

Selenium Study

Laurent Christophe

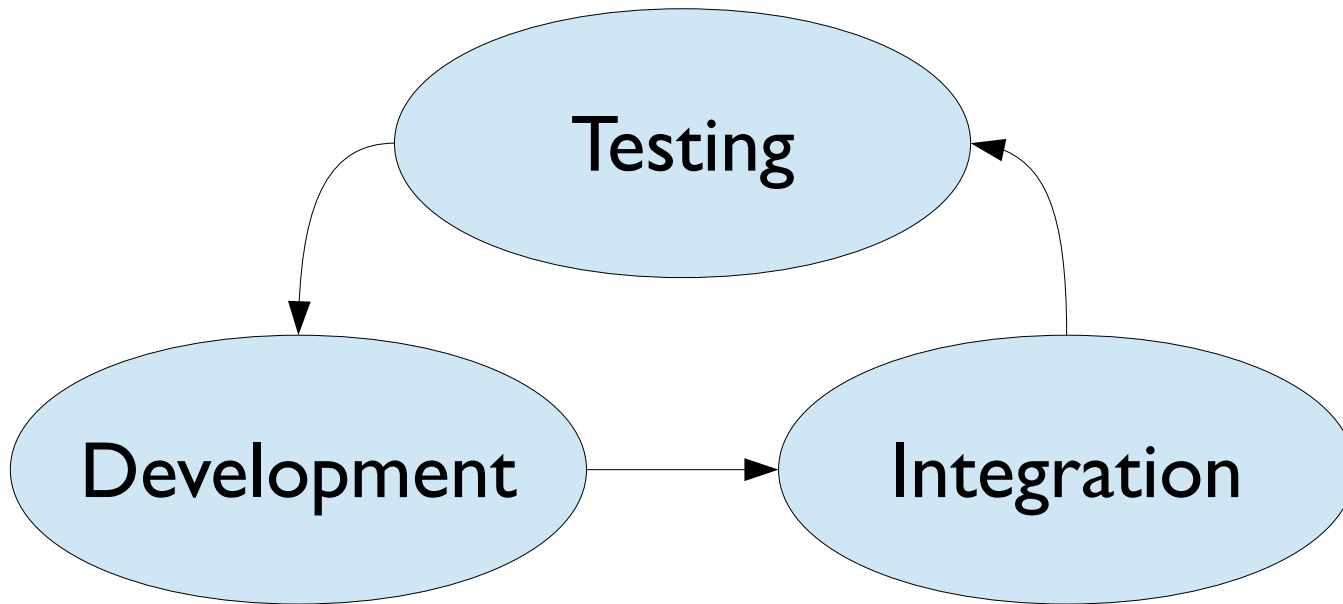
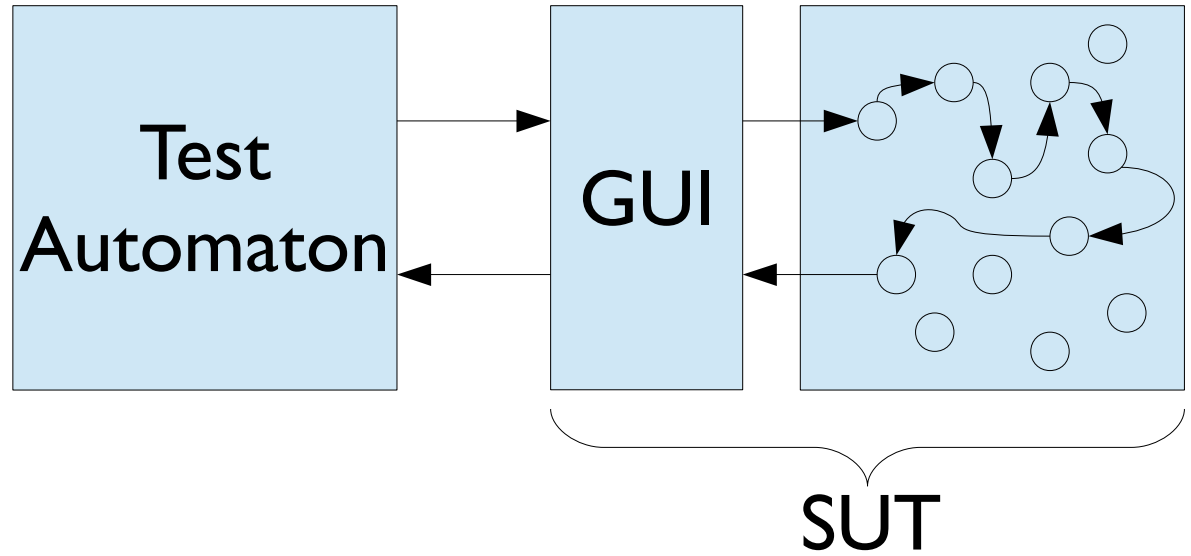
lachrist@vub.ac.be



