

SELENIUM

CS 130

Creative Software Architectures
for Collaborative Projects

Prof. Donald J. Patterson

A decorative graphic in the bottom right corner of the slide. It features a light blue, semi-circular shape with a grid pattern inside, overlaid on a darker blue background with a pattern of circles.

OVERVIEW

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- Browser automation
 - Use it to automate repeated tasks in a web browser
 - Use it to test that your web application is working
 - Use it to test that your new code doesn't break your existing application



SOFTWARE TESTING

PURPOSE

- To make sure our software does what it is supposed to do
- To find defects with software that has just been developed
- To guarantee a level of quality in a software system
- To prevent damage to systems, reputation, business, people after deployment



SOFTWARE TESTING

FRAMEWORKS

- Every language has many, many **frameworks** for testing software
 - Java has JUnit
 - Ruby has Test::Unit, Shoulda, Context, Cucumber, RSpec
 - Python has nose, pytest, subunit,
 - .NET has nUnit
- They are ubiquitous



SOFTWARE TESTING

FRAMEWORKS

- Different frameworks test different aspects of a system
- Selenium is a web testing framework
 - It checks to make sure that when you do things on a web page the expected results occur
 - If they don't then
 - There is a problem with your code
 - There is a problem with your system



SOFTWARE TESTING

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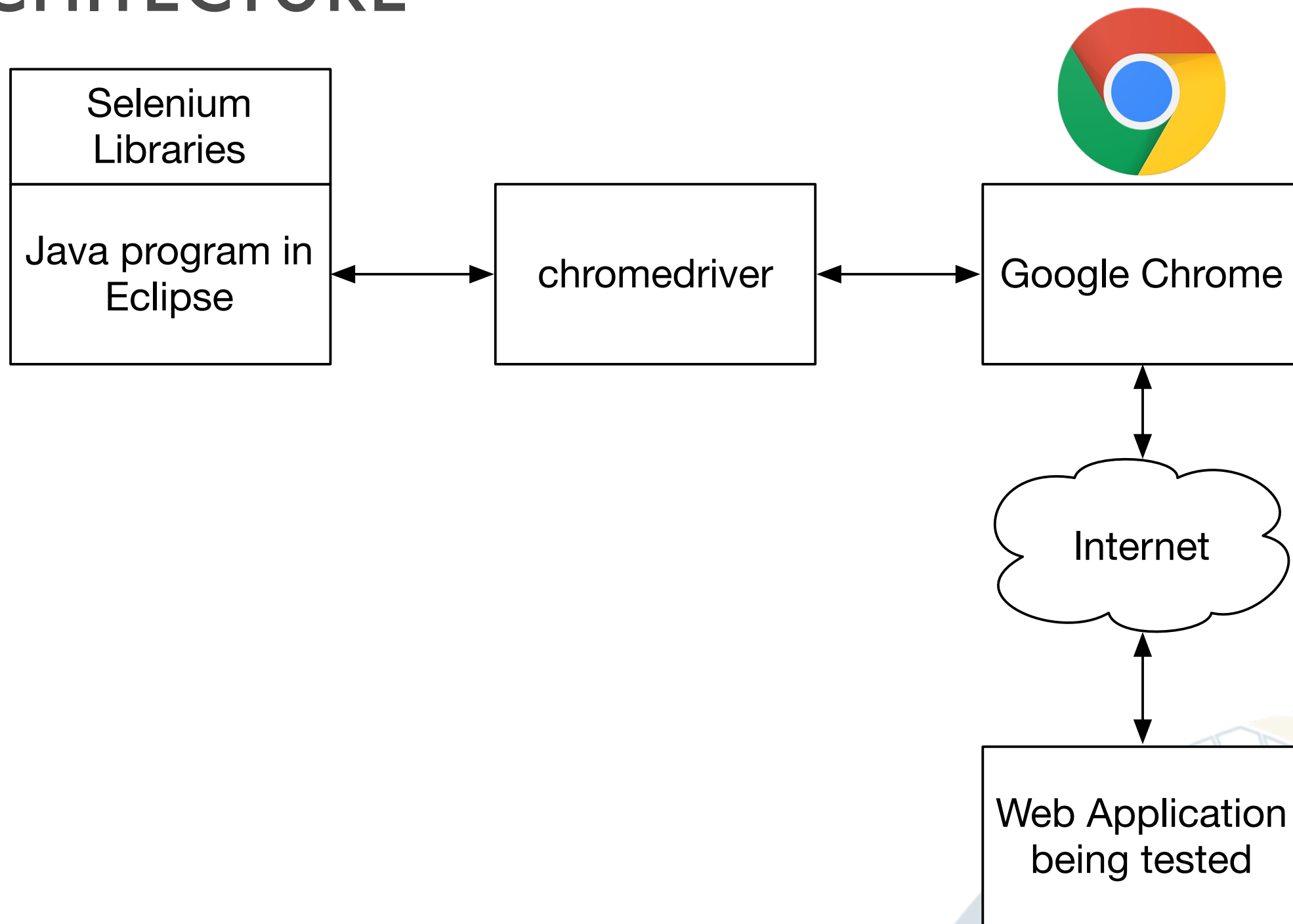
HISTORY

