

# DEV LAB 1

# TODAY

MP1 Overview

Setting up a development environment

Setting up a server

Brief overview of important tools

MP 1 was released yesterday.

<http://uiuc-web-programming.github.io/sp2016/MP-1/>

# MP 1 Setup

<http://uiuc-web-programming.github.io/sp2016/Lab-1/>

# SETUP AND WORKFLOW



Development Machine



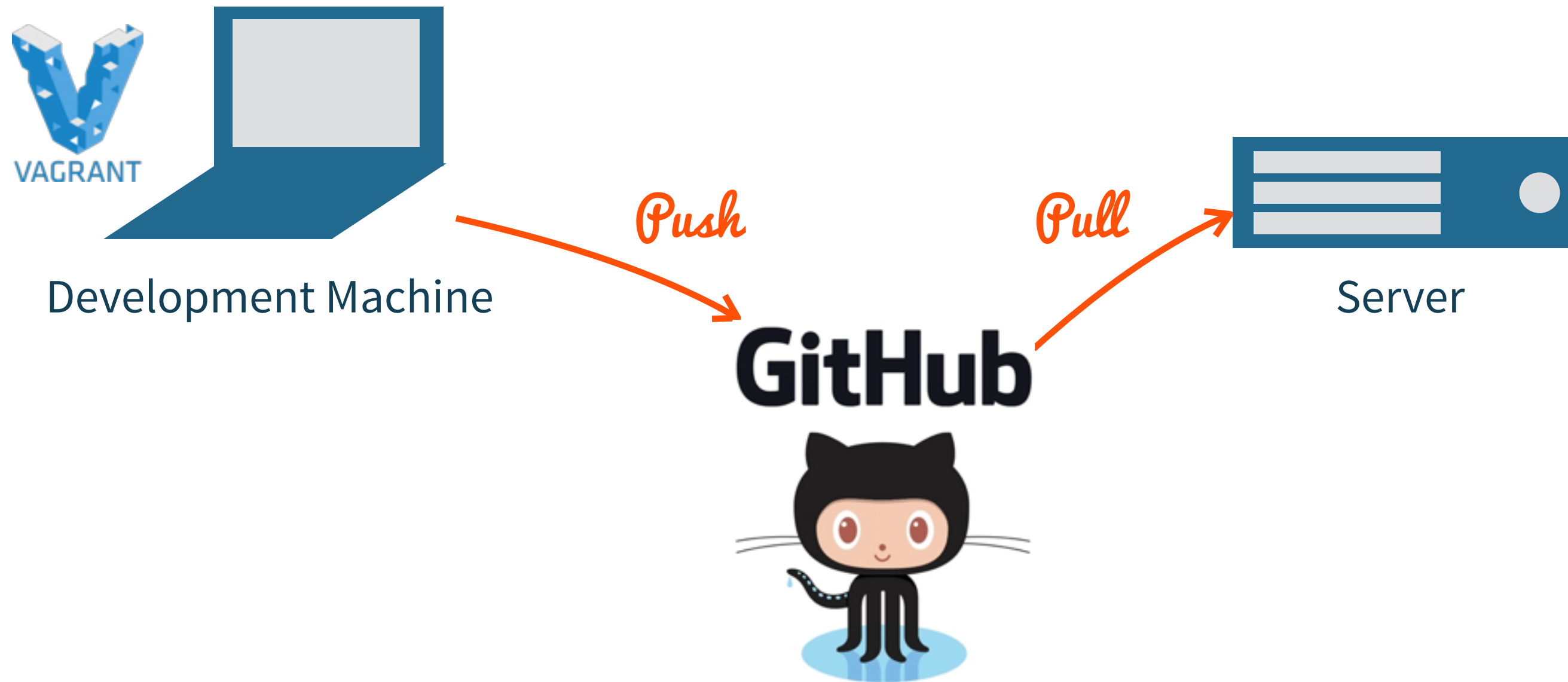
Server

Web applications end up on a server

Development is generally done on a local machine

<http://webdesign.about.com/od/servers/qt/web-servers-and-workflow.htm>

# SETUP AND WORKFLOW



# VAGRANT

Tool for creating virtual development environments

A **Vagrantfile** contains all the information about the environment

All developers on a project use the same exact environment for development



# GITHUB

Everyone should have an account

Pointers to tutorials on Resources page

Apply for student developer pack

Watch important class related repositories



<https://github.com/uiuc-web-programming>



# ADDITIONAL WORKFLOW OPTIONS

Have a development git branch

Add a staging environment

Example of a fairly elaborate git branching model

Use git-hooks for automation

Use git-hooks for deployment to server

TOOLS

# WEBSTORM

Powerful IDE for JavaScript

Free for students

Alternative: Sublime Text 3

Learn to use Emmet - [Demo](#)



<https://www.jetbrains.com/webstorm/>

# NODEJS

Platform that enables server side  
JavaScript

Built on Chrome's JavaScript runtime

Event-driven, non-blocking I/O model



# EXPRESS

Web server for Nodejs

We use express to serve static files for MP 1

Details in **app.js** in MP1 starter code

# NPM

Node package manager

**package.json** file contains list of packages needed for a project

```
npm install <package_name>
```

```
npm install -g <package_name>
```

```
npm install --save <package_name>
```

```
npm install
```



# BOWER

Package manager for front-end packages

**bower.json** file contains list of packages needed for a project

```
bower install <package_name>
```

```
bower install --save <package_name>
```

```
bower install
```



# GRUNT

JavaScript task runner

Define tasks in **Gruntfile.js**

**grunt** <task>





NEXT CLASS: CSS

[courses.engr.illinois.edu/cs498rk1/](https://courses.engr.illinois.edu/cs498rk1/)