



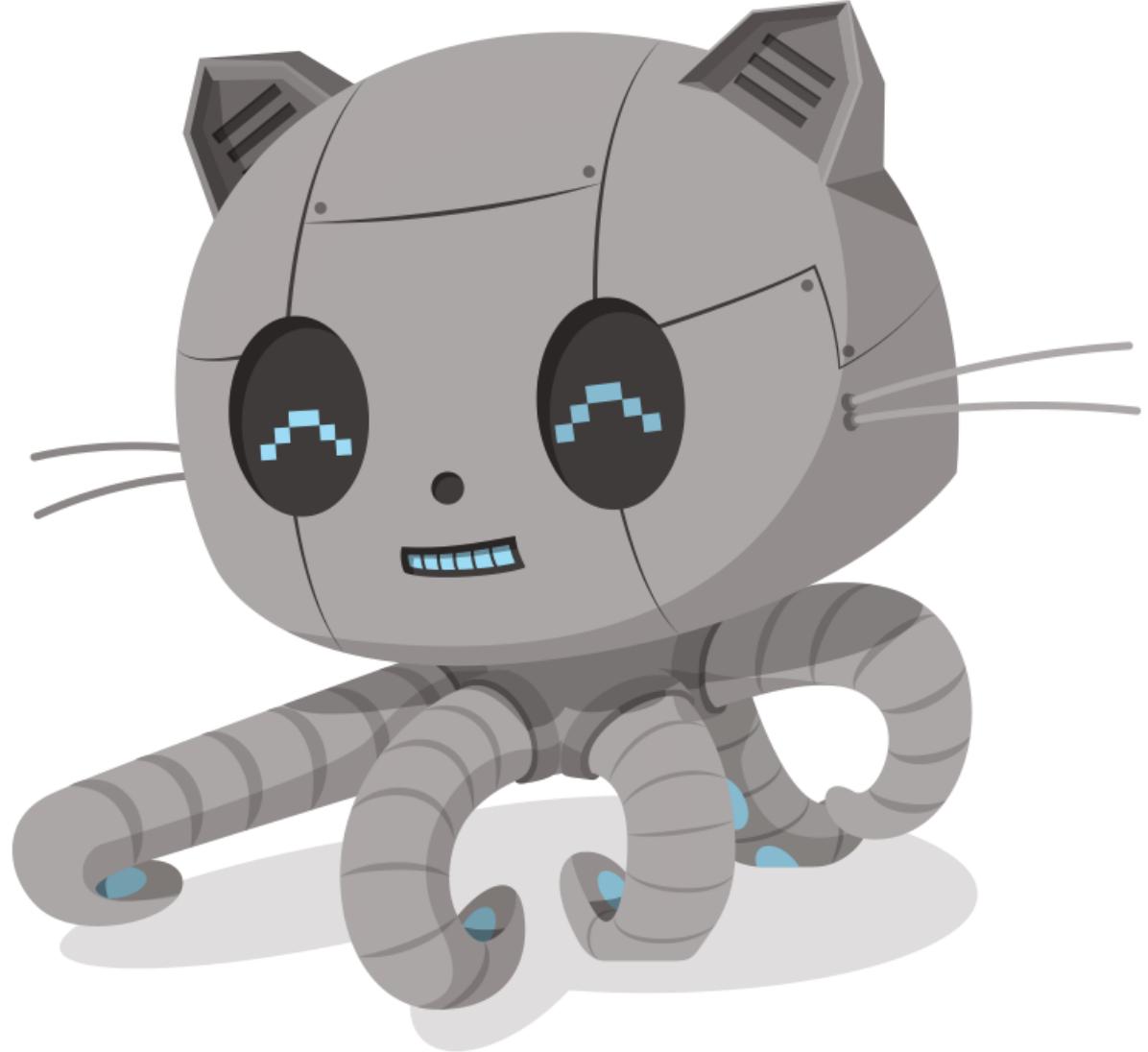
git ops

john.rellis@setu.ie

Web Development 2

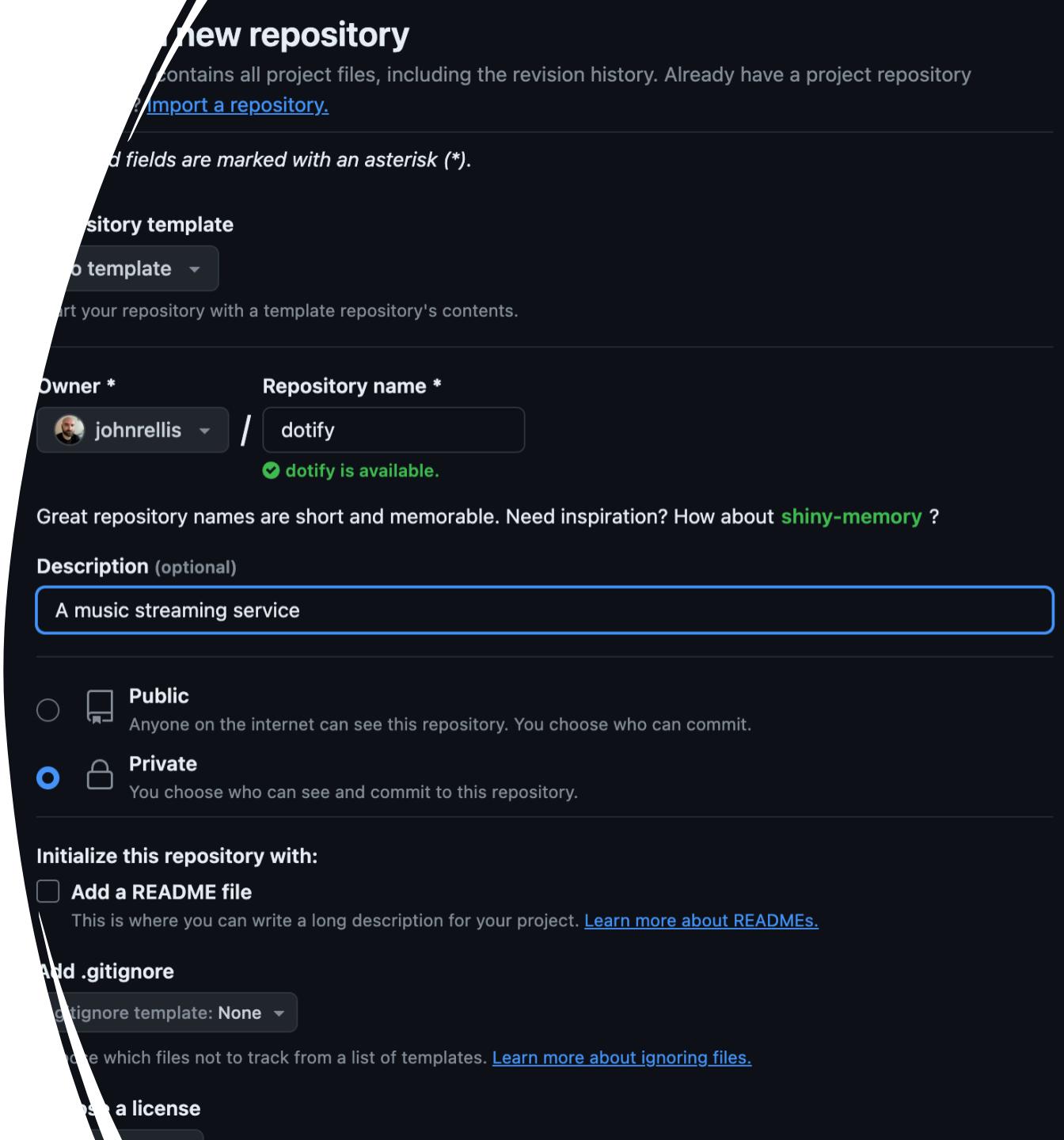
git ops

Well, we are not going to cover the entire scope of git driven operations BUT what we are going to do is us git to autodeploy our Dotify site on netlify



Lets get some code

- Download the archive from tutors
 - <INSERT LINK HERE>
- Unzip and open it in VS Code
 - Try and get vs code launching from your command line ;)
 - [https://code.visualstudio.com/docs/edit or/command-line](https://code.visualstudio.com/docs/edit-or/command-line)
- Now, create a new private repository in github
 - Do not add a README or Licence
- Create the empty repo on github



Back in VS Code

```
● → js-playlist-main git init
    Initialized empty Git repository in /Users/john/Desktop/archive/js-playlist-main/.git/
● → js-playlist-main git:(main) ✘ git add -A
● → js-playlist-main git:(main) ✘ git commit -a -m "adding all files from zipped download"
[main (root-commit) 427001b] adding all files from zipped download
  21 files changed, 411 insertions(+)
```

And push up to your repo

```
create mode 100644 playlist.js
⊗ → js-playlist-main git:(main) git push
fatal: No configured push destination.
Either specify the URL from the command-line or configure a remote repository using
  git remote add <name> <url>
and then push using the remote name
  git push <name>
◊ → js-playlist-main git:(main) ┌
```

OH WAIT

It didn't work!

- git push failed.... Why?
- Well, all we did was unzip some code and commit them to our LOCAL git repo.
- These have no relation to our REMOTE github repo.

No relationship



Git repository
on your laptop



Git repository
on github

So, let's add a remote to our local

github gives us some help here if we look at our empty repo link

Quick setup — if you've done this kind of thing before

Set up in Desktop or HTTPS SSH git@github.com:johnrellis/dotify.git

Get started by [creating a new file](#) or [uploading an existing file](#). We recommend every repository include a [README](#), [LICENSE](#), and [.gitignore](#).

