

UNIT 6.

ACTIVITY 3: DEPLOY ON HEROKU

Web Applications Deployment
CFGS DAW

Important: this activity is not mandatory and does not compute for the final grade.

Importante: esta actividad no es obligatoria y no cuenta para la nota final.

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Nomenclature

During this unit we are going to use special symbols to distinct some important elements.
This symbols are:



Important



Attention



Interesting

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UT06. WEB APPLICATIONS DEPLOYMENT ACTIVITY: DEPLOY ON HEROKU

1. INTRODUCTION

In this activity we are going to learn about the Heroku platform, create an account and deploy three Simple PHP, Java and Node.js applications web applications.

You can use your own physical machine or a virtual machine. In any case you need a Linux OS.

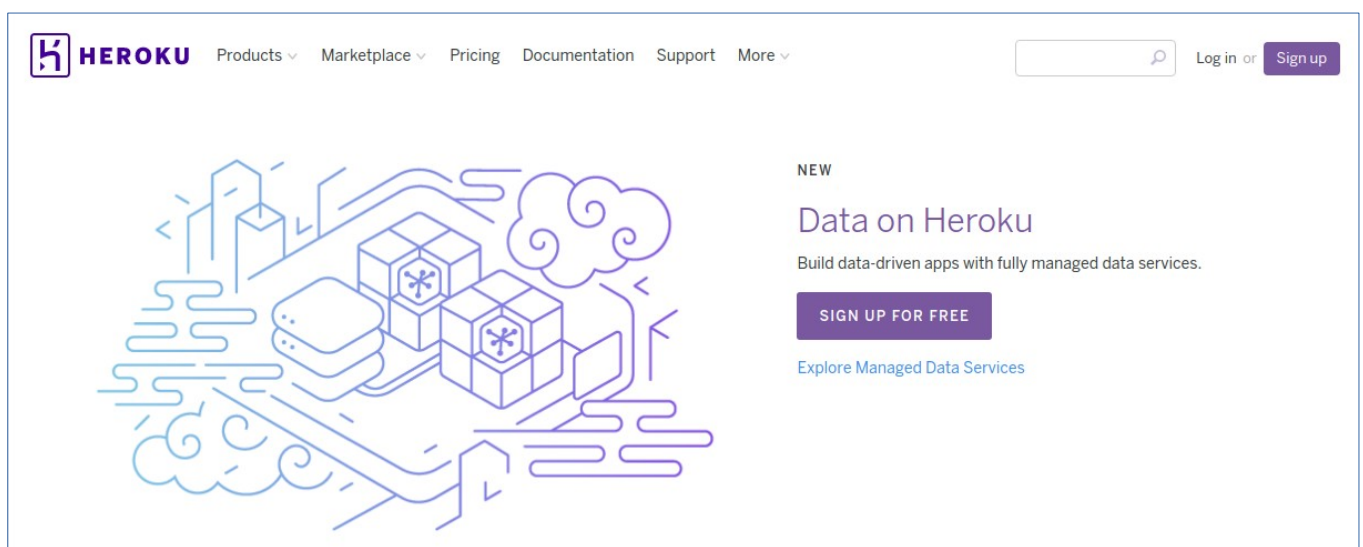
This activity is done in Ubuntu.

