

Creating an Automated Testing Framework With Selenium

Best Practices And Tips

John Sonmez
<http://simpleprogrammer.com>
@jsonmez



pluralsight 
hardcore developer training

Automating Hard Things

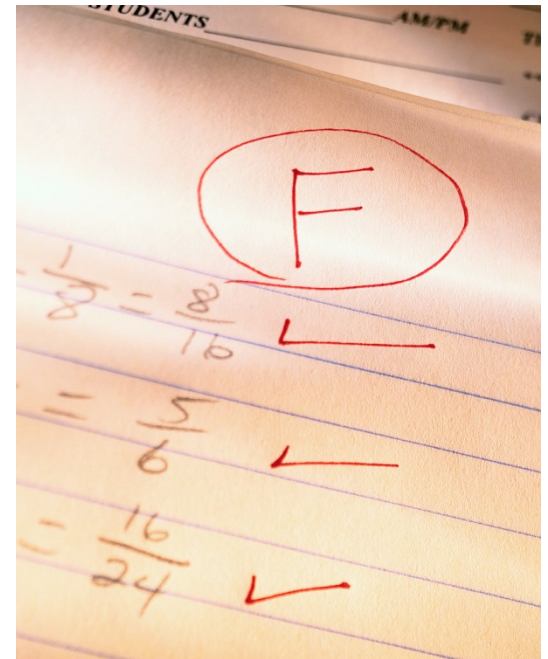


Not everything can be automated (at least not without considerable effort)

Errors Vs Failures

- **Tests fail because**
 - The condition being tested was not met
 - An assertion in the test failed
- **Tests error because**
 - Something other than what was being tested failed
 - The framework threw an exception