...or create a new repository on the command line

```
echo "# dotify" >> README.md
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin git@github.com:johnrellis/dotify.git
git push -u origin main
```

...or push an existing repository from the command line

```
git remote add origin git@github.com:johnrellis/dotify.git
git branch -M main
git push -u origin main
```

ProTip! Use the URL for sharing.

● → js-playlist-main git:(main) git remote add origin git@github.com:johnrellis/dotify.git
● → js-playlist-main git:(main) git push -u origin main
Enumerating objects: 27, done.
Counting objects: 100% (27/27), done.
Delta compression using up to 16 threads
Compressing objects: 100% (26/26), done.
Writing objects: 100% (27/27), 32.95 KiB | 16.47 MiB/s, done.
Total 27 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), done.
To github.com:johnrellis/dotify.git
 * [new branch] main -> main
branch 'main' set up to track 'origin/main'.
● → js-playlist-main git:(main) git status
On branch main
Your branch is up to date with 'origin/main'.
nothing to commit, working tree clean
○ → js-playlist-main git:(main)



johnrellis / dotify

Type ⌘ to search



Code

Issues

Pull requests

Actions

Projects

Wiki

Security

Insights

Settings



otify

Private

Unwatch 1

Fork 0

Star 0

main

1 Branch

0 Tags

Go to file



Add file

Code



johnrellis adding all files from zipped download

427001b · 9 minutes ago

1 Commits

_includes

adding all files from zipped download

9 minutes ago

images

adding all files from zipped download

9 minutes ago

js

adding all files from zipped download

9 minutes ago

.eleventy.js

adding all files from zipped download

9 minutes ago

.gitignore

adding all files from zipped download

9 minutes ago

README.md

adding all files from zipped download

9 minutes ago

index.njk

adding all files from zipped download

9 minutes ago

playlist.njk

adding all files from zipped download

9 minutes ago

README



js-playlist

Refresh GitHub....