Vrije
Universiteit
Brussel

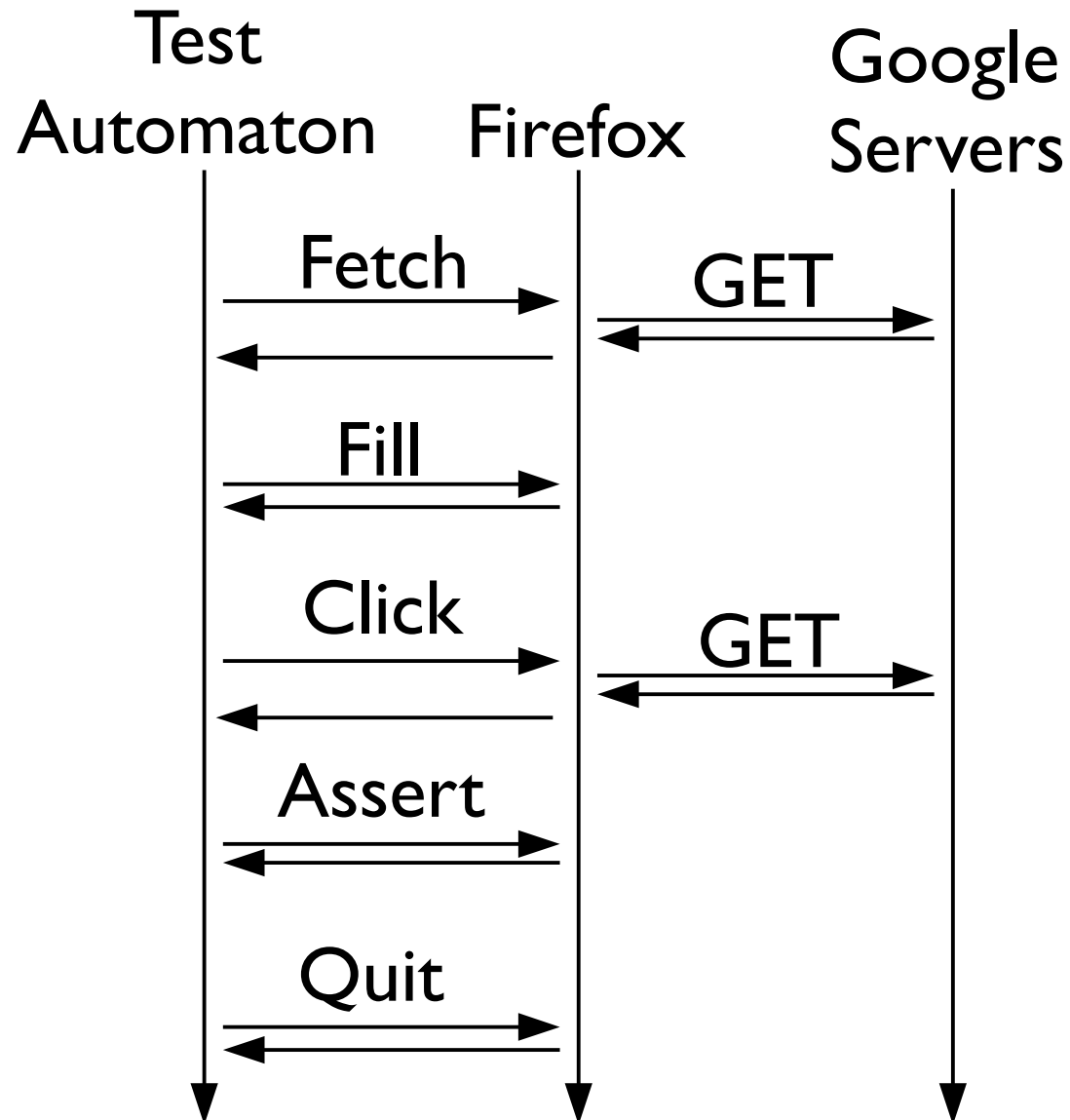


Test Automation

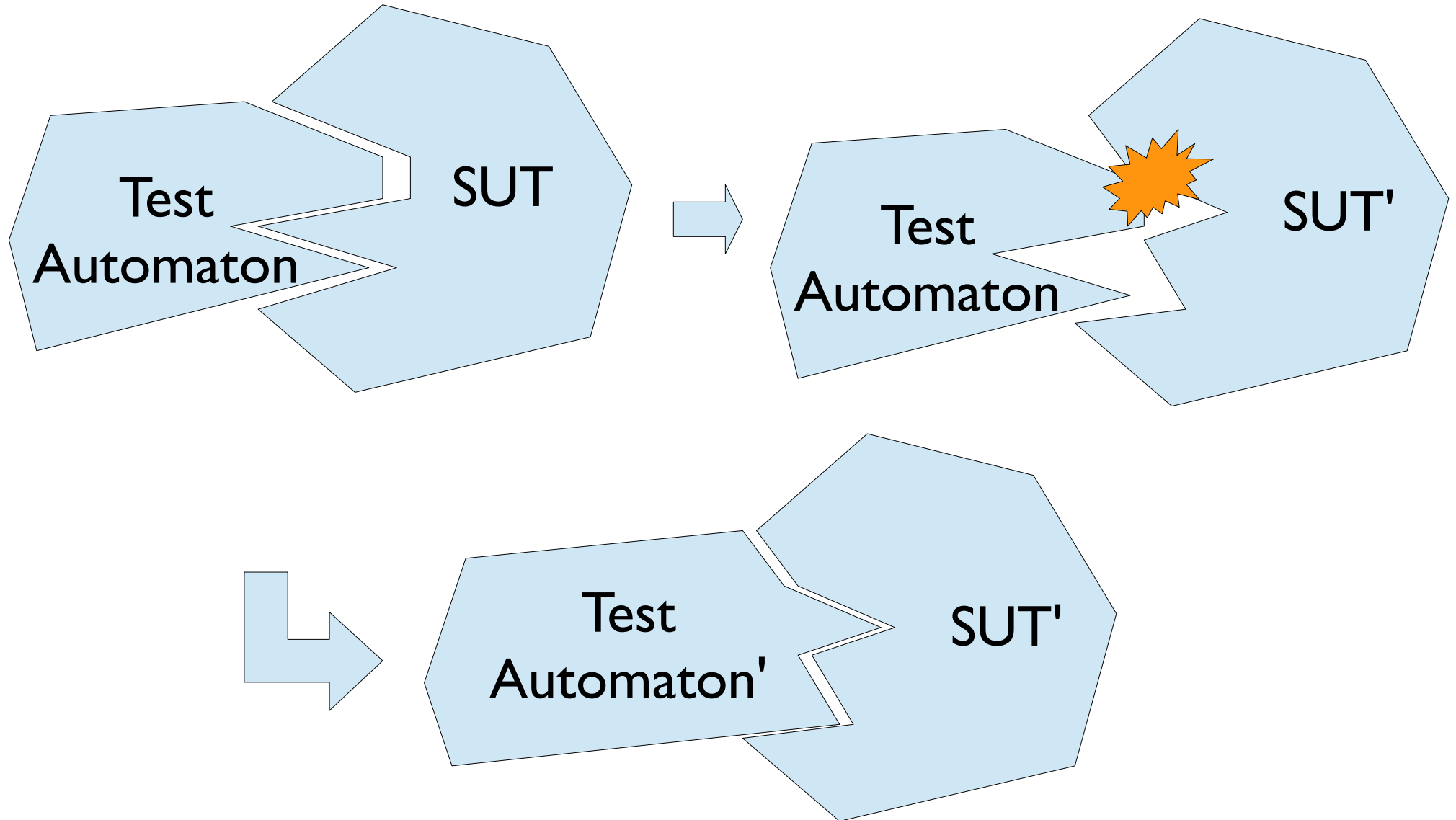


Rapid release cycle

Test Automation



Fragility Problem



A Recognized Problem

- Shauvik Roy Choudhary, Dan Zhao, Husayn Versee, and Alessandro Orso. Water: Web application test repair. In Proceedings of the First International Workshop on End-to-End Test Script Engineering, pages 24–29. ACM, 2011.
- Mark Grechanik, Qing Xie, and Chen Fu. Maintaining and evolving gui-directed test scripts. In Software Engineering, 2009. ICSE 2009. IEEE 31st International Conference on, pages 408–418. IEEE, 2009.
- Atif M Memon and Mary Lou Soffa. Regression testing of guis. In ACM SIGSOFT Software Engineering Notes, volume 28, pages 118–127. ACM, 2003.

Querying SourceForge with BOA

Boa Source Code

```
1 out: output collection of string;
