

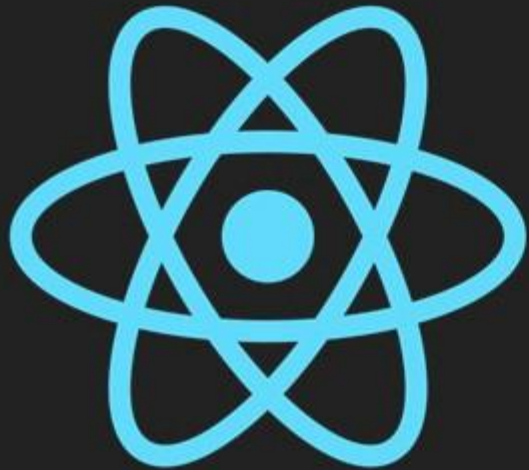


The first Hub for Developers
Ztoupis Konstantinos

Deployment

Code.Learn Program:
React

Deploy React to GitHub-Pages

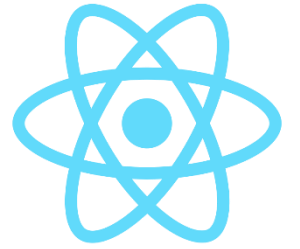


Deploy React to GitHub-Pages

Prerequisites :

- GitHub Account
- Install Git in your machine and Set up Git
- Make sure you have Node.js and Npm installed in your machine
- Install Node.js
- Install Npm

React



- also known as React.js or ReactJS
- a JavaScript library used to create and handle flexible components for user-interface
- developed by Facebook
- a base in the development of single-page or mobile applications
- optimal for fetching rapidly changing data that needs to be recorded



- an amazing revision control system for any type of document-based projects
- tracks changes in source code during software development
- is designed for coordinating work among programmers
- its goals include speed, data integrity, and support for distributed, non-linear workflows
- is free and open-source software

- a web-based version of git
- provides access control and several collaboration features such as bug tracking, feature requests, task management, and wikis for every project
- is a subsidiary of Microsoft, which acquired the company in 2018 for \$7.5 billion
- offers unlimited private repositories to all plans, including free accounts
- the largest host of source code in the world

GitHub Pages



- a static web hosting service offered by GitHub since 2008 to GitHub users for hosting
 - user blogs
 - project documentation
 - whole books created as a page
- are publicly available on the internet, even if their repositories are private

GitHub Pages sites

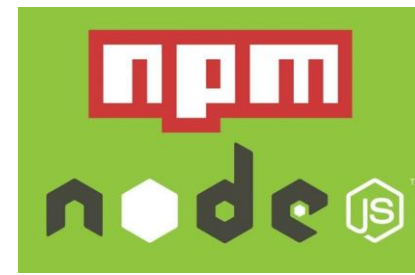
- created after June 15, 2016 and using github.io domains are served over HTTPS
- GitHub Pages sites shouldn't be used for sensitive transactions like sending passwords or credit card numbers
- is subject to the GitHub Terms of Service, including the prohibition on reselling

Usage limits

GitHub Pages sites are subject to the following usage limits:

- source repositories have a recommended limit of 1 GB
- may be no larger than 1 GB
- have a soft bandwidth limit of 100GB per month
- have a soft limit of 10 builds per hour

Node.js and npm



node: a server runtime environment for running Javascript on the server

npm: a package manager used to download and install different packages for JavaScript projects

Create-react-app - Philosophy



- One Dependency: There is just one build dependency
- No Configuration Required: You don't need to configure anything
- No Lock-In: You can “eject” to a custom setup at any time

What's Included

- React, JSX, ES6, and Flow syntax support
- Language extras beyond ES6 like the object spread operator
- Autoprefixed CSS, so you don't need -webkit- or other prefixes
- A fast interactive unit test runner with built-in support for coverage reporting

What's Included

- A live development server that warns about common mistakes
- A build script to bundle JS, CSS, and images for production, with hashes and sourcemaps
- An offline-first service worker and a web app manifest, meeting all the Progressive Web App criteria
- Hassle-free updates for the above tools with a single dependency

Create-react-app types

- TypeScript: `create-react-app-typescript`
- Parcel instead of Webpack: `create-react-app-parcel`
- React Native: `create-react-native-app`

Create-react-app - Structure

package.json

```
package.json
1 {
2   "name": "myfirstreactapp",
3   "version": "0.1.0",
4   "private": true,
5   "dependencies": {
6     "react": "^15.5.4",
7     "react-dom": "^15.5.4"
8   },
9   "devDependencies": {
10    "react-scripts": "1.0.7"
11  },
12  "scripts": {
13    "start": "react-scripts start",
14    "build": "react-scripts build",
15    "test": "react-scripts test --env=jsdom",
16    "eject": "react-scripts eject"
17  }
18 }
```

app structure

```
.gitignore
README.md
node_modules
package-lock.json
package.json
public
src
```

Procedure

- create a repository named my-app using create-react-app
- install GitHub Pages package as a dev-dependency
- add properties to package.json file
- create a Github repository, initialize it and add it as a remote in your local git repository
- deploy it to GitHub Pages
- commit and push your commit to GitHub

Create-react-app

<code>npm install -g create-react-app</code>	→	help to creates a boilerplate React application to work on
<code>create-react-app my-app</code>	→	create a new React app called “my-app”
<code>cd my-app</code>	→	change directory
<code>npm start</code>	→	create a local development server to run the application

'gh-pages' package

```
npm install gh-pages --save-dev
```



install gh-pages package

Modify package.json

at the top level "homepage" define this as a string with value:
"https://{name}.github.io/{repo}"

- {name}: your GitHub username
- {repo}: the name of the GitHub repository

```
"homepage":
```

Modify package.json

in the existing scripts property
add

- `predeploy: "npm run build"`
- `deploy: "gh-pages -d build"`

```
"scripts": {  
  //...  
  "predeploy": "npm run  
build",  
  "deploy": "gh-pages -d build"
```

package.json


```
package.json
1  {
2    "homepage": "http://{name}.github.io/{repo}",
3    "name": "my-app",
4    "version": "0.1.0",
5    "private": true,
6    "dependencies": {
7      "react": "16.7.0",
8      "react-dom": "16.7.0",
9      "react-scripts": "1.1.4"
10   },
11   "scripts": {
12     "start": "react-scripts start",
13     "build": "react-scripts build",
14     "test": "react-scripts test --env=jsdom",
15     "eject": "react-scripts eject",
16     "predeploy": "npm run build",
17     "deploy": "gh-pages -d build"
18   },
19   "devDependencies": {
20     "enzyme": "^3.3.0",
21     "enzyme-adapter-react-16": "^1.1.1",
22     "gh-pages": "^2.0.1",
23     "sinon": "^6.1.2"
24   }
25 }
```

Create a new repository

Create a new repository

A repository contains all the files for your project, including the revision history.

Owner

 kztoup ▾

Repository name

/

Great repository names are short and memorable. Need inspiration? How about **curly-giggle**.

Description (optional)

☒  **Public**

Anyone can see this repository. You choose who can commit.

☐  **Private**

You choose who can see and commit to this repository.

☐ **Initialize this repository with a README**

This will let you immediately clone the repository to your computer. Skip this step if you're importing an existing repository.

Add .gitignore: **None** ▾

Add a license: **None** ▾



Create repository

Convert project to a git repository

`git init`

—————→ create a new git repository

`git remote add origin
https://github.com
/{name}/{repo}.git`

—————→ add remote repository

`npm run deploy`

—————→ create build of production

Commit and push to GitHub

`git add .`



add all changed file paths to staged changes

`git commit -m "add my-app"`



commit all staged changes

`git push origin master`



push your changes to the remote repository

Deploy application

```
> new-app@0.1.0 predeploy /Users/konztoup/projects/tutorial/new-app
> npm run build
```

```
> new-app@0.1.0 build /Users/konztoup/projects/tutorial/new-app
> react-scripts build
```

Creating an optimized production build...
Compiled successfully.

File sizes after gzip:

32.4 KB	build/static/js/1.6105a37c.chunk.js
766 B	build/static/js/runtime~main.bf2515a3.js
633 B	build/static/js/main.852d186f.chunk.js
510 B	build/static/css/main.7bbe62fb.chunk.css

The project was built assuming it is hosted at `/react/`.
You can control this with the `homepage` field in your `package.json`.