About

A music streaming service

Readme

Activity

0 stars

1 watching

0 forks

Releases

No releases published

[Create a new release](#)

Packages

No packages published

[Publish your first package](#)

Languages

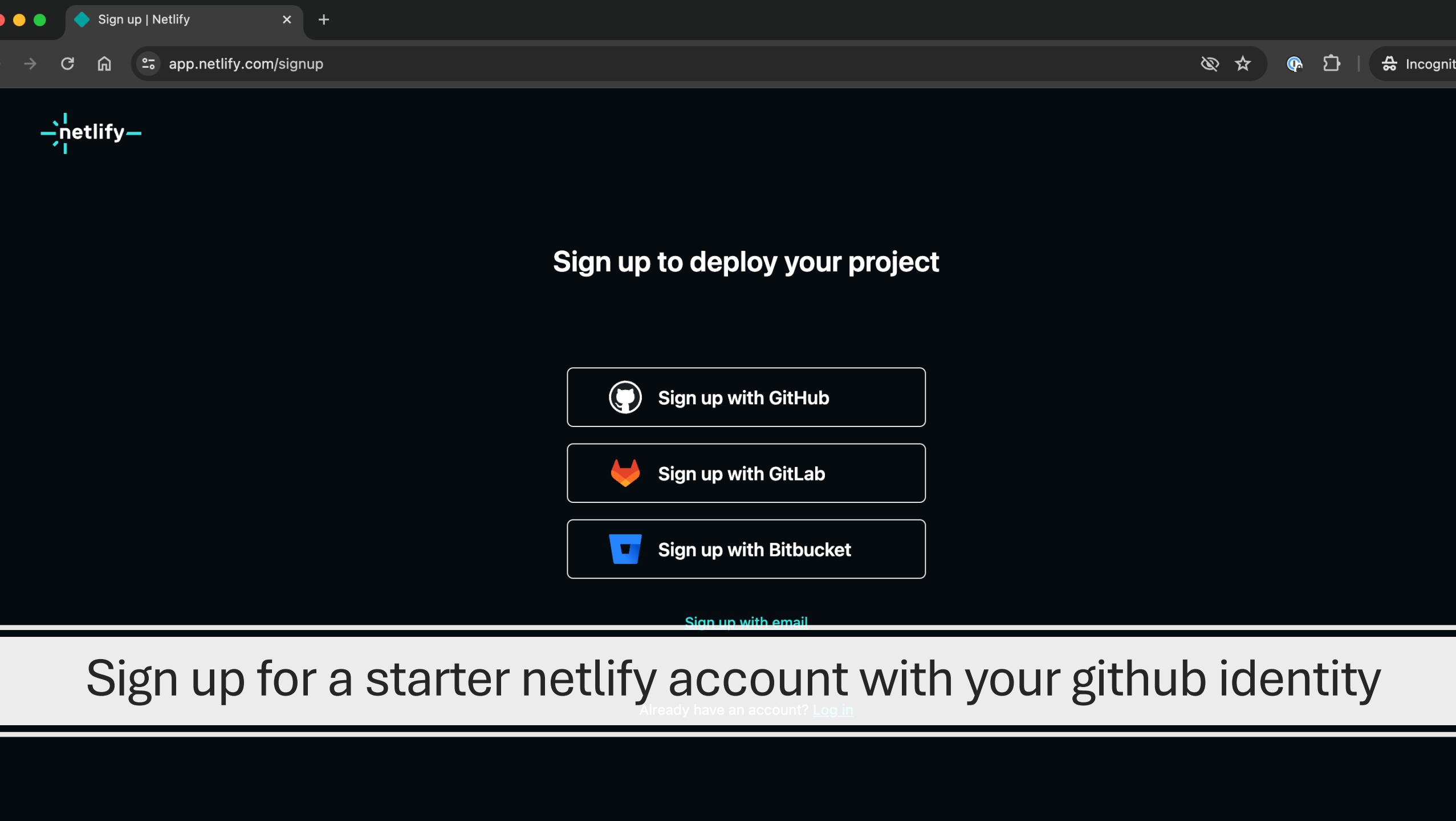


Suggested workflows

Based on your tech stack

Great, we now
have our code up
on github





Sign up to deploy your project

 [Sign up with GitHub](#)

 [Sign up with GitLab](#)

 [Sign up with Bitbucket](#)

[Sign up with email](#)

Sign up for a starter netlify account with your github identity

Already have an account? [Log in](#)

The screenshot shows the Netlify dashboard interface. On the left, a sidebar menu includes 'Team overview', 'Sites' (which is selected and highlighted in grey), 'Builds', 'Integrations', and 'Domains'. The main content area displays a list of sites with a search bar at the top. A modal window titled 'Add new site ^' is open on the right, containing three options: 'Import an existing project', 'Start from a template', and 'Deploy manually'. The 'Import an existing project' option is currently selected. The top navigation bar features the Netlify logo, user name 'johnlify', a search bar with placeholder 'Search Netlify...', and links for 'News' and 'Support'.

Add a new site – import existing project

Deploy with github

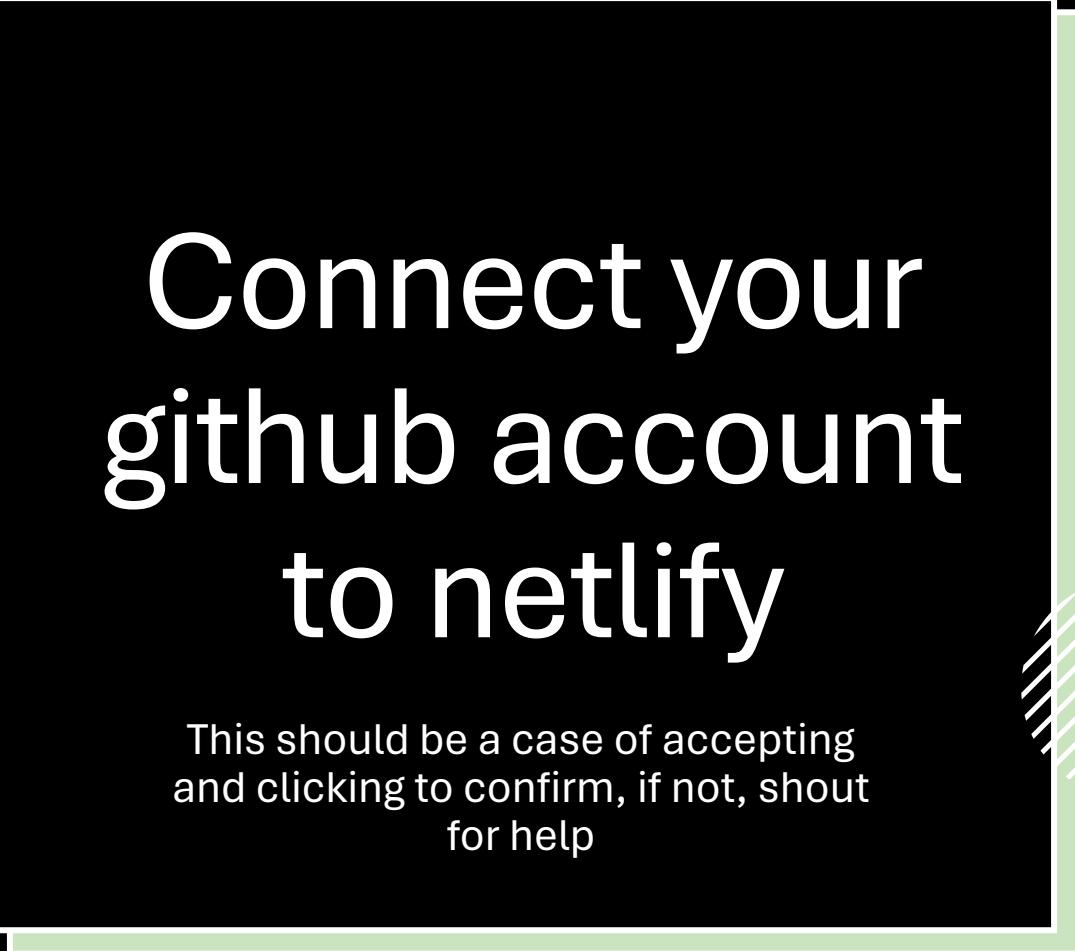
Let's deploy your project.

 Deploy with GitHub

 Deploy with GitLab

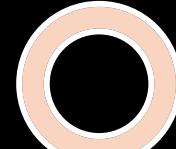
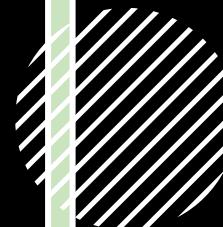
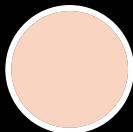
 Deploy with Bitbucket

 Deploy Azure DevOps



Connect your github account to netlify

This should be a case of accepting
and clicking to confirm, if not, shout
for help



Select your newly created repo

Let's deploy your project.

johnrellis

dotify
JavaScript

14m ago · Private

Confirm all the settings are correct

- Netlify can typically tell you are running eleventy autoconfigure
- Ensure the following settings
 - Branch to Deploy = main
 - Build Command = eleventy
 - Publish directory = site

1. Connect to Git provider 2. Select repository 3. Configure site and deploy

Let's deploy your project.

Review configuration for dotify
Deploy as johnrellis on johnlifly team from main branch using eleventy command and publishing to _site

Team
johnlifly

Site name
 

<https://dotify-your-life.netlify.app>

Branch to deploy
main

Build settings
Specify how Netlify will build your site.
[Learn more in the docs ↗](#)


Site name
dotify-your-life
Git repository
 dotify
Deploying

Build command
eleventy
Published to
_site

WAVE
WAVE

DEPLOY!



Add environment variables

Deploy dotify-your-life



Your app will start building

Upgrade

The screenshot shows the Netlify site overview for the 'dotify-your-life' site. The left sidebar includes options like Site overview, Site configuration, Deployments, Logs, Integrations, Metrics, Domain management, Forms, and Blobs. The main content area displays the site's name, 'dotify-your-life', and a message indicating a 'Site deploy in progress' from GitHub at 8:28 PM. A large callout box titled 'Set up your site' provides three steps: 1. Deploying your site (Netlify's robots are busy building), 2. Set up a custom domain (Buy a new domain or set up a domain you already own), and 3. Secure your site with HTTPS (Your site is secured automatically with a Let's Encrypt certificate). Below these steps are sections for Production deploys (main@HEAD Building) and Deploy Previews.

Search Netlify...

News Support

dotify-your-life

- Site deploy in progress

Deploys from [GitHub](#).
Created at 8:28 PM.

Site configuration Favorite site

Set up your site

- 1 Deploying your site
- 2 Set up a custom domain
- 3 Secure your site with HTTPS

Netlify's robots are busy building and deploying your site to our CDN.

Production: main@HEAD Building
8:28 PM: No deploy message

Production deploys

Deploy Previews

IT FAILED!

Deploy log

Building

Failed

```
27 8:28:38 PM: Netlify Build
28 8:28:38 PM: 
29 8:28:38 PM: 
30 8:28:38 PM: > Version
31 8:28:38 PM:   @netlify/build 29.41.3
32 8:28:38 PM: 
33 8:28:38 PM: > Flags
34 8:28:38 PM:   baseRelDir: true
35 8:28:38 PM:   buildId: 6643bb4f38050a09b417cee1
36 8:28:38 PM:   deployId: 6643bb4f38050a09b417cee3
37 8:28:38 PM: 
38 8:28:38 PM: > Current directory
39 8:28:38 PM:   /opt/build/repo
40 8:28:38 PM: 
41 8:28:38 PM: > Config file
42 8:28:38 PM:   No config file was defined: using default values.
43 8:28:38 PM: 
44 8:28:38 PM: > Context
45 8:28:38 PM:   production
46 8:28:38 PM: 
47 8:28:38 PM: Build command from Netlify app
48 8:28:38 PM: 
49 8:28:38 PM: 
50 8:28:38 PM: $ eleventy
51 8:28:38 PM: bash: eleventy: command not found
52 8:28:38 PM: 
53 8:28:38 PM: "build.command" failed
54 8:28:38 PM: 
```

Ah, no eleventy

```
50      8:28:38 PM: $ eleventy
51      8:28:38 PM: bash: eleventy: command not found
52      8:28:38 PM:
53      8:28:38 PM: "build.command" failed
54      8:28:38 PM:
55      8:28:38 PM:
56      8:28:38 PM: Error message
57      8:28:38 PM: Command failed with exit code 127: eleve
58      8:28:38 PM:
59      8:28:38 PM: Error location
60      8:28:38 PM: In Build command from Netlify app:
61      8:28:38 PM: eleventy
62      8:28:38 PM:
63      8:28:38 PM: Resolved config
64      8:28:38 PM: build:
65      8:28:38 PM:   command: eleventy
66      8:28:38 PM:   commandOrigin: ui
67      8:28:38 PM:   publish: /opt/build/repo/_site
68      8:28:38 PM:   publishOrigin: ui
69      8:28:38 PM: Failed during stage 'building site': Build
70      8:28:39 PM: Build failed due to a user error: Build s
71      8:28:39 PM: Failing build: Failed to build site
72      8:28:39 PM: Finished processing build request in 13.0
```

Why did this happen?

- Build agents are typically virtual machine images or containers with a basic linux install, so eleventy isn't installed
- Some build agents allow you to run an install phase but this can be expensive when running builds on commits
- An alternative is to install eleventy to our node_modules and run it from there with a custom npm script, we'll do that now.

Add a package.json to our project and install eleventy (locally)

```
● → js-playlist-main git:(main) npm init
This utility will walk you through creating a package.json file.
It only covers the most common items, and tries to guess sensible defaults.

See `npm help init` for definitive documentation on these fields
and exactly what they do.

Use `npm install <pkg>` afterwards to install a package and
save it as a dependency in the package.json file.

Press ^C at any time to quit.
package name: (js-playlist-main) dotify
version: (1.0.0)
description:
entry point: (.eleventy.js)
test command:
git repository:
keywords:
author:
license: (ISC)
About to write to /Users/john/Desktop/archive/js-playlist-main/package.json:

{
  "name": "dotify",
  "version": "1.0.0",
  "description": "",
  "main": ".eleventy.js",
  "scripts": {
    "test": "echo \\\"Error: no test specified\\\" && exit 1"
  },
  "author": "",
  "license": "ISC"
}

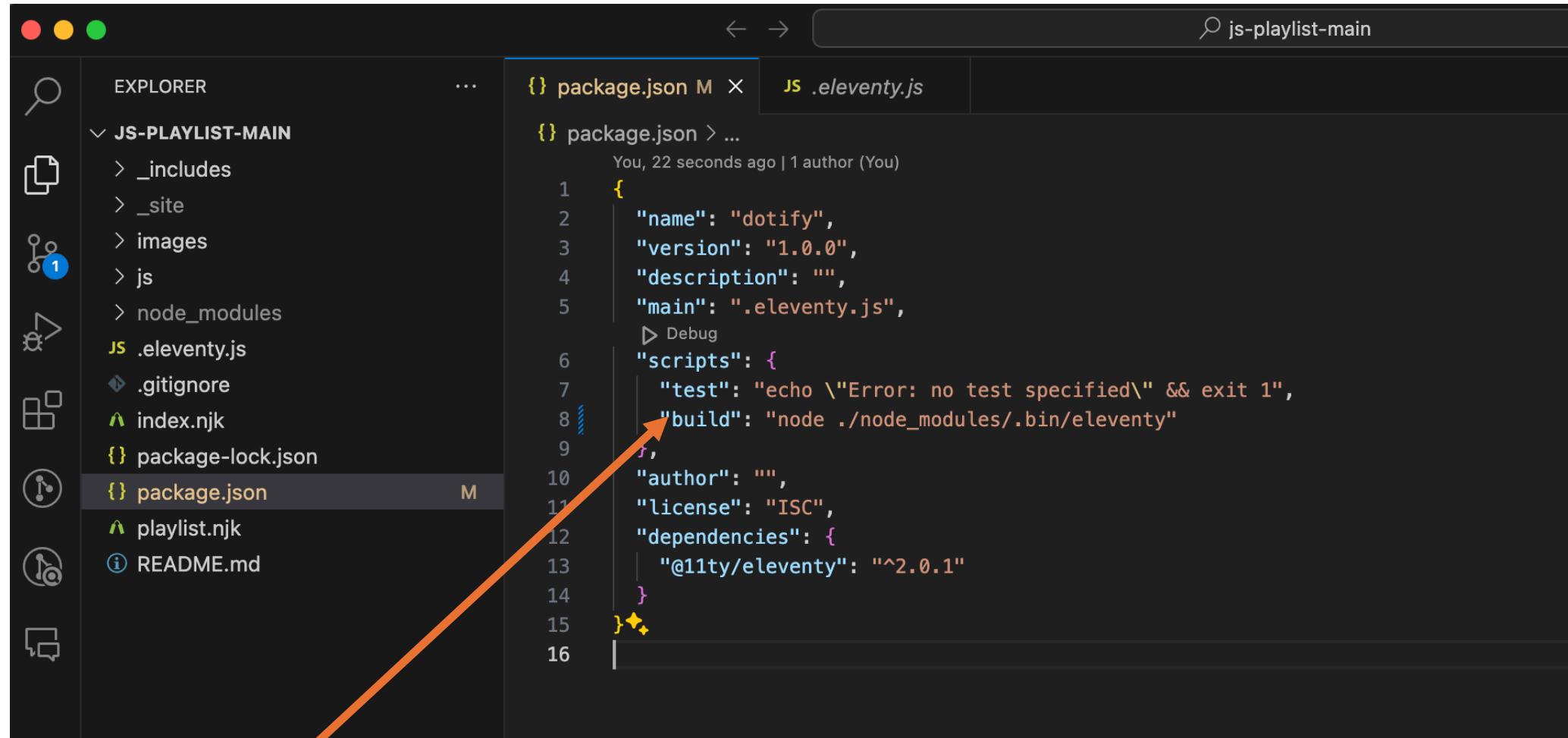
Is this OK? (yes) yes
```

```
● → js-playlist-main git:(main) x npm install @11ty/eleventy
added 215 packages, and audited 216 packages in 14s

44 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
○ → js-playlist-main git:(main) x █
```

Add npm build script in package.json

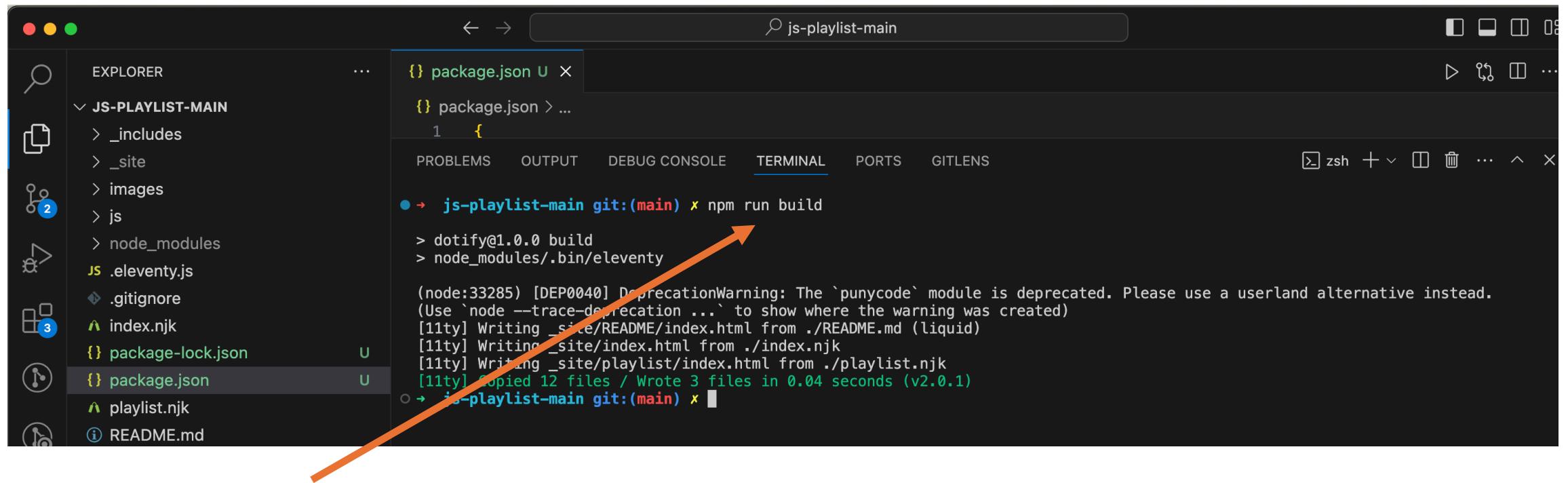


The screenshot shows a dark-themed interface of VS Code. On the left, the Explorer sidebar displays a project structure with files like `_includes`, `_site`, `images`, `js`, `node_modules`, `.eleventy.js`, `.gitignore`, `index.njk`, `package-lock.json`, `package.json` (which is currently selected), `playlist.njk`, and `README.md`. A blue circular icon with the number '1' is visible next to the `node_modules` folder. In the center, the code editor shows the `package.json` file. An orange arrow points from the text "Add this here" at the bottom to the `"build": "node ./node_modules/.bin/eleventy"` line in the JSON. The code editor tabs at the top show `package.json` and `.eleventy.js`.

```
{} package.json M X JS .eleventy.js
{} package.json > ...
You, 22 seconds ago | 1 author (You)
1  {
2    "name": "dotify",
3    "version": "1.0.0",
4    "description": "",
5    "main": ".eleventy.js",
6    ▷ Debug
7    "scripts": {
8      "test": "echo \"Error: no test specified\" && exit 1",
9      "build": "node ./node_modules/.bin/eleventy"
10     ,
11     "author": "",
12     "license": "ISC",
13     "dependencies": {
14       "@11ty/eleventy": "^2.0.1"
15     }
16   }
```

Add this here

Run a build locally to confirm



A screenshot of the Visual Studio Code interface. The Explorer sidebar on the left shows a project structure with a folder named 'JS-PLAYLIST-MAIN' containing '_includes', '_site', 'images', 'js', 'node_modules', '.eleventy.js', '.gitignore', 'index.njk', 'package-lock.json', 'package.json', 'playlist.njk', and 'README.md'. The 'package.json' file is currently selected. The Terminal tab is active at the bottom, displaying the command 'npm run build' being executed. The output shows the build process starting with 'dotify@1.0.0 build' and 'node_modules/.bin/eleventy', followed by a deprecation warning about the 'punycode' module, and finally a message indicating 12 files were copied and 3 files were written in 0.04 seconds. An orange arrow points from the bottom-left towards the terminal output.

```
{} package.json U X
{} package.json > ...
1  {
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS
zsh + ... ^ X
● → js-playlist-main git:(main) ✘ npm run build
> dotify@1.0.0 build
> node_modules/.bin/eleventy
(node:33285) [DEP0040] DeprecationWarning: The `punycode` module is deprecated. Please use a userland alternative instead.
(Use `node --trace-deprecation ...` to show where the warning was created)
[11ty] Writing _site/README/index.html from ./README.md (liquid)
[11ty] Writing _site/index.html from ./index.njk
[11ty] Writing _site/playlist/index.html from ./playlist.njk
[11ty] Copied 12 files / Wrote 3 files in 0.04 seconds (v2.0.1)
○ → js-playlist-main git:(main) ✘
```

Change eleventy to run npm run build

The screenshot shows the Netlify site configuration interface for the 'dotify-your-life' site. On the left, a sidebar lists 'Site overview', 'Site configuration' (which is selected), 'Deploys', 'Logs', 'Integrations', 'Metrics', 'Domain management', 'Forms', and 'Blobs'. Below the sidebar is a blue 'Upgrade' button. The main content area has a dark header with 'General' and 'Build & deploy' sections. Under 'Build & deploy', 'Continuous deployment' is selected, showing options for 'Post processing', 'Split Testing', 'Deploy notifications', 'Environment variables', 'Notifications', 'Identity', and 'Access & security'. To the right, under 'Build command:', the value 'npm run build' is entered in a text input field. An orange arrow points from the text input field towards the 'Build command:' label. Other settings shown include 'Publish directory: _site', 'Functions directory: netlify/functions', and 'Build status: Active builds'. At the bottom, there are 'Save' and 'Cancel' buttons, and a 'Functions region' section with a 'Configure how functions are deployed for your site.' link.

app.netlify.com/sites/dotify-your-life/configuration/deploys

johnlifly / dotify-your-life

Search Netlify...

News Support

Site overview

Site configuration

Deploys

Logs

Integrations

Metrics

Domain management

Forms

Blobs

Upgrade

General

Build & deploy

Continuous deployment

Post processing

Split Testing

Deploy notifications

Environment variables

Notifications

Identity

Access & security

Package directory:

For monorepos, the directory that contains your site files, including the `netlify.toml`. Set this value only if it is different from the base directory.

Build command:

`npm run build`

Publish directory:

`_site`

Functions directory:

`netlify/functions`

Build status:

Active builds

Netlify will build your site according to your continuous deployment settings when you push to your Git provider.

Stopped builds

Netlify will not build your site automatically. You can build locally via the CLI and then publish new deploys manually via the CLI or the API.

[Learn more about configuring builds in the docs](#)

Save Cancel

Functions region

Configure how functions are deployed for your site.

Push up our changes

```
● → js-playlist-main git:(main) ✘ git status
On branch main
Your branch is up to date with 'origin/main'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    package-lock.json
    package.json

  nothing added to commit but untracked files present (use "git add" to track)
● → js-playlist-main git:(main) ✘ git add -A
● → js-playlist-main git:(main) ✘ git commit -m "added package.json"
[main f1ea20b] added package.json
  2 files changed, 2224 insertions(+)
  create mode 100644 package-lock.json
  create mode 100644 package.json
● → js-playlist-main git:(main) git push
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 16 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (4/4), 23.65 KiB | 11.82 MiB/s, done.
Total 4 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To github.com:johnrellis/dotify.git
  427001b..f1ea20b  main -> main
○ → js-playlist-main git:(main) █
```

Now, let's check netlify



The screenshot shows the Netlify dashboard for the site `dotify-your-life`. The left sidebar has a dark theme with white text and icons. The **Deploys** section is highlighted with a teal border. The main content area displays the **Deploys for dotify-your-life** section. It shows a single deployment entry:

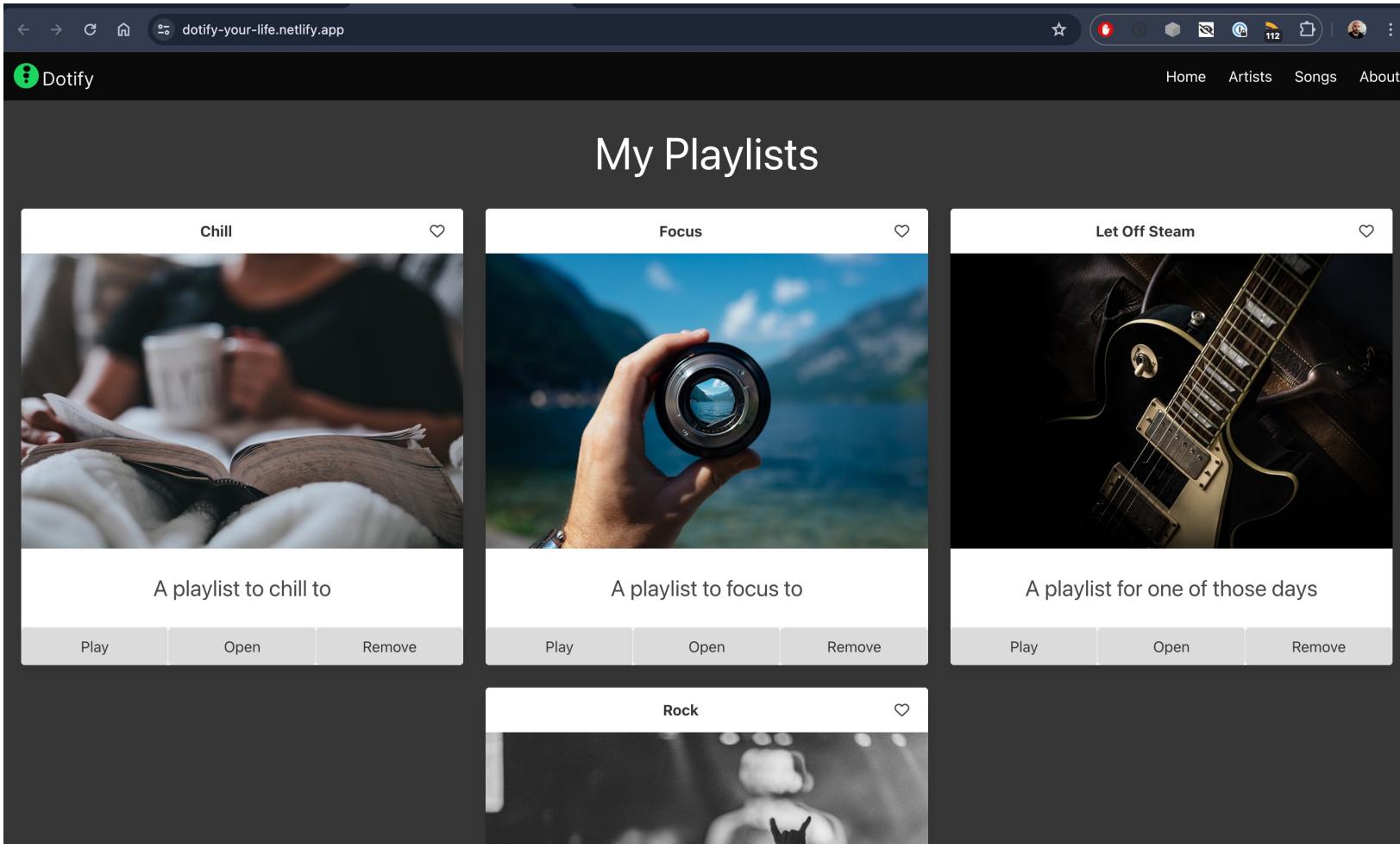
- <https://dotify-your-life.netlify.app>

Below the link, it says "Deploys from [github.com/johnrellis/dotify](#) with [Netlify](#)". A red arrow points from the word "Published" in this line to the green "Published" button in the deployment list below. The deployment list shows:

- Production:** main@[f1ea20b](#) **Published**

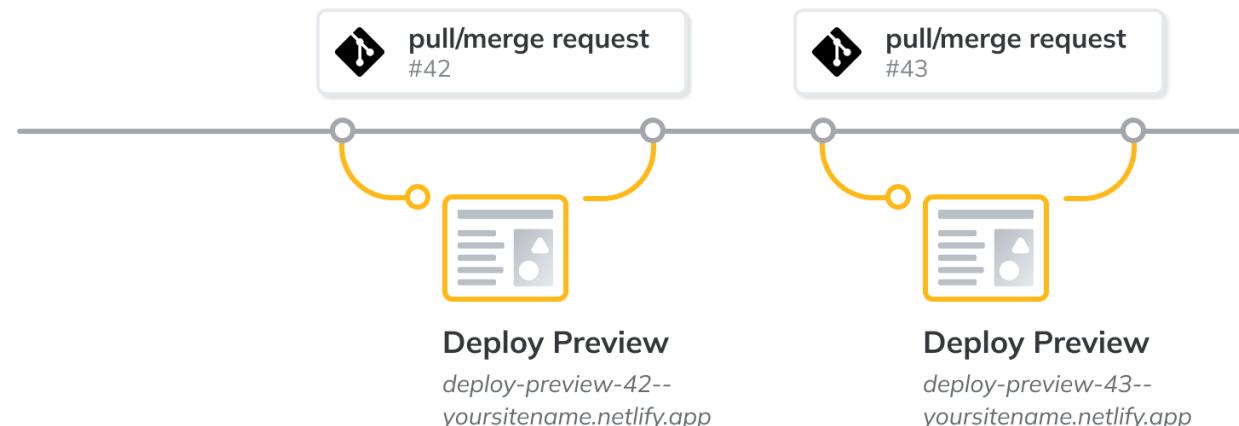
Below this, it says "added package.json". At the bottom of the main content area, there are three buttons: "Deploy settings", "Notifications", and "Lock to stop auto publishing". To the right, there is a sidebar with the heading "Test your site's Lighthouse" and a "Install Lighthouse plugin" button.

Success!



Is it a good idea to deploy from main?

- It depends on your operations process
- Typically, main can be locked to commits and only an approved pull request is allowed to be merged
- It is possible to set up netlify to publish previews of changes too
- <https://docs.netlify.com/site-deploys/overview/#branches-and-deploys>



Is that gitops?

- That is a tiny bit of gitops, we have essentially implemented naive continuous deployment
- A CICD pipeline is typically made up of Continuous Integration and Continