Hyperiondev

Task

Deploy a React App

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Introduction

WELCOME TO THE DEPLOY A REACT APP TASK!

You have reached another exciting milestone in your journey to becoming a full-stack web developer. You have built a front-end web application using React. You have ensured the quality of your code by debugging and refactoring it. You are now ready to make your app available to the rest of the world! In this task, you will learn how to deploy your app to Heroku.

Get in touch

Connect for support

Remember that with our courses, you're not alone! You can contact your mentor to get support on any aspect of your course.

The best way to get help is to login to **www.hyperiondev.com/portal** to start a chat with your mentor. You can also schedule a call or get support via email.

Your mentor is happy to offer you support that is tailored to your individual career or education needs. Do not hesitate to ask a question or for additional support!

WHAT IS HEROKU?

In order for your application to work, it needs to be supported by appropriate infrastructure and platform. IT infrastructure refers to the physical and virtual resources that form the basis of Information and Communications Technology (ICT). Examples of IT infrastructure include web servers, database servers, hard drives and other forms of storage. Platform sits on top of infrastructure and is the software that interfaces directly with the infrastructure to make it work as you would like it to. It provides a layer between the application software (e.g. MS Word, Gmail and the applications you have built) and the infrastructure. Examples of platform include your operating system (OS) and development tools like Node.js.

Application software 	End-users use these applications. The programmes you have learned to build are examples of application software.
Platform 	Platform sits on top of the infrastructure. Platform is the software that interfaces directly with the infrastructure to make it work as you would like. It provides a layer between the application software (e.g. MS Word, Gmail and the applications you have built) and the infrastructure.
Infrastructure 	IT infrastructure is a term used to describe the physical and virtual resources that form the basis of ICT. Examples of IT infrastructure include web servers, database servers, hard drives and other forms of storage.

Cloud computing has allowed us to use infrastructure and platform provided by cloud service providers across the internet as opposed to having to rely on our own physical servers that we have to set up and configure with the necessary platform. Heroku is an example of a cloud solution that provides platform as a service (PaaS). Heroku allows us to use virtual platform and infrastructure resources that are maintained by the owners of Heroku to host our web applications.

HOW DOES HEROKU WORK?

In order to use Heroku to run your web applications, you have to put a copy of your web application on Heroku. Heroku can then build your application. Building your

code results in a slug. **Heroku** defines a slug as "a bundle of your source, fetched dependencies, the language runtime, and compiled/generated output of the build system — ready for execution." Your **package.json** file includes a lot of important information that is needed for this build, including the dependencies and the information that specifies which file to use to run the app that is specified in the main field. Your app can then be run on virtual Unix-based web servers called dynos.

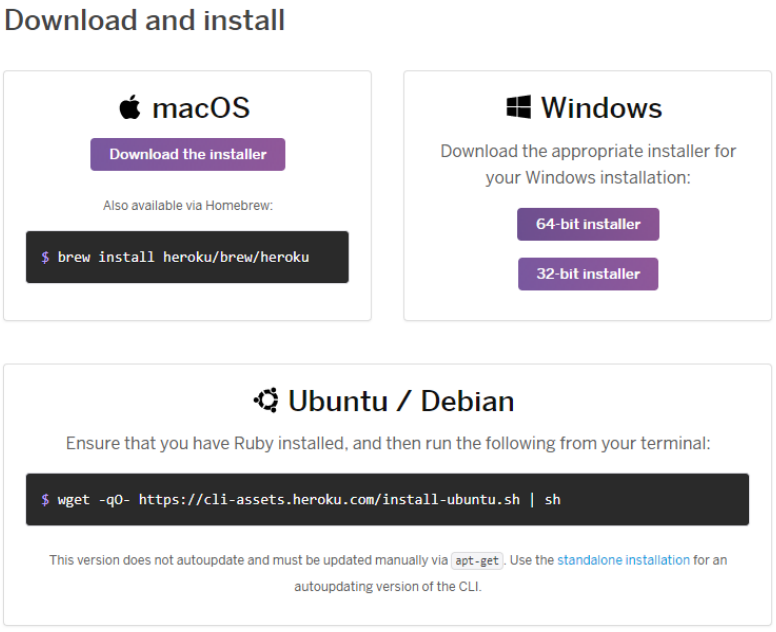
SIGN UP FOR A HEROKU ACCOUNT

You are going to have to sign up for a Heroku account in order to be able to deploy your app to Heroku. To do this, fill in the form **here**.

DEPLOYING YOUR APP TO HEROKU

The simplest way to deploy your app to Heroku is to do so using git and the Heroku command line interface (CLI). You can do this in a few simple steps as shown below.

1. Download and install the Heroku CLI as instructed **here**. Once you have followed the appropriate instructions to install the Heroku CLI, test that it has been properly installed by typing `heroku -v` in the command line interface of your PC. You should see which version of Heroku CLI has been installed if the installation ran correctly.



2. Open your command line interface (your normal CLI i.e. the one you used in the task, “The command line for web development) and navigate to the project directory of the web app you created using Create React App. E.g: `cd E:\hyperiondev\my-app`
3. Make this directory a git repository. This git repository will be on your local machine. You will later push this to a Heroku server. Do this by typing `git init`. You won’t have to do this if you have used Create React App to create your app since a git repository would have been created by default for your project.
4. Login to Heroku by typing `heroku login` in the CLI. You will be prompted for your password. Use the password you created when you created your Heroku account to login.
5. Create an empty application on Heroku using the official buildpack provided by Heroku to build apps created using Create React Apps. Do this by typing:

```
heroku create -b https://github.com/mars/create-react-app-buildpack.git
```

6. Commit and push your app to Heroku by typing the following instructions:
    - `git add .`
    - `git commit -m "react-create-app on Heroku"`
    - `git push heroku master`
7. Test your app by typing `heroku open` in the CLI. This should open your app in the browser if everything worked correctly.

SPOT CHECK 1
Let’s see what you can remember from this section.

1. What are the 3 things needed for an application to work? Give an example for each.
2. How does Heroku fit into these 3 requirements?

Compulsory Task 1

Follow these steps:

- In your previous Capstone Project, you created a basic game using Create React App. For this task, you are required to deploy this app to Heroku. Do this by following the instructions in this document.
- Create a text document called **link.txt** in which you provide your mentor with the URL they can use to visit your deployed app.

Completed the task(s)?

Ask your mentor to review your work!

Review work

Things to look out for:

1. Please consult Heroku's official documentation for deploying with **Create React App** for more information.

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Reference:

React.js. (2020). Getting Started – React. Retrieved 6 August 2020, from https://reactjs.org/docs/getting-started.html

SPOT CHECK 1 ANSWERS

1.
    a. IT infrastructure: refers to the physical and virtual resources that form the basis of Information and Communications Technology (ICT). Examples of IT infrastructure include web servers, database servers, hard drives and other forms of storage.
    b. Platform: sits on top of infrastructure and is the software that interfaces directly with the infrastructure to make it work as you would like it to. Examples of platform include your operating system (OS) and development tools like Node.js.
    c. Application software: is what is the end-user interacts with. Examples of application software include MS Word, Gmail and the applications you have built up until now.
2. Heroku provides platform as a service (PaaS) and allows us to use virtual platform and infrastructure resources that are maintained by the owners of Heroku to host our web applications.