UNIT 6.
ACTIVITY 3: DEPLOY ON HEROKU

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.

Author: Carlos Cacho López

Reviewed by: Lionel Tarazón Alcocer

lionel.tarazon@ceedcv.es

License

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.

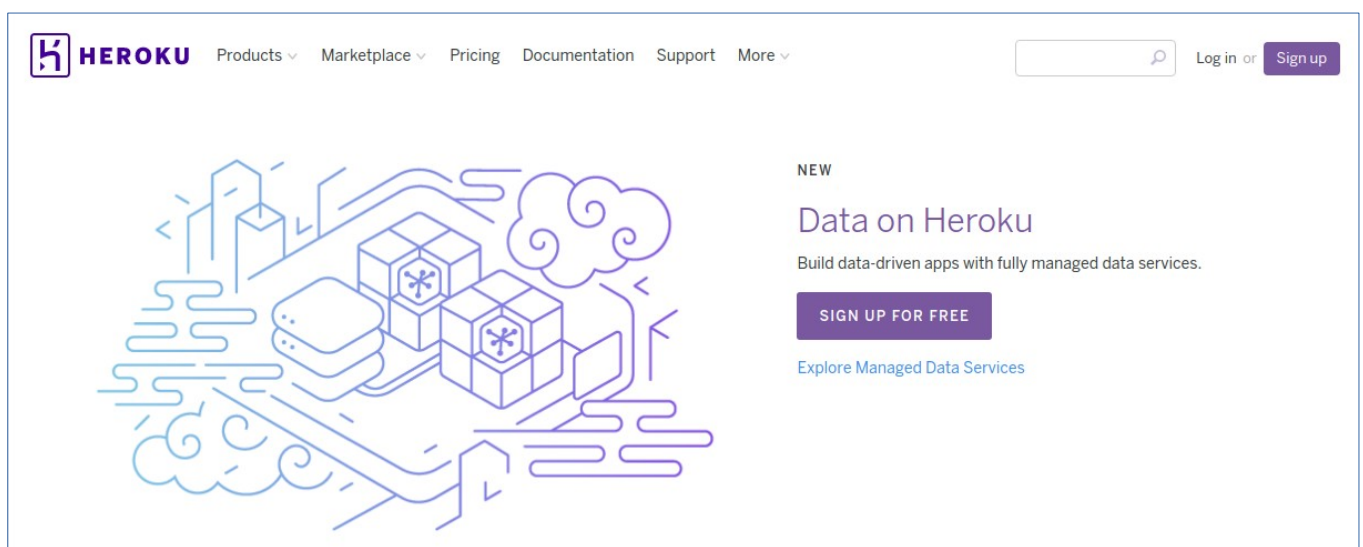You can use your own physical machine or a virtual machine. In any case you need a Linux OS.