It is important to make a distinction between errors and failures



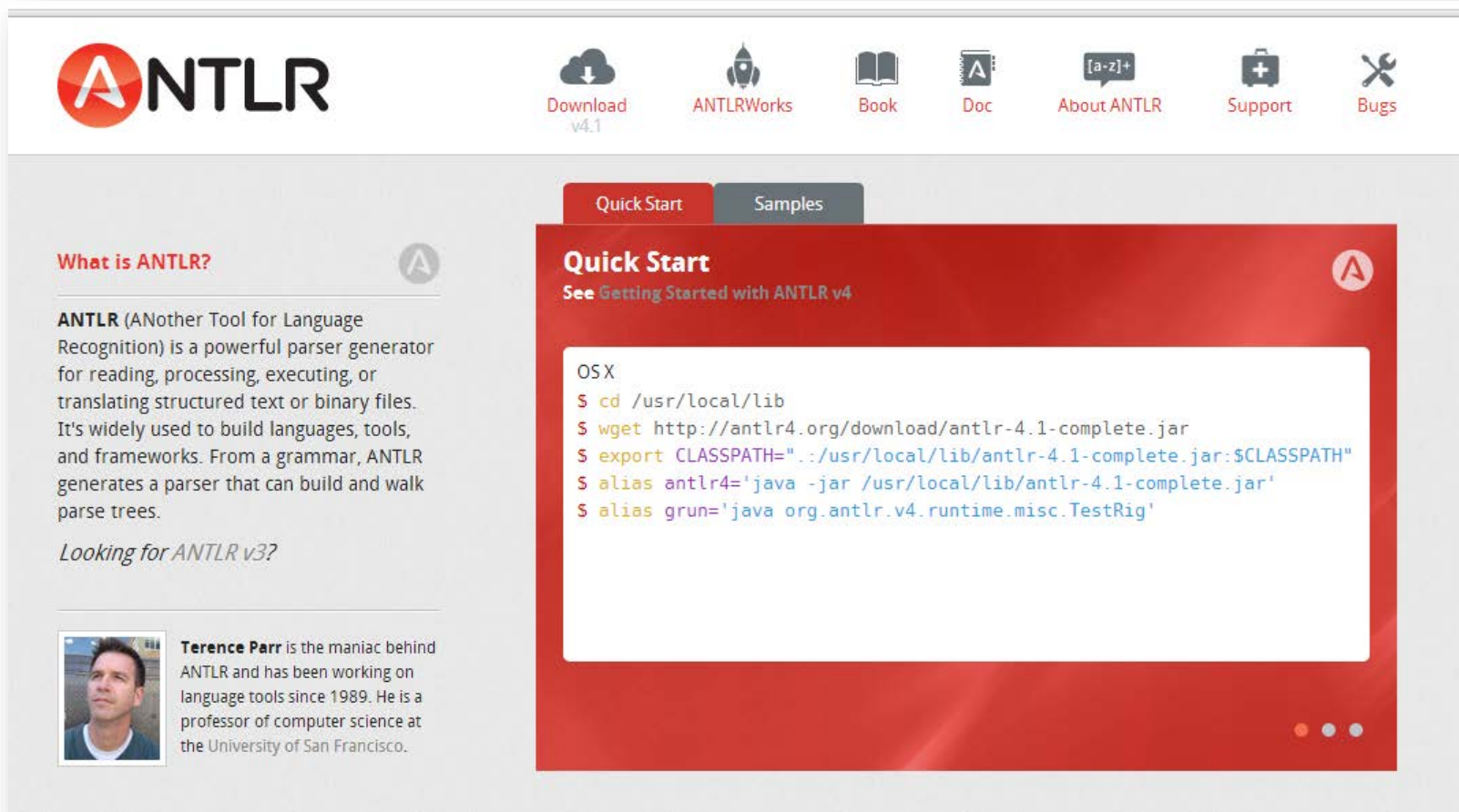
Continuous Integration

- Have a plan and stick to it
- Run tests as part of build
- Run tests locally
- Report results
- Break builds



Make sure automated tests are taken seriously!

True DSLs



The screenshot shows the ANTLR website. At the top is the ANTLR logo. To its right is a navigation bar with icons and links: Download v4.1, ANTLRWorks, Book, Doc, About ANTLR, Support, and Bugs. Below the navigation bar, on the left, is a section titled "What is ANTLR?" with a sub-header "What is ANTLR?". The text describes ANTLR as a powerful parser generator. Below this is a link "Looking for ANTLR v3?". On the right, there are two tabs: "Quick Start" (selected) and "Samples". The "Quick Start" tab is active, showing a red box with the title "Quick Start" and a sub-header "See Getting Started with ANTLR v4". Inside this box is a code block with terminal commands for installing ANTLR on OSX.

What is ANTLR?

ANTLR (ANother Tool for Language Recognition) is a powerful parser generator for reading, processing, executing, or translating structured text or binary files. It's widely used to build languages, tools, and frameworks. From a grammar, ANTLR generates a parser that can build and walk parse trees.

Looking for ANTLR v3?

Terence Parr is the maniac behind ANTLR and has been working on language tools since 1989. He is a professor of computer science at the University of San Francisco.

Quick Start
See *Getting Started with ANTLR v4*

```
OSX
$ cd /usr/local/lib
$ wget http://antlr4.org/download/antlr-4.1-complete.jar
$ export CLASSPATH=".:usr/local/lib/antlr-4.1-complete.jar:$CLASSPATH"
$ alias antlr4='java -jar /usr/local/lib/antlr-4.1-complete.jar'
$ alias grun='java org.antlr.v4.runtime.misc.TestRig'
```