2 proj: Project = input;
3 check: bool = false;
4 visit(proj, visitor {
5     before ast: ASTRoot -> {
6         exists (i: int ; match(".*selenium.*", lowercase(ast.imports[i]))) {
7             check = true;
8         }
9     }
10 });
11 if (check) {
12     out << proj.project_url;
13 }
```

Input Dataset

2013 May

Run Program

NOTE: All data submitted to this site is subject to our [privacy policy](#).

<http://boa.cs.iastate.edu/boa/>

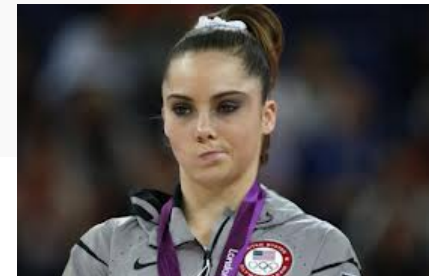
Querying SourceForge with BOA

[Job Status](#) [View Job Output](#) [Download Job Output](#)

Output for Job 2829

```
out[] = http://sourceforge.net/projects/somap
out[] = http://sourceforge.net/projects/lportal
out[] = http://sourceforge.net/projects/jspsurveylib
out[] = http://sourceforge.net/projects/biprime
out[] = http://sourceforge.net/projects/junitbook
out[] = http://sourceforge.net/projects/htmlunit
out[] = http://sourceforge.net/projects/flashrecruit
out[] = http://sourceforge.net/projects/specrunner
out[] = http://sourceforge.net/projects/atarrabi
out[] = http://sourceforge.net/projects/itracker
out[] = http://sourceforge.net/projects/actioncenters
out[] = http://sourceforge.net/projects/jameleon
out[] = http://sourceforge.net/projects/adempiere
out[] = http://sourceforge.net/projects/iwii-organizer
out[] = http://sourceforge.net/projects/officefloor
out[] = http://sourceforge.net/projects/xrace
out[] = http://sourceforge.net/projects/cruisereport
out[] = http://sourceforge.net/projects/storytestig
out[] = http://sourceforge.net/projects/wonder
out[] = http://sourceforge.net/projects/simpleysql
out[] = http://sourceforge.net/projects/wicketpagetest
out[] = http://sourceforge.net/projects/sitools2
out[] = http://sourceforge.net/projects/pcollecta
```