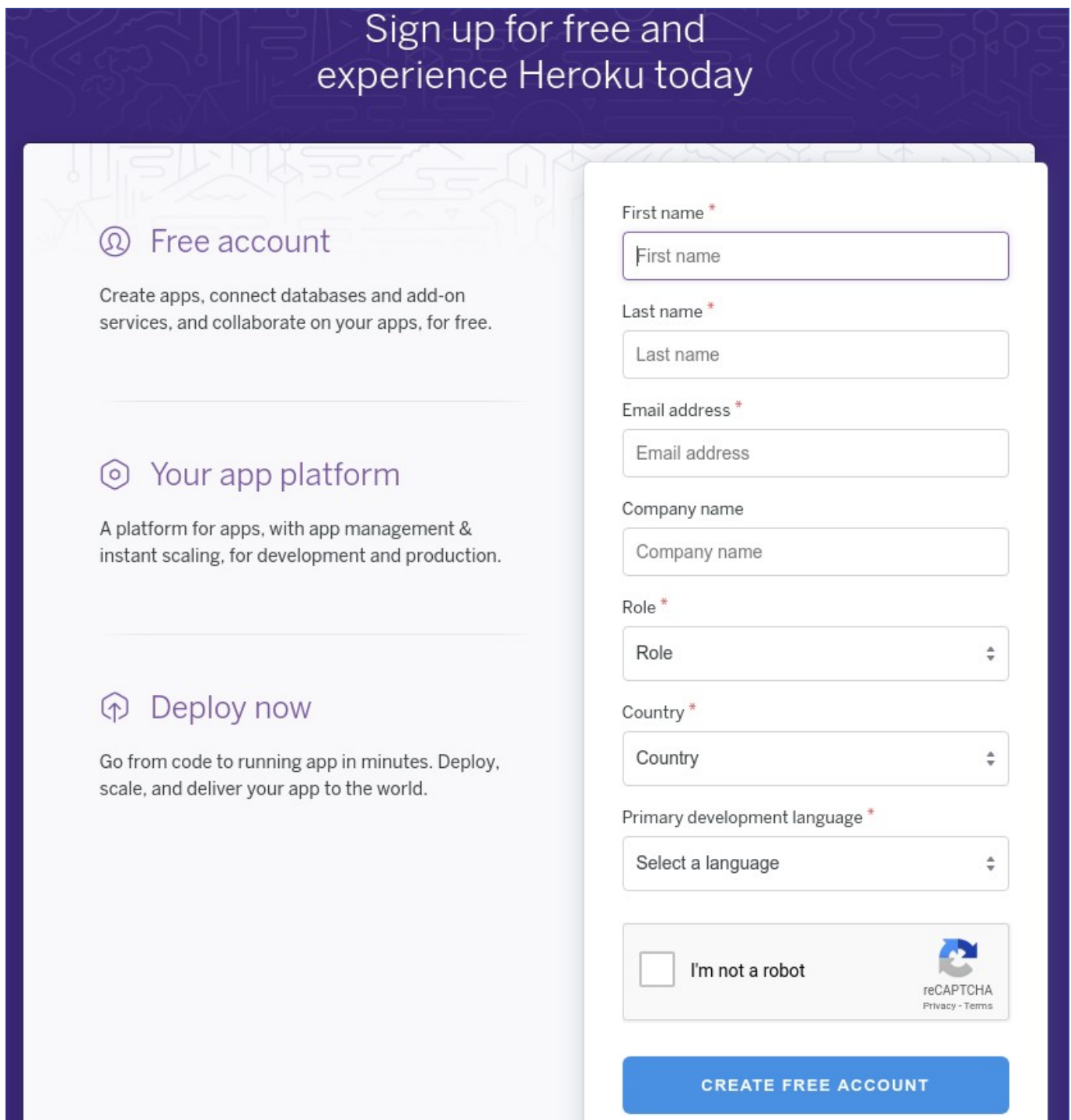This activity is done in Ubuntu.

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.

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

And we have everything ready to start using Heroku:

Now click on the **Create New App** button. Type an app name (for example daw-heroku-activity3-app, select a recgion 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 intsall 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 snap**d**, 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
```
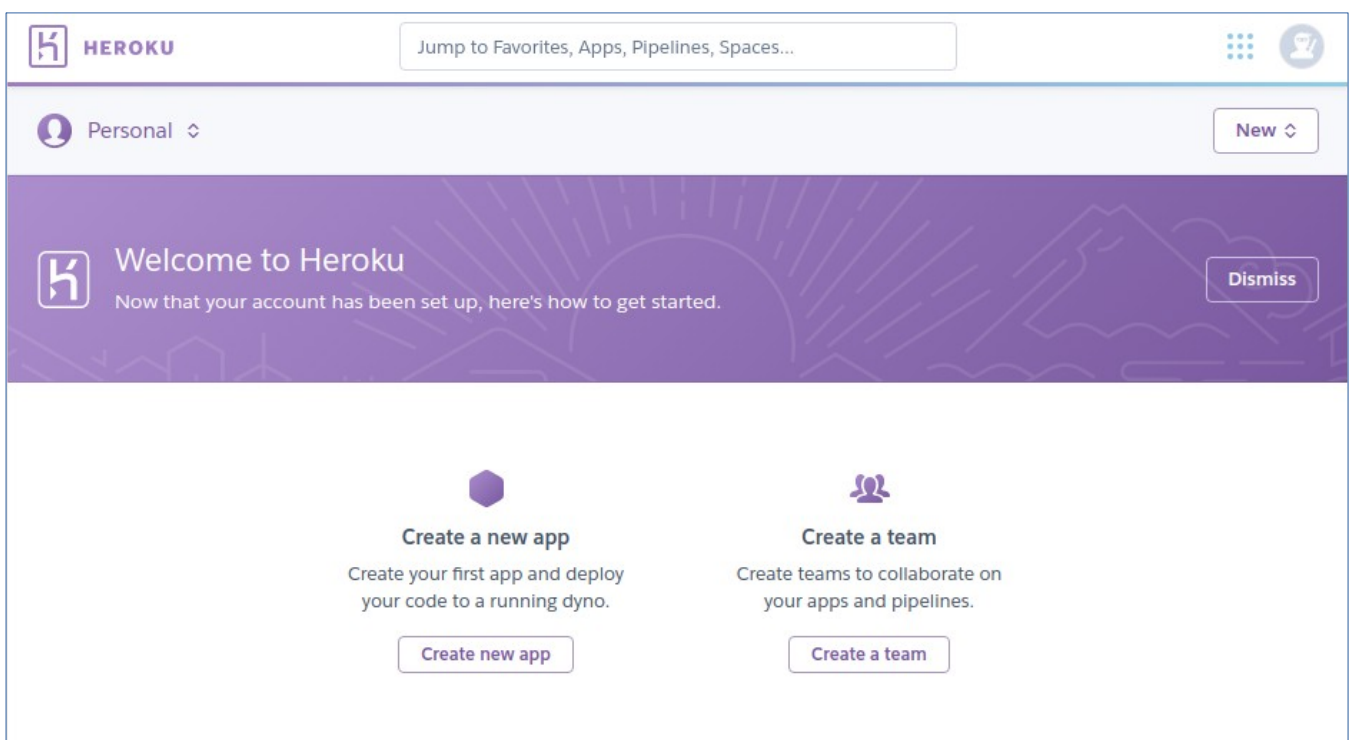
Now we can install heroku as specified in the opfficial webpage:

Ubuntu 16+

Run the following from your terminal:

```
$ sudo snap install --classic heroku
```
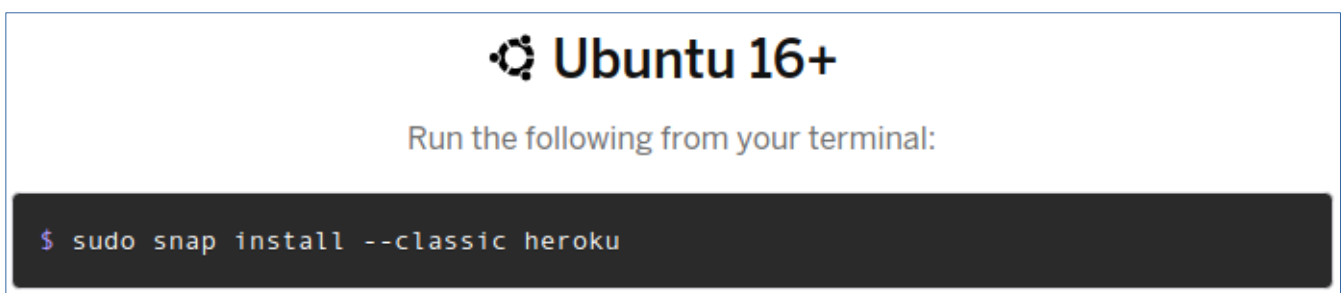
Verify your installation running this command:

```
$ 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 symbolik 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. Lets 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 commmand 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 **Deply the app** section and follow the steps. This will create a Heroku app in the cloud and deploy the PHP code to it.
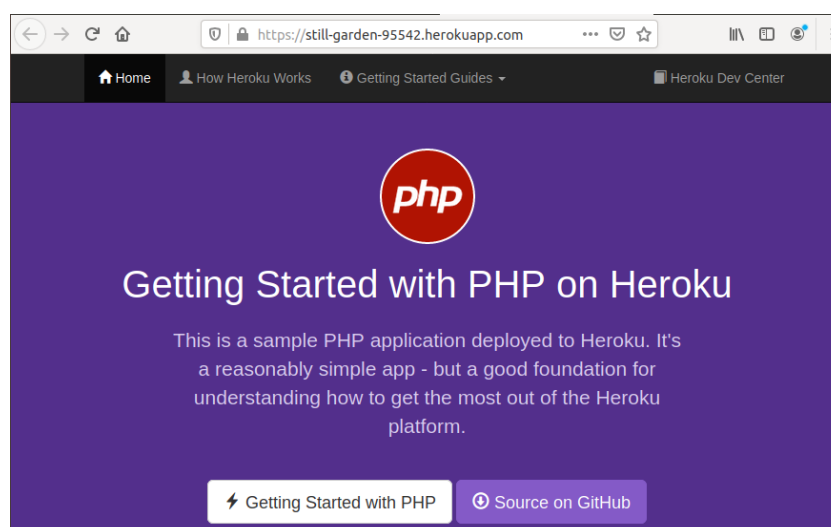
Your web app is available in the Internet!

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 **Deply the app** section and follow the steps. This will create a Heroku app in the cloud and deploy the Java code to it.
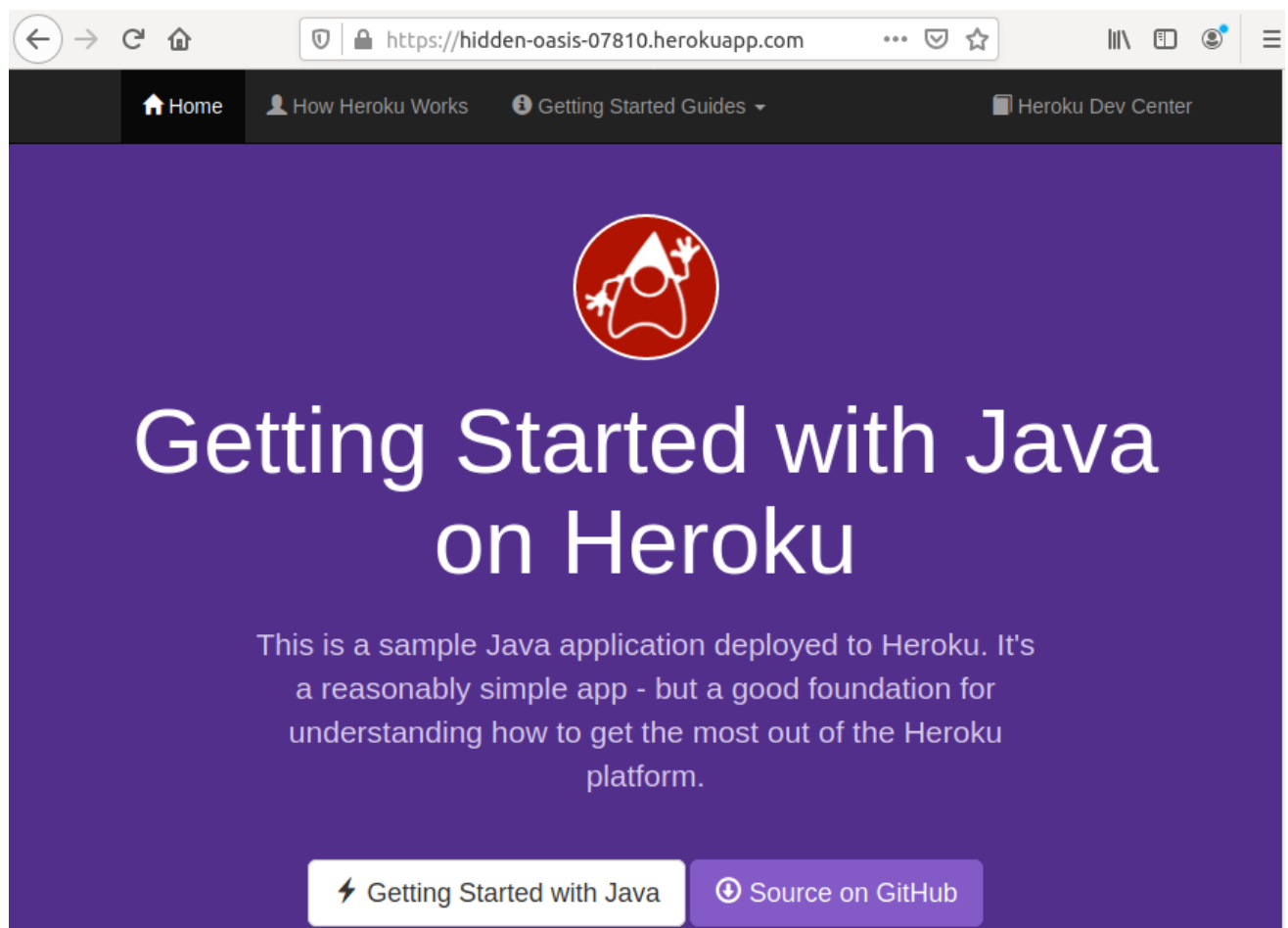
Your web app is available in the Internet!