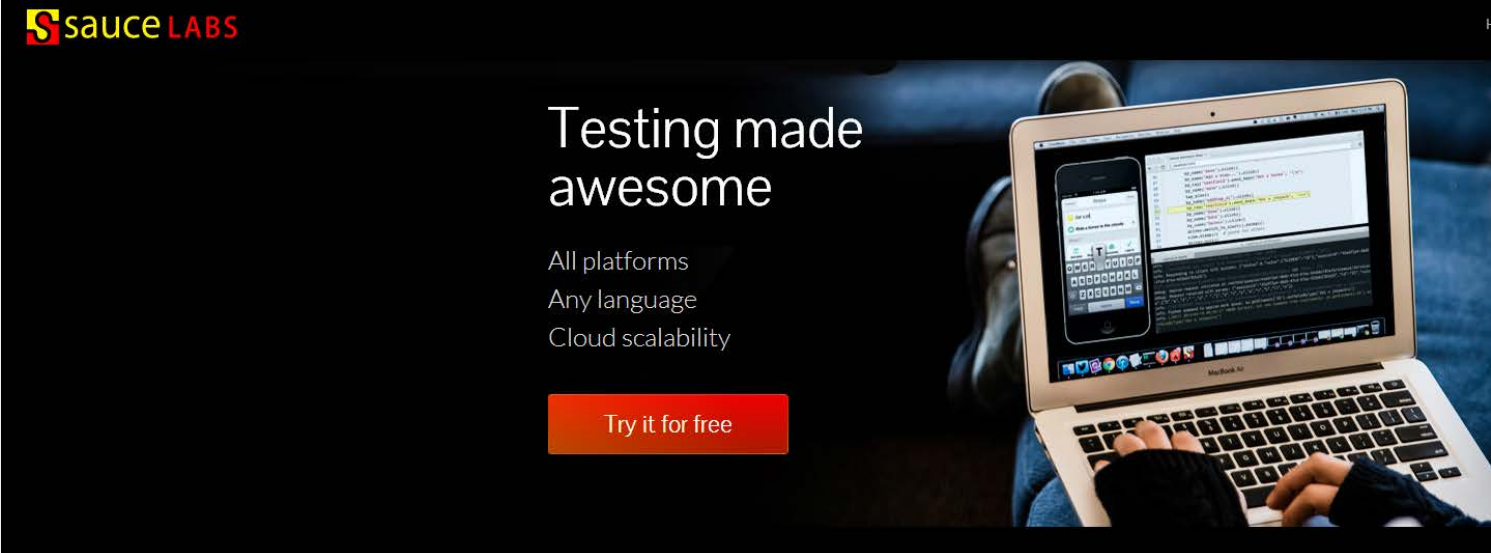
<http://www.antlr.org/>

Scaling Out



Have a plan for scaling out before you need to do it

Sauce Labs And Other Services



sauce LABS

Testing made awesome

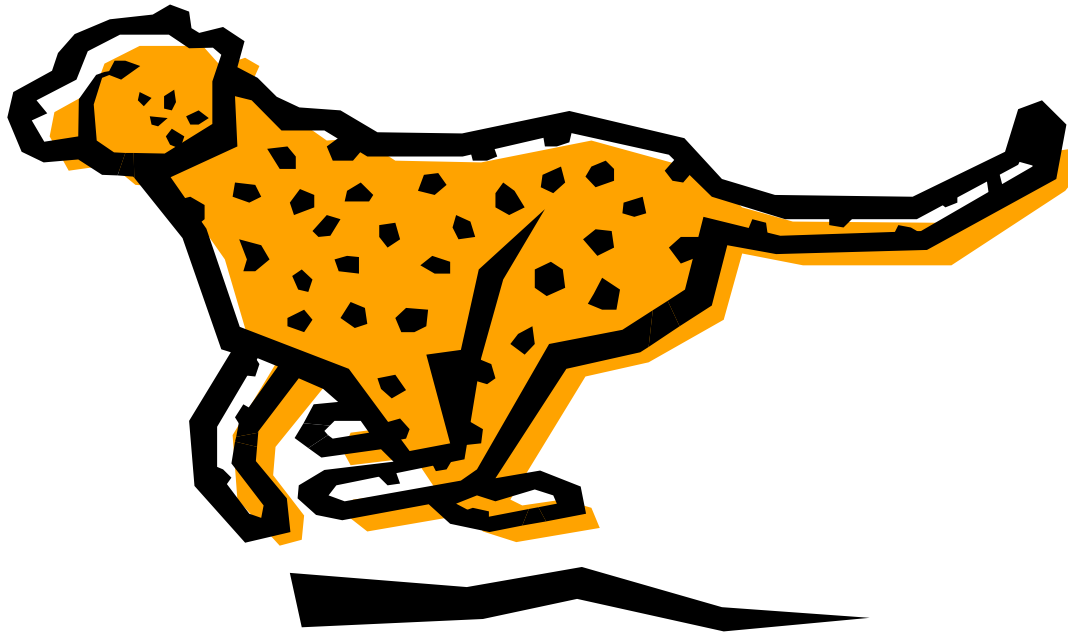
All platforms
Any language
Cloud scalability

