your immediate observations and recommendations for improvement.
Selenium

- Javascript framework that runs in your web-browser
- Works anywhere Javascript is supported
- Hooks for many other languages
  - Java, Ruby, Python
- Can simulate a user navigating through pages and then assert for specific marks on the pages
- All you need to really know is HTML to start using it right away
Where to get Selenium

• You can use Selenium-Core and customize everything

• But it is easier to just get a Firefox plug-in “Selenium-IDE” that helps you “record” test cases

• You can record how an application is being used and then play back those recordings followed by asserts

• Get everything at: www.openqa.org/selenium/
Selenium

The root of the application to test

The list of actions to execute. Green means success, red means failure

The log of what happened during the execution
Selenium

Execution commands let you control replay, speed of replay, and step by step play.
Demo
Next Time: More tools

• Going into white box testing tools
• jUnit, Emma, and lint/splint