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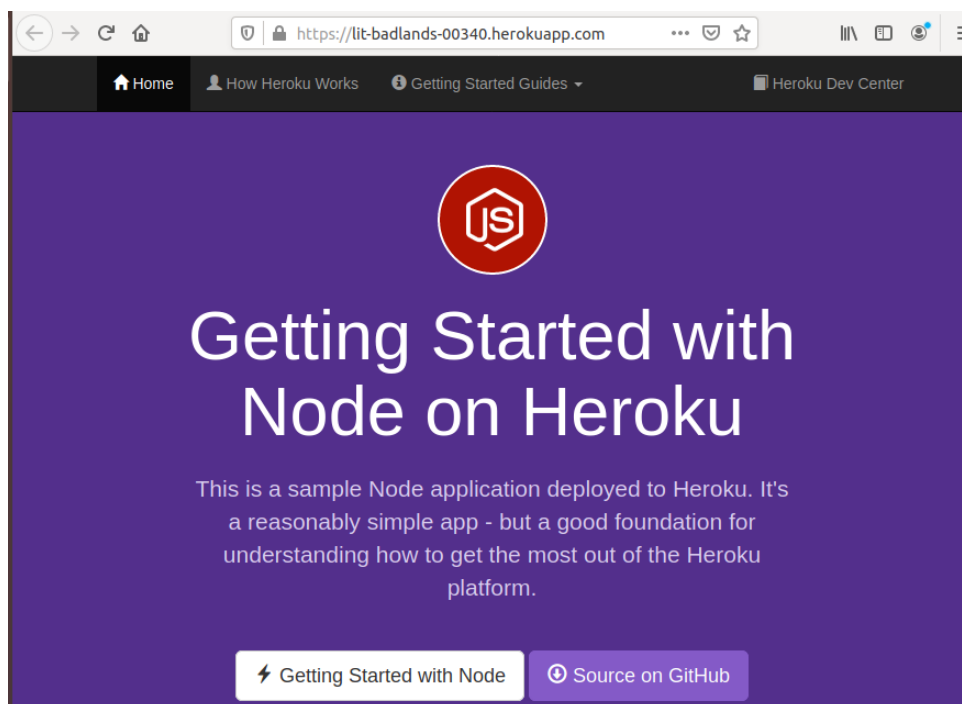
`npm` is installed with Node, so check that it's there. If you don't have it, install a more recent version of Node:

```
$ 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 **Deply 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!