- 2004 Selenium was started
- 2006 Google started WebDriver
- 2009 They merged to create Selenium 2.0
- 10/18/16 latest drivers released



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ARCHITECTURE



TESTING ARCHITECTURE

SETTING UP

- Pull code from my GitHub repo
- Obtain chromedriver
- Obtain a pom.xml file (from selenium)
 - Maven Java Project description
- Create Eclipse workspace
 - test/selenium_workspace
- import project from
 - test/selenium_suite



TESTING ARCHITECTURE

RUNNING SAMPLE TEST

- Run `SampleTests` to make sure the architecture works
 - It will load up Google and enter a query

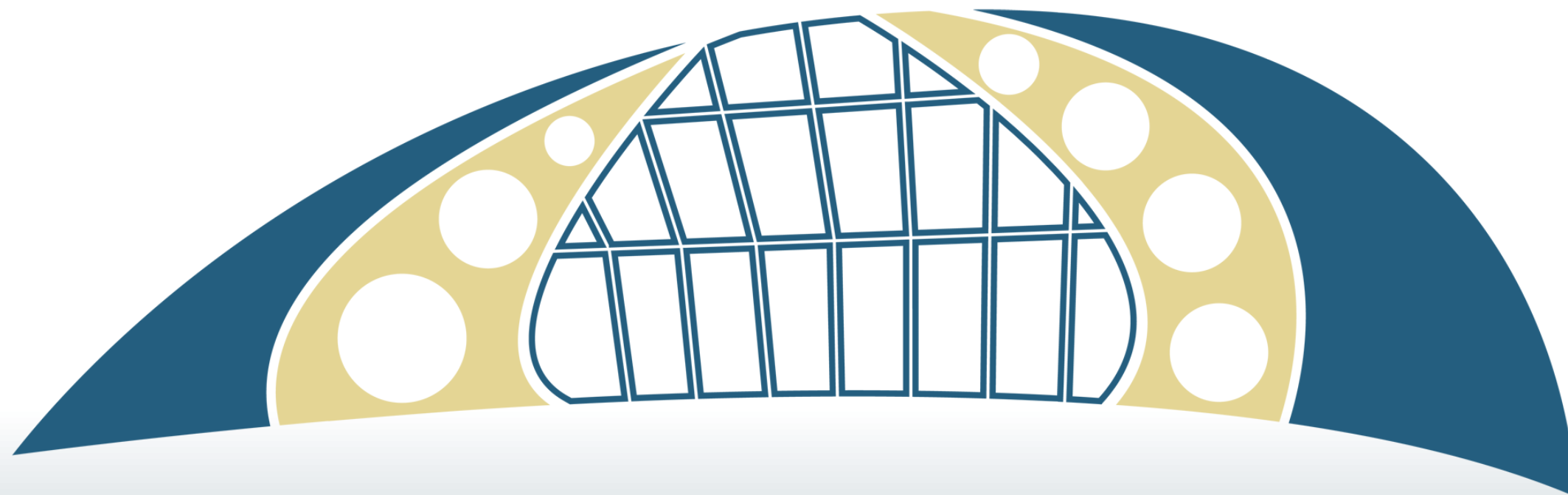


TESTING ARCHITECTURE

LET'S BRAINSTORM TESTS FOR ALLY

- First let's think of some
- Then we are each going to implement one and commit it to the code base
- It should be set up to test a local deployment





WESTMONT **INSPIRED**
— COMPUTING LAB —