Try it for free

59730421 tests

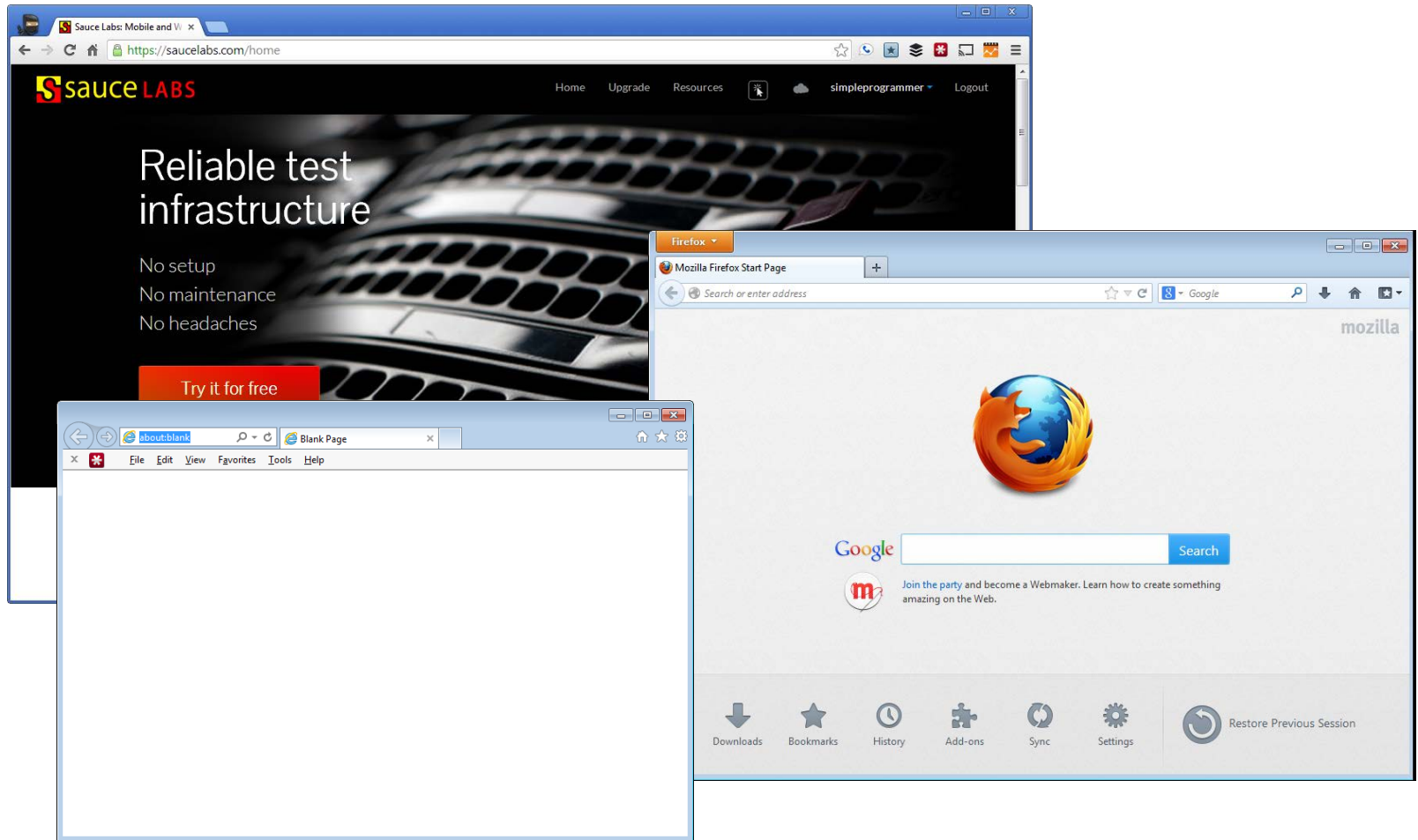
<https://saucelabs.com>

Working With Agile



Automated tests can become parts of DONE criteria

Browser Versions?



Not all tests need to run on all browsers

The End



How you will feel when your automated tests all pass