2. HEROKU

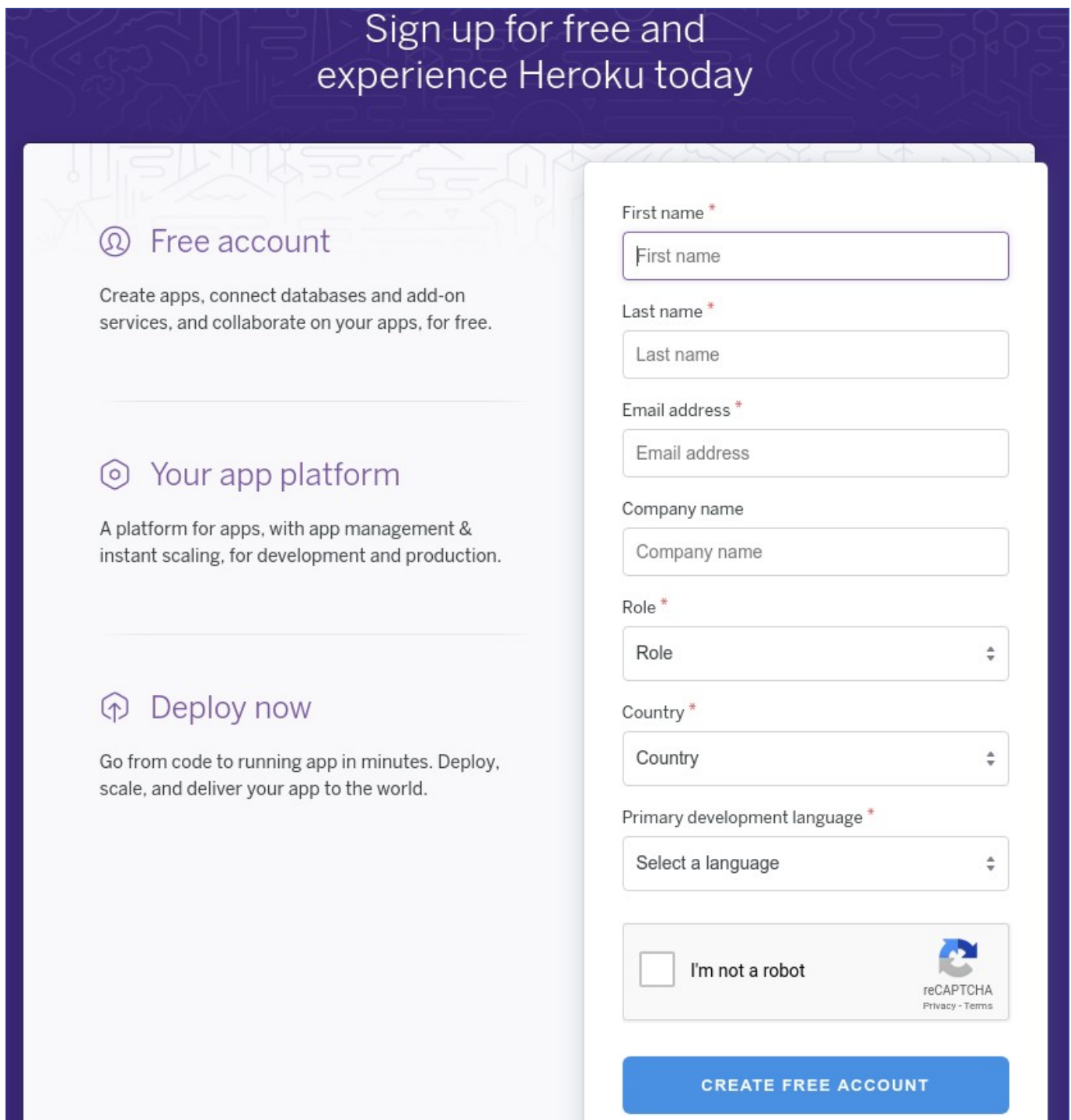
Heroku is a cloud platform as a service (PaaS) supporting several programming languages:



First of all, we have to create an account. To do so go to Heroku's official site: <https://www.heroku.com/>, click on the button **Sign up for free**:



Follow the steps and fill in the fields in order to create a **free account**. In 'Primary development language' you can select any, for example PHP or Node.js.

The image shows the Heroku sign-up page. At the top, a dark blue banner contains the text "Sign up for free and experience Heroku today" in white. Below this, the page is divided into two main sections. The left section, titled "Free account" with a person icon, describes the benefits of a free account: "Create apps, connect databases and add-on services, and collaborate on your apps, for free." Below this is the "Your app platform" section, which states: "A platform for apps, with app management & instant scaling, for development and production." At the bottom of the left section is the "Deploy now" section, which says: "Go from code to running app in minutes. Deploy, scale, and deliver your app to the world." The right section is a form titled "Sign up for free" (partially visible). It contains several input fields: "First name", "Last name", "Email address", "Company name", "Role" (a dropdown menu), "Country" (a dropdown menu), and "Primary development language" (a dropdown menu). Below these fields is a reCAPTCHA widget with the text "I'm not a robot" and a checkbox. At the bottom of the form is a large blue button labeled "CREATE FREE ACCOUNT".