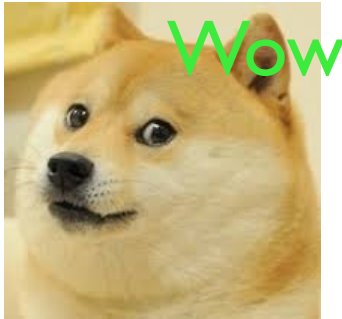
... 105 Results



Querying GitHub

Querying GitHub

Much results
(120,000)



GitHub Search interface showing results for the query `import openqa.selenium`.

Search: `import openqa.selenium` [Search]

We've found 119,994 code results

Sort: Best match

Repositories: 2
Code: 119,994
Issues: 8
Users: 0

Languages

Java	108,075
XML	1,399
Groovy	1,247
HTML	1,146
Scala	717
Python	699
PHP	498
JavaScript	164
C#	146
Markdown	138

Advanced Search Cheat Sheet

hyzs25/homework – startbrowser.java
Last indexed 2 months ago

```
1 import org.openqa.selenium.webdriver
```

munagaraja/commitcode – TestNG
Last indexed 3 months ago

```
1 Folder
2 import org.openqa.selenium.WebElement;
```

EBogomol/Prod-sanity-check-tool – WaiterOfPageLoad.java
Last indexed a month ago

```
1 import org.openqa.selenium.WebDriver;
2 import org.openqa.selenium.support.ui.Wait;
3 import org.openqa.selenium.support.ui.WebDriverWait;
...
3 import org.openqa.selenium.support.ui.WebDriverWait;
4
5 public class WaiterOfPageLoad {
6
7 }
```

10 Hits / Pages

Max 100 pages

oraz/selenium – Page.java
Last indexed 4 months ago

```
1 package selenium;
2
3 import org.openqa.selenium.WebDriver;
4
5 public interface Page {
6     void init(WebDriver driver);
7 }
```

1 2 3 4 5 6 7 8 9 ... 99 100

How are these search results? Tell us!

Querying GitHub

Result slicing (< 1000)