The `build` folder is ready to be deployed.
To publish it at <https://kztoup.github.io/react>, run:

```
npm run deploy
```

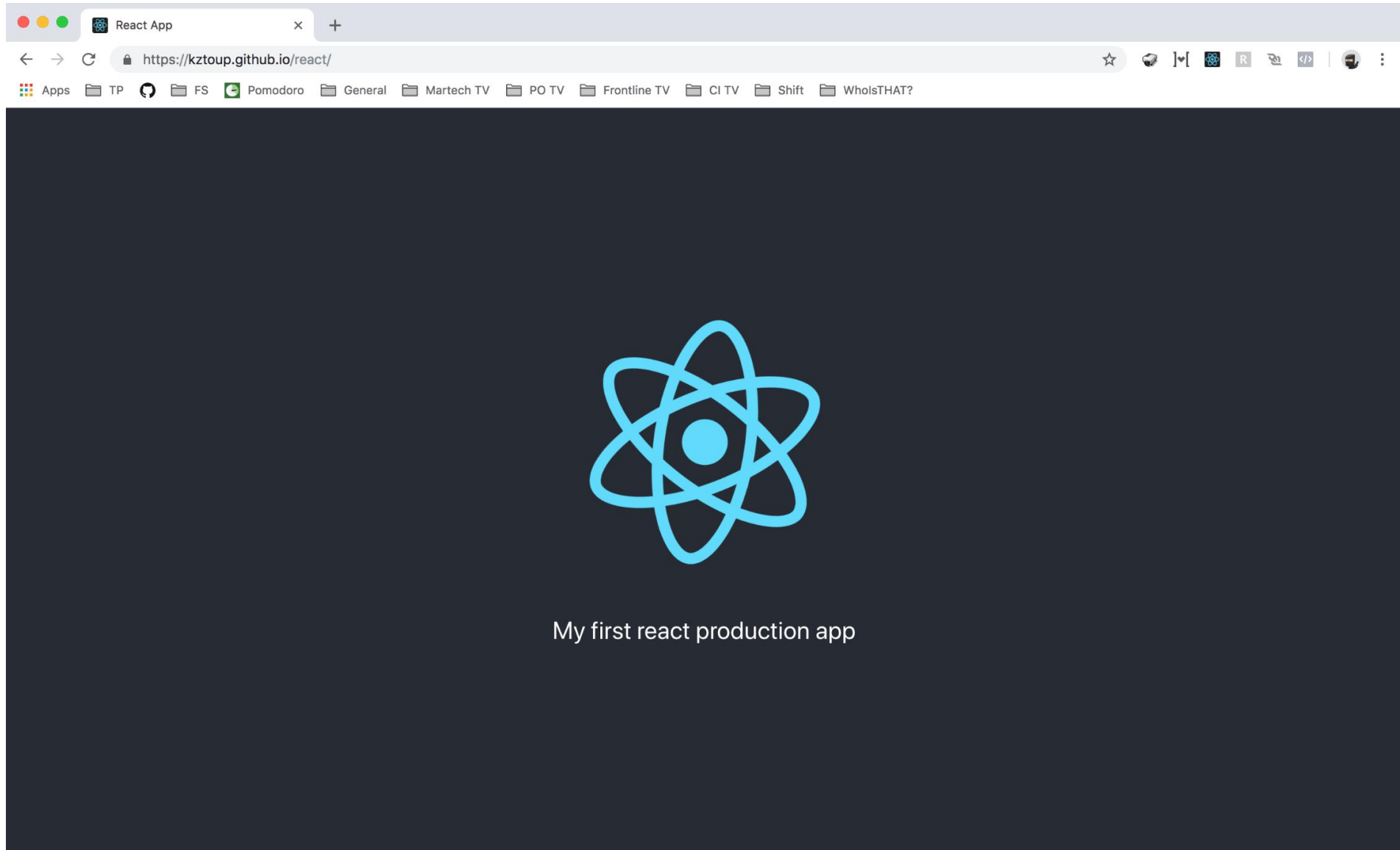
Find out more about deployment here:

<http://bit.ly/CRA-deploy>

```
> new-app@0.1.0 deploy /Users/konztoup/projects/tutorial/new-app
> gh-pages -d build
```

Published

Production



Recap

- create React App using create-react-app
- install gh-pages as a dev-dependency
- add property homepage and include in scripts predeploy and deploy commands in package.json file
- create a remote repository and initialize it
- run npm run deploy to generate a production build and deploy it to GitHub Pages