Sign up for free and experience Heroku today

Free account

Create apps, connect databases and add-on services, and collaborate on your apps, for free.

Your app platform

A platform for apps, with app management & instant scaling, for development and production.

Deploy now

Go from code to running app in minutes. Deploy, scale, and deliver your app to the world.

First name *

Last name *

Email address *


Company name

Role *

Country *

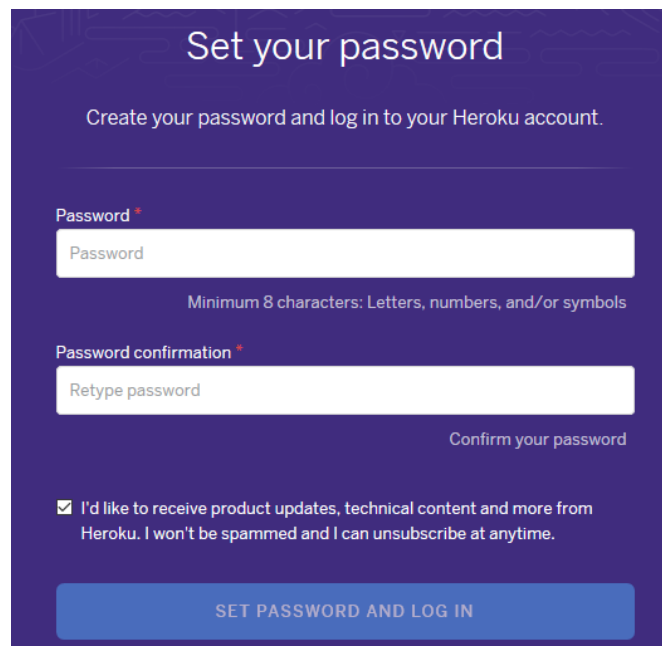
Primary development language *

☐ I'm not a robot


reCAPTCHA
[Privacy](#) - [Terms](#)

