GENERAL ASSEMBLY

JAVASCRIPT DEVELOPMENT

Sasha Vodnik, Instructor

HELLO!

1. Pull changes from the `JS-SF-15-resources` repo to your computer
2. DO NOT open the `05-slackbot-lab/starter-code` folder in your code editor! (We will copy the files to another location during class and work with them from there.)

SLACK BOT LAB

LEARNING OBJECTIVES

At the end of this class, you will be able to

- Install and configure all utilities needed to build a bot using the Hubot framework
- Write scripts that allow your bot to interact with users of the class Slack workspace

AGENDA

- Install and configure Slack bot utilities and accounts
- Explore sample code for bots
- Plan what you'd like your bot to do
- Create a basic bot to verify that your setup works
- Expand on your basic code to add your planned functionality

WEEKLY OVERVIEW

WEEK 3	Scope & objects / Slack Bot Lab
WEEK 4	JSON & Intro to DOM / DOM & jQuery
WEEK 5	Advanced jQuery / Ajax & APIs

EXIT TICKET QUESTIONS

1. If an object pulls data from outside of the program via the API, can that data be used in the global scope or is it also limited by block/global/function scoping

REVIEW – CATCH PHRASE!

EXERCISE

TYPE OF EXERCISE

- Pairs

TIMING

3 min

1. Get your partner to guess the word on each piece of paper by giving clues describing it.
2. Take turns giving clues and guessing words.

SLACK BOTS

SLACK AND BOTS

- **Bot**: A script programmed to interact with users as if it's a person
  - Slackbot
  - PlusPlus
- We will use a framework to create our own bots with interactive behaviors that we specify with our code
- These bots will be members of our class Slack organization

HUBOT

- **Hubot**: A framework meant to speed the process of developing bots for a variety of platforms, including Slack
- Includes built-in functionality for performing common bot tasks, such as posting images.
- We will use the Hubot framework to create our bots

DISAMBIGUATION

WIKIPEDIA
The Free Encyclopedia

Main page
Contents
Featured content
Current events
Random article
Donate to Wikipedia
Wikipedia store

Interaction
Help
About Wikipedia
Community portal
Recent changes
Contact page

Tools
What links here
Related changes
Upload file
Special pages
Permanent link
Page information
Wikidata item

San Francisco (disambiguation)

From Wikipedia, the free encyclopedia

San Francisco is a combined city/county in the U.S. state of California.

San Francisco may also refer to:

Places within San Francisco, California [edit]

- San Francisco Bay
- San Francisco Bay Area, the metropolitan area
- San Francisco Peninsula, the peninsula where the city is located
- University of San Francisco, a Jesuit university located in the city
  - San Francisco Dons, this school's athletic program
- Mission San Francisco de Asís, the Spanish mission which was the first European settlement in the city
- San Francisco Giants, the professional baseball team which plays in the city
- San Francisco 49ers, the professional American football team which plays in Santa Clara, but retains the name San Francisco, having played in the city from 1946 to 2013

Other places [edit]

Argentina

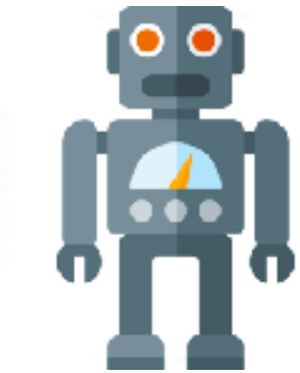
- San Francisco, Córdoba

Chile

- San Francisco Glacier

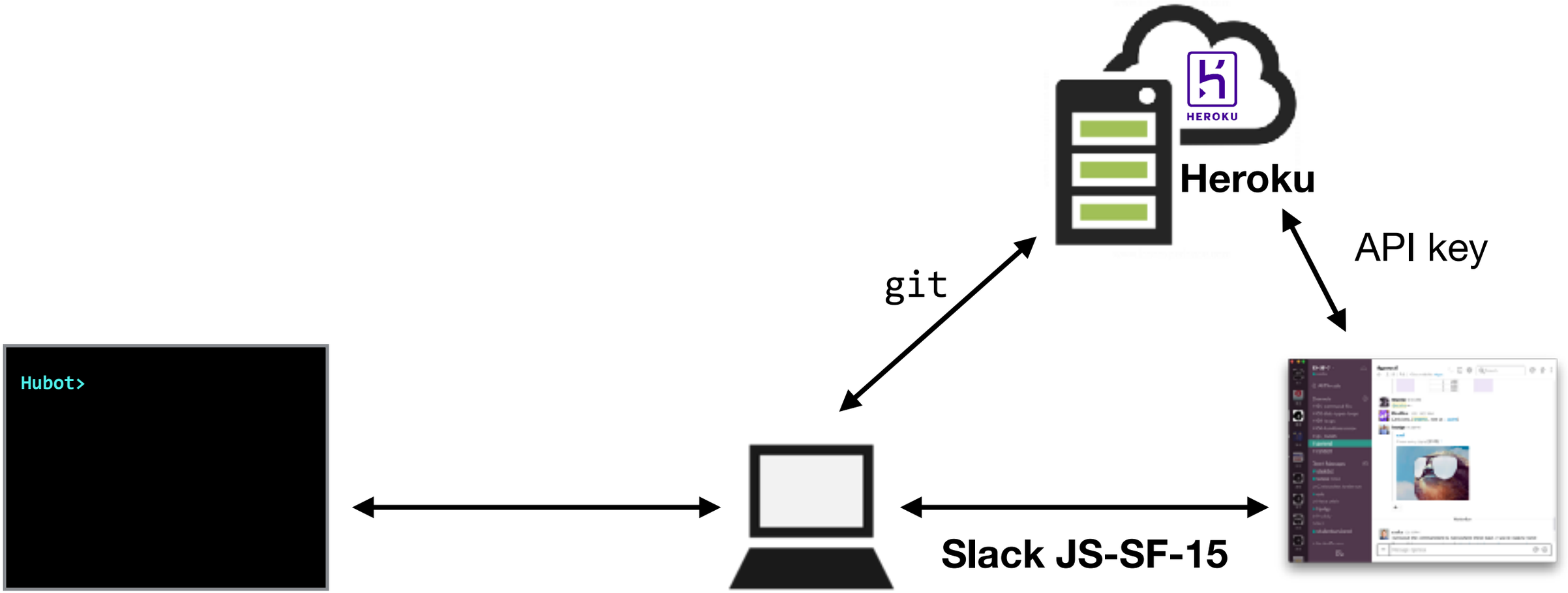
HUBOT vs SLACK BOT vs SLACKBOT

- Hubot is the framework we're using
- Each of us will be building a bot for Slack === a Slack bot
- Slackbot is the name of a specific bot already installed in our Slack organization; it answers questions about how to use Slack



HEROKU

- **Heroku**: A platform for hosting and running apps in the cloud.
- We will create our code on our computers, then push it to Heroku so it can run even when our computers are sleeping or shut down



Interacting with your bot at the command line involves local files on your computer only.

Interacting with your bot on the class Slack organization involves the files you published to your Heroku instance.

YEOMAN

- **Yeoman**: A set of tools that provides a scaffolding (basic structure) for getting web apps up and running quickly
- We'll use a Yeoman tool called yo, which automates a lot of behind-the-scenes work

YEOMAN

COFFEESCRIPT

- **CoffeeScript**: A variant of JavaScript, intended to be more readable and faster to type.
- Only JavaScript can run in browsers
  - Before being used, CoffeeScript code must be compiled, which is a process that translates it into JavaScript
- Many Hubot examples are written in CoffeeScript, but you can write Hubot code in vanilla JavaScript without any problem

MARKDOWN

- **Markdown**: A markup language used for creating formatted text documents.
- Easier to use than HTML for basic tasks
- Comes in different flavors; GitHub has its own
- Used to create README files that document projects in GitHub repos
- You will use Markdown to create a README file explaining what your bot does and how to use it

ACTIVITY — HUBOT CONFIGURATION

KEY OBJECTIVE

- Install and configure all utilities to run a Hubot

LOCATION

- Slack Bot Lab - Install Guide
  (first link in Resources on website for today's class)

EXECUTION

20 min

1. Follow the instructions to install command line utilities for building Hubots.
2. When you finish, start reading and exploring the sample code in Slack Bot Lab - Sample Code (second link in Resources on website for today's class)

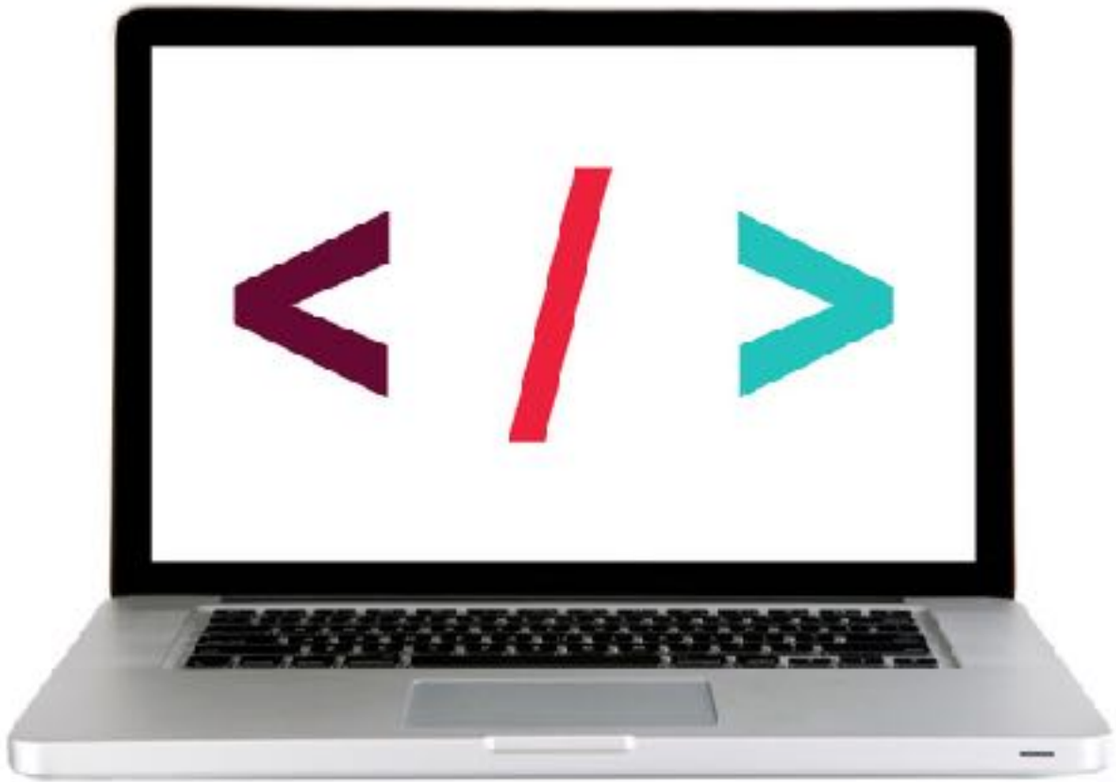
UNDERSTANDING THE HUBOT FRAMEWORK

```
module.exports = function(robot) {
  robot.verb(parameter1, function(res) {
    return res.command();
  });
  robot.verb(parameter1, function(res) {
    return res.command();
  });
  ...
};
```

BASIC HUBOT VERBS

- `hear`: called anytime a message's text matches
- `respond`: called for messages immediately preceded by the robot's name or alias

LET'S TAKE A CLOSER LOOK



ADVANCED HUBOT VERBS

- `random`: choose a random element from an array
- `topic`: set the topic of the current channel
- `brain`: store and retrieve data
- `http`: make an http request (API data, for instance)

COMMON GOTCHAS

```
module.exports = function(robot) {
    bot.hear(/Hello!/, function(res) {
      return res.send("Hi there!");
    });
};
```

```
module.exports = function(robot) {
    robot.hear(/Hello!/, function(res) {
      return res.send("Hi there!");
    });
};
```

```
module.exports = function(bot) {
    bot.hear(/Hello!/, function(res) {
      return res.send("Hi there!");
    });
};
```

```
module.exports = function(bot) {
    bot.respond(/Hello!/, function(res) {
      return res.send("Hi there!");
    });
};
```

```
thunderbot> Hello!
thunderbot>
```

```
module.exports = function(bot) {
    bot.hear(/Hello!/, function(res) {
      return res.send("Hi there!");
    });
};
```

```
thunderbot> Hello!
thunderbot> Hi there!
```

```
module.exports = function(bot) {
    bot.respond(/Hello!/, function(res) {
      return res.send("Hi there!");
    });
};
```

```
thunderbot> @thunderbot Hello!
thunderbot> Hi there!
```

```
module.exports = function(bot) {
    bot.hear(/Hello!/, function(res) {
      return res.send("Hi there!");
    });
};
module.exports = function(bot) {
    bot.hear(/Yo/, function(res) {
      return res.send("Heya");
    });
};
```

```
thunderbot> Hello!
thunderbot>
thunderbot> Yo
thunderbot> Heya
```

```
module.exports = function(bot) {
    bot.hear(/Hello!/, function(res) {
      return res.send("Hi there!");
    });
    bot.hear(/Yo/, function(res) {
      return res.send("Heya");
    });
};
```

```
thunderbot> Hello!
thunderbot> Hi there!
thunderbot> Yo
thunderbot> Heya
```

SLACK BOT LAB

```
module.exports = function(bot) {
    bot.hear(/JavaScript/, function(res) {
      return res.send("I love JavaScript!");
    });
};
```

```
thunderbot> I'm learning JavaScript
thunderbot> I love JavaScript!
thunderbot> I love JavaScript!
thunderbot> I love JavaScript!
thunderbot> I love JavaScript!
```

```
thunderbot> I love JavaScr
thunderbot> I love JavaScr
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thunderbot> I love JavaScr
```
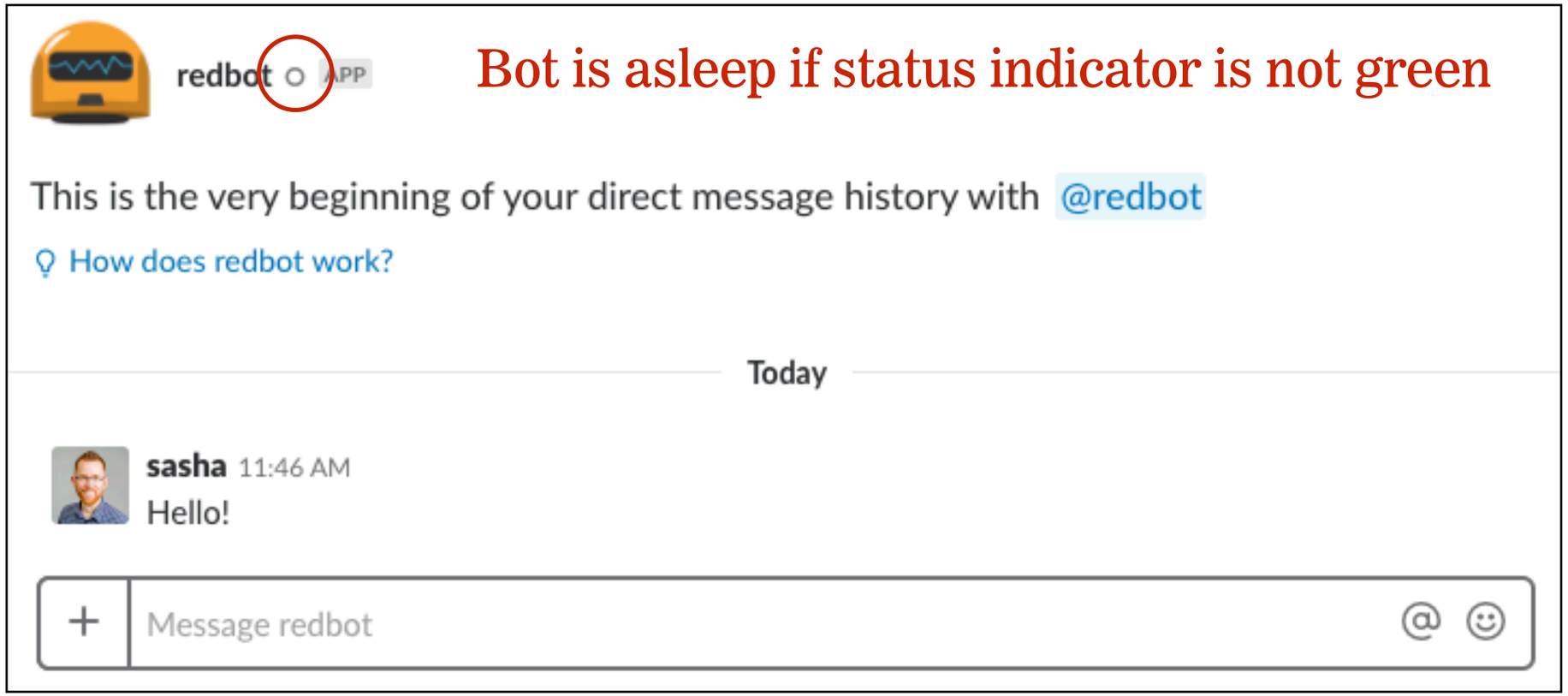

```
module.exports = function(bot) {
    bot.hear(/JavaScript/, function(res) {
      return res.send("I love coding!”);
    });
};
```

```
thunderbot> I'm learning JavaScript
thunderbot> I love coding!
```

```
module.exports = function(bot) {
    bot.respond(/JavaScript/, function(res) {
      return res.send("I love JavaScript!");
    });
};
```

```
thunderbot> @thunderbot I’m learning JavaScript
thunderbot> I love JavaScript!
```




```
$ heroku ps:restart
```

DO NOT ADD YOUR API TOKEN TO ANY OF YOUR FILES AS A COMMENT!

LAB — BUILD A SLACK BOT

KEY OBJECTIVE

- Write scripts that allow your Hubot to interact with users of the class Slack organization

LOCATION

- `JSD > myhubot > scripts > script.js`

EXECUTION

Until 9:15

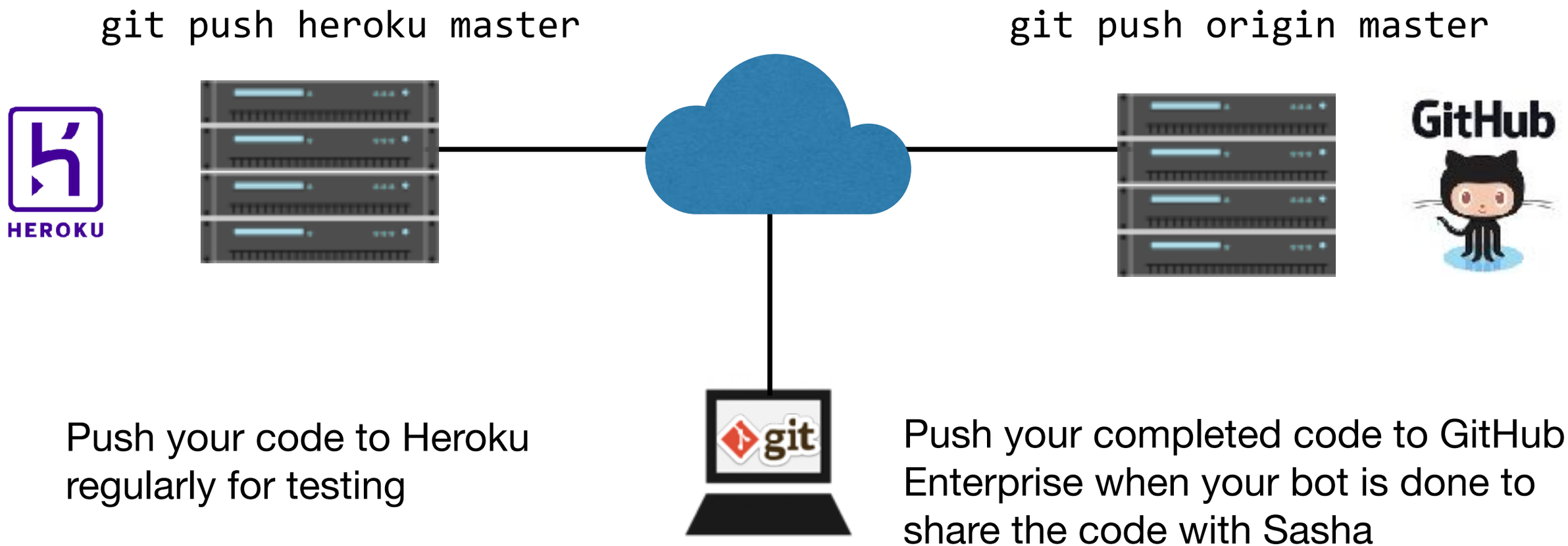
1. Uncommenting portions of the sample code in `script.js` to explore how to code in the Hubot framework, and what a bot can do in Slack.
2. Try out some of the code samples in today's start code files.
3. Create a plan for what you want your bot to be able to do, pseudocode it, and start building it!
4. Test using the steps in Slack bot lab - Testing & Troubleshooting (third link on class resources on website)
5. BONUS: Experiment with advanced commands documented at https://github.com/github/hubot/blob/master/docs/scripting.md

CREATING A GITHUB ENTERPRISE REPO

Heroku vs GitHub

- **Heroku** is running your bot code in the cloud
- **GitHub** is making your raw code available to Sasha

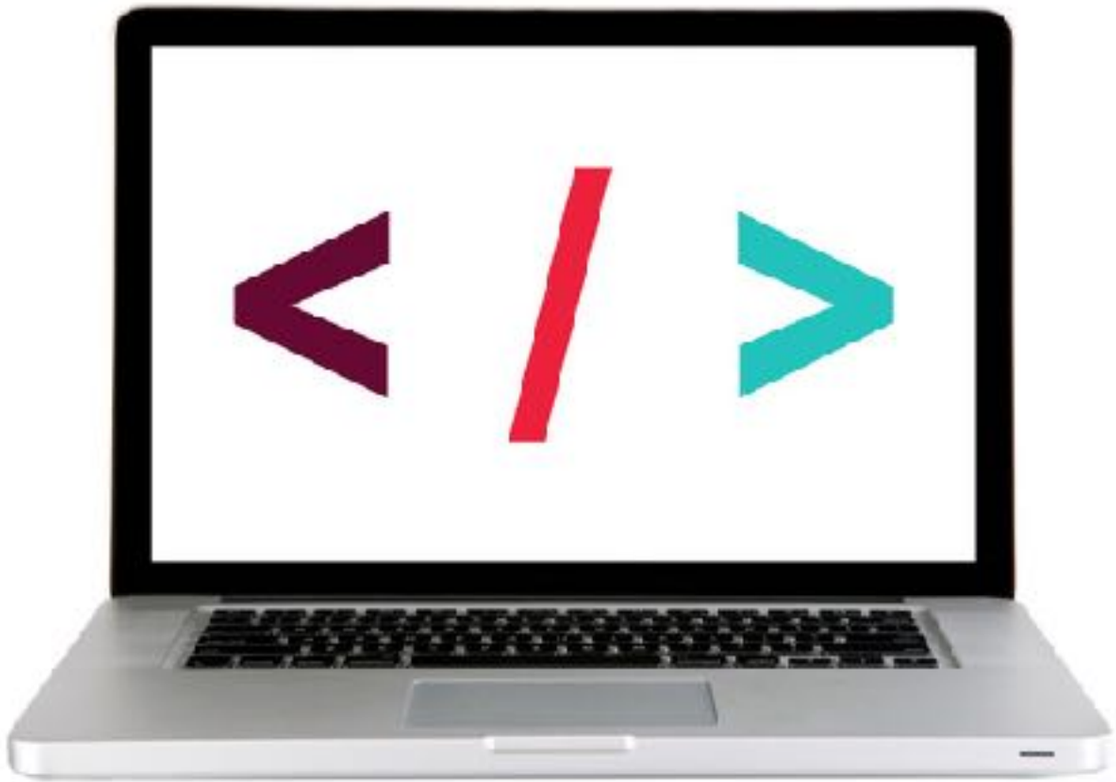
Heroku vs GitHub



Push your code to Heroku regularly for testing

Push your completed code to GitHub Enterprise when your bot is done to share the code with Sasha

LET'S TAKE A CLOSER LOOK



Exit Tickets!

(Class #5)

LEARNING OBJECTIVES - REVIEW

- Install and configure all utilities needed to build a bot using the Hubot framework
- Write scripts that allow your bot to interact with users of the class Slack organization

NEXT CLASS PREVIEW

JSON & Intro to the DOM

- Implement and interface with JSON data
- Identify differences between the DOM and HTML.
- Use vanilla JavaScript methods and properties to create and modify DOM nodes.

Q&A