Advanced search criterion

Explore Gist Blog Help laurentchristophe

Search

import openqa.selenium size:100..200 Search

We've found 265 code results Sort: Best match

Repositories

<> Code 265

! Issues 8

👤 Users

Languages

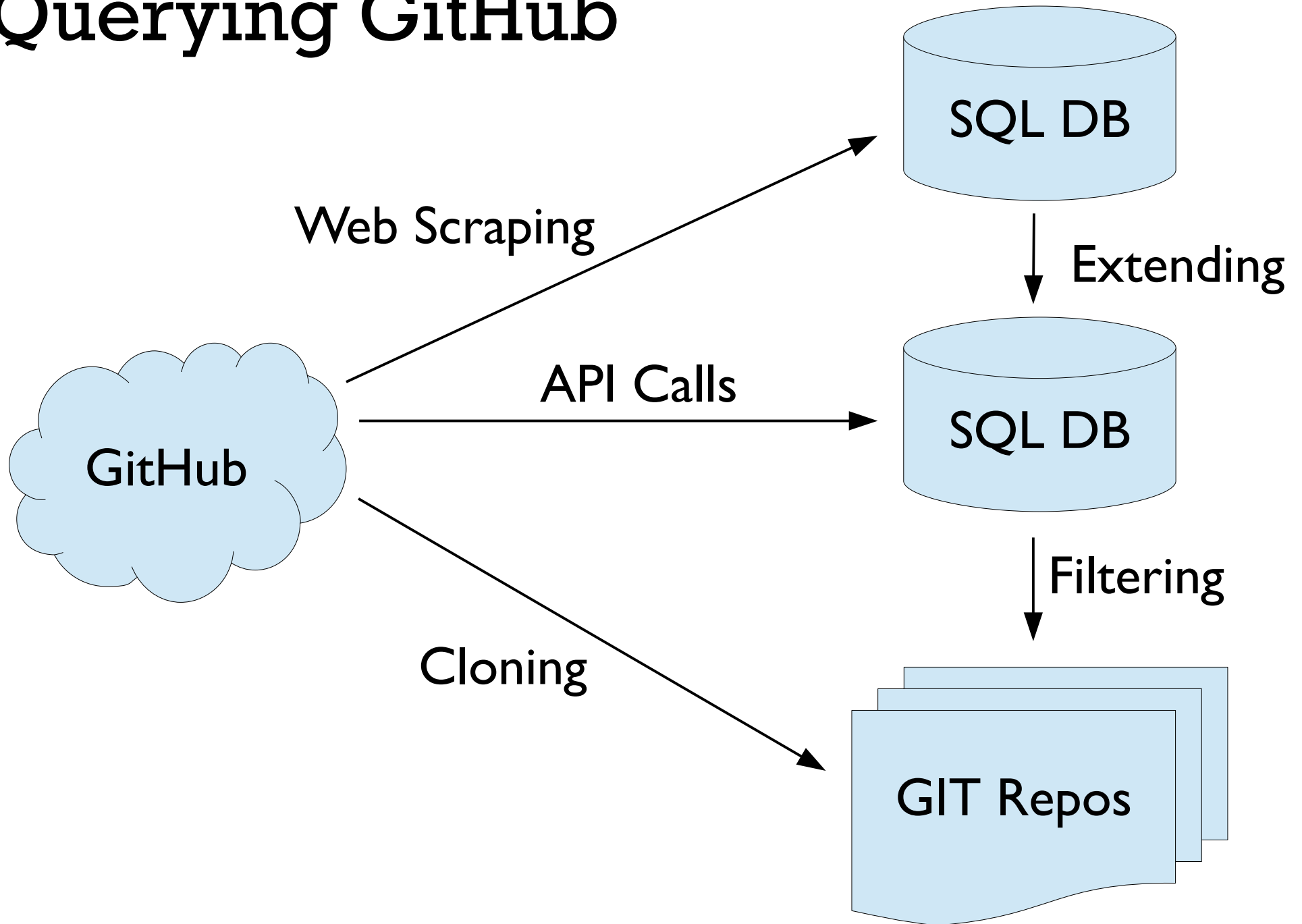
Java	198
Groovy	51
Scala	10

EBogomol/Prod-sanity-check-tool – WaiterOfPageLoad.java Java

Last indexed a month ago

```
1 import org.openqa.selenium.WebDriver;
2 import org.openqa.selenium.support.ui.Wait;
3 import org.openqa.selenium.support.ui.WebDriverWait;
...
3 import org.openqa.selenium.support.ui.WebDriverWait;
4
5 public class WaiterOfPageLoad {
6
7 }
```

Querying GitHub



Using GitHub API

Ivan Žužak

... Finally, while you're free to use the API as much as the rate limit permits, please do so at a reasonable pace. In other words, don't spin up a hundred EC instances and start making API requests in parallel -- that kind of applications are hard to tell apart from malicious attacks. Making a few requests in parallel should be okay, and will earn you a Good Citizen badge. ...

Ivan Žužak

... When you make a request to the Repository Statistics API, you will often get a 202 status code back, which means that we've started a job to compute the statistics data and that you should come back later to pick it up [1]. However, there might be situations where this data is never computed (e.g. due to repository corruption). In such cases, those endpoints will keep returning a 202 status code every time you come back to pick the data up. ...

Scraping GitHub

Stop, Demo Time