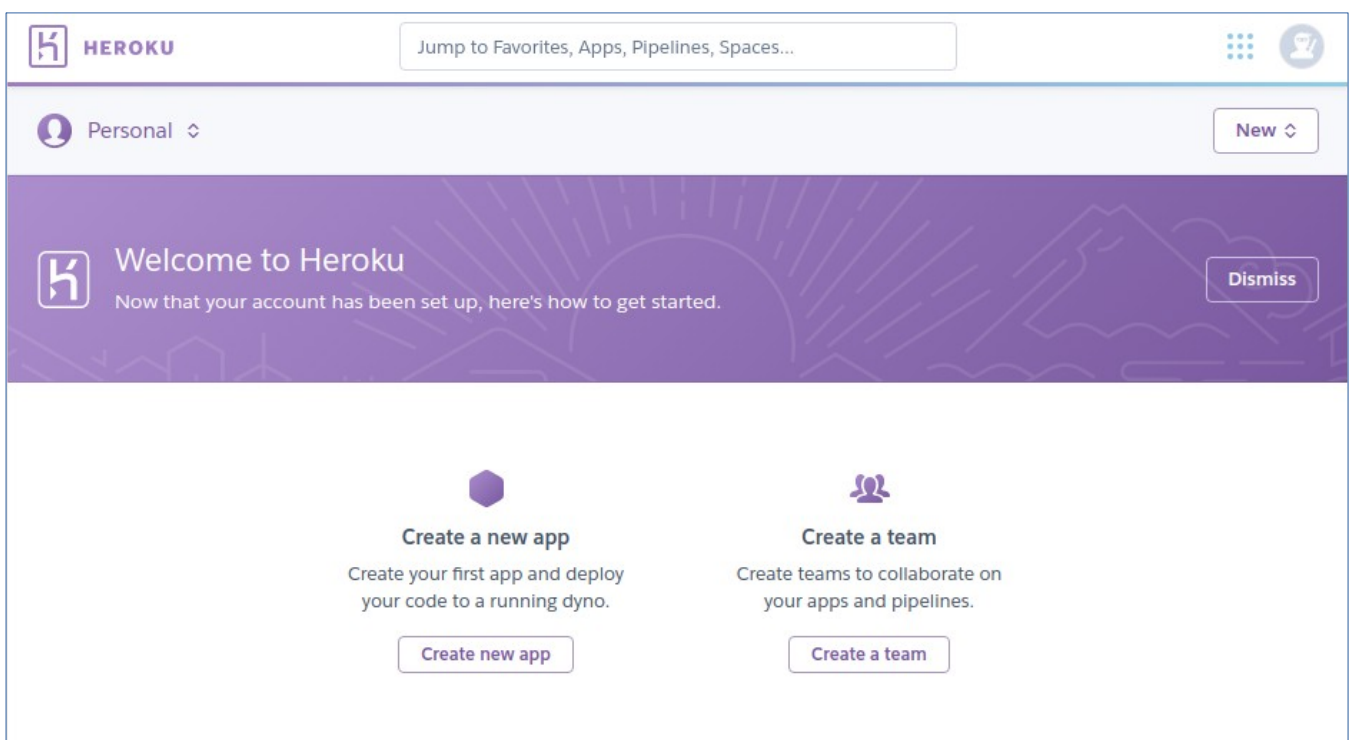
CREATE FREE ACCOUNT

Then, you have to check you email, click on the link sent by Heroku to activate your account and set your password:



The image shows the 'Set your password' form on the Heroku website. It has a dark purple background with white text. At the top, it says 'Set your password' in a large font, followed by 'Create your password and log in to your Heroku account.' Below this are two input fields: 'Password' and 'Password confirmation'. The 'Password' field has a hint: 'Minimum 8 characters: Letters, numbers, and/or symbols'. The 'Password confirmation' field has a hint: 'Confirm your password'. Below the fields is a checkbox with the text: 'I'd like to receive product updates, technical content and more from Heroku. I won't be spammed and I can unsubscribe at anytime.' At the bottom is a large blue button that says 'SET PASSWORD AND LOG IN'.

And we have everything ready to start using Heroku:



The image shows the Heroku dashboard. At the top is the Heroku logo and a search bar that says 'Jump to Favorites, Apps, Pipelines, Spaces...'. Below the search bar is a navigation bar with 'Personal' and a 'New' button. The main content area has a purple header with the text 'Welcome to Heroku' and 'Now that your account has been set up, here's how to get started.' Below this are two cards: 'Create a new app' and 'Create a team'. The 'Create a new app' card has a sub-header 'Create a new app' and a description 'Create your first app and deploy your code to a running dyno.' Below the description is a button that says 'Create new app'. The 'Create a team' card has a sub-header 'Create a team' and a description 'Create teams to collaborate on your apps and pipelines.' Below the description is a button that says 'Create a team'.

Now click on the **Create New App** button. Type an app name (for example daw-heroku-activity3-app, select a region and click **Create App**. In this activity we are going to deploy simple PHP, Java and Node.js applications.

3. INSTALL HEROKU CLI

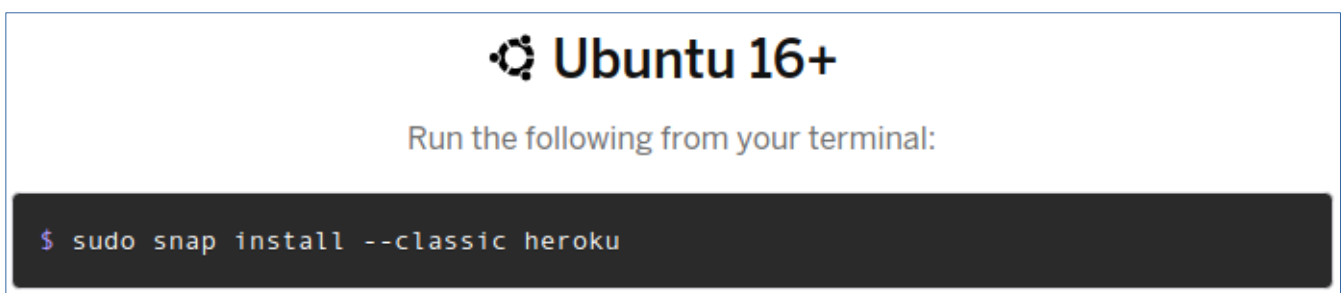
To be able to deploy apps in Heroku we first need to install the Heroku Command Line Interface (CLI). To do so, we will follow the instructions in the official Heroku documentation page:

<https://devcenter.heroku.com/articles/heroku-cli#download-and-install>

Notice that Heroku uses **Git**, and to install Heroku you need **snap**. Make sure to install both. Notice the the snap package is called **snapd**, with a d.

```
lionel@lenovo-mint ~ $ sudo apt-get update
lionel@lenovo-mint ~ $ sudo apt-get install git-all
lionel@lenovo-mint ~ $ sudo apt-get install snapd
```

Now we can install heroku as specified in the official webpage:



Verify your installation running this command:

```
$ heroku --version
heroku/7.0.0 (darwin-x64) node-v8.0.0
```

You might get an **error message** saying that 'heroku' is not found. This happens because snap did not add the snap binaries folder or the heroku command to your terminal PATH. There are different ways to solve it. One of the easiest one is to just add a symbolic link from **/snap/bin/heroku** to **/usr/bin/heroku** so that the Terminal will find the command automatically.

```
lionel@lenovo-mint ~ $ sudo ln -s /snap/bin/heroku /usr/bin/heroku
```

Now heroku should work. Let's login to heroku via command line.

Once installed, you can use the `heroku` command from your command shell.

Use the `heroku login` command to log in to the Heroku CLI:

```
$ heroku login
heroku: Press any key to open up the browser to login or q to exit
> Warning: If browser does not open, visit
> https://cli-auth.heroku.com/auth/browser/**
heroku: Waiting for login...
Logging in... done
Logged in as me@example.com
```

4. DEPLOY A PHP APPLICATION

We are going to deploy a simple PHP application. **Everything you need is explained in the “Getting started on Heroku with PHP” official documentation:**

<https://devcenter.heroku.com/articles/getting-started-with-php>

First, go to the **Set Up** section. Check if php and composer are installed. Otherwise, install them.

```
$ php -v
PHP 7.0.5 (cli) (built: Apr 26 2016 04:39:48) ( NTS )
Copyright (c) 1997-2016 The PHP Group
Zend Engine v3.0.0, Copyright (c) 1998-2016 Zend Technologies
```

Now check that you have `composer` installed. If not, [install it](#) and test again:

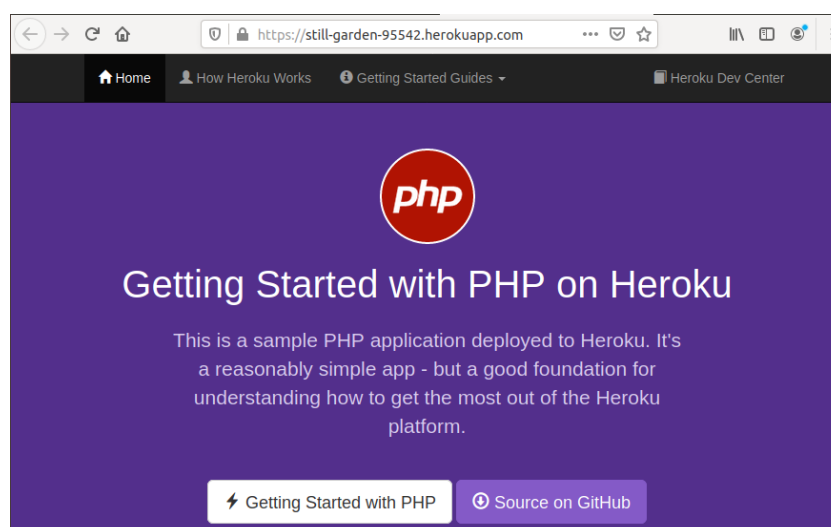
```
$ composer -V
Composer version 1.4.1 2017-03-10 09:29:45
```

To install Composer go to the link available in the documentation and follow the steps. Basically you have to **download the installer executable**, then run it with **php installer** in a command line (it will download file composer.phar) and finally follow the steps to install it **Globally** (not locally).

Now go to the **Prepare the app** section. We are going to use a sample PHP application available in Heroku's github.com account. Clone it using git and enter the folder.

```
$ git clone https://github.com/heroku/php-getting-started.git
$ cd php-getting-started
```

Now go to the **Deploy the app** section and follow the steps. This will create a Heroku app in the cloud and deploy the PHP code to it.



Your web app is available in the Internet!

5. DEPLOY A JAVA APPLICATION

We are going to deploy a simple Java application. **Everything you need is explained in the “Getting started on Heroku with Java” official documentation:**

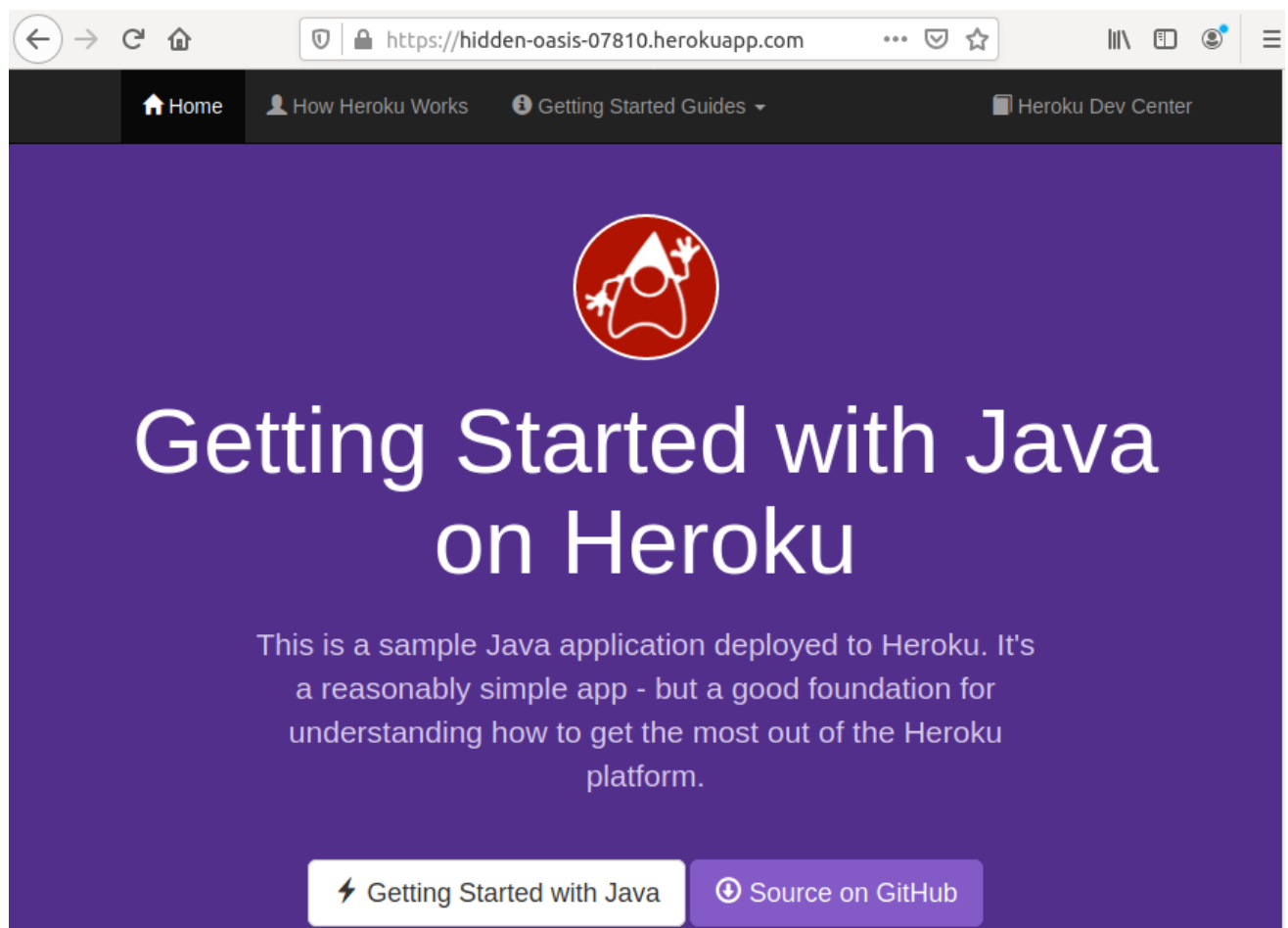
<https://devcenter.heroku.com/articles/getting-started-with-java>

First, go to the **Set Up** section. Notice you have everything you need so there’s nothing to install.

Now go to the **Prepare the app** section. We are going to use a sample Java application available in Heroku’s github.com account. Clone it using git and enter the folder.

```
$ git clone https://github.com/heroku/java-getting-started
$ cd java-getting-started
```

Now go to the **Deploy the app** section and follow the steps. This will create a Heroku app in the cloud and deploy the Java code to it.



Your web app is available in the Internet!

6. DEPLOY A NODE.JS APPLICATION

We are going to deploy a simple Node.js application. **Everything you need is explained in the “Getting started on Heroku with Node” official documentation:**

<https://devcenter.heroku.com/articles/getting-started-with-nodejs>

First, go to the **Set Up** section. Make sure you have node and npm installed. Otherwise, install the nodejs and npm packages using apt-get.

```
$ node --version  
v12.13.0
```

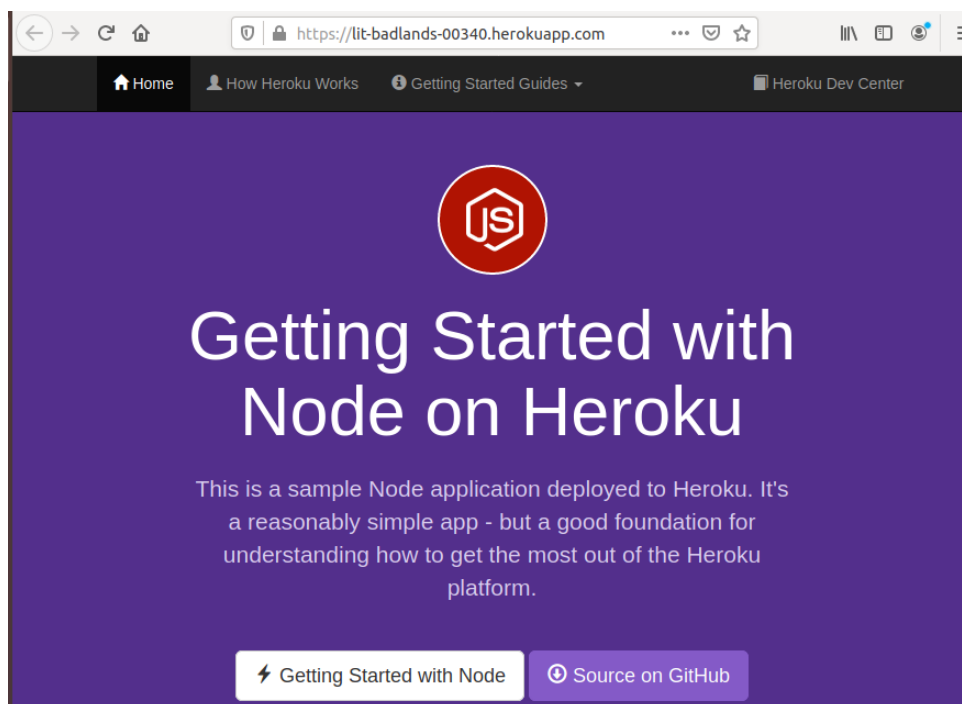
`npm` is installed with Node, so check that it's there. If you don't have it, install a more recent version of Node:

```
$ npm --version  
6.11.3
```

Now go to the **Prepare the app** section. We are going to use a sample Node.js application available in Heroku's github.com account. Clone it using git and enter the folder.

```
$ git clone https://github.com/heroku/node-js-getting-started.git  
$ cd node-js-getting-started
```

Now go to the **Deploy the app** section and follow the steps. This will create a Heroku app in the cloud and deploy the Node.js code to it.



Your web app is available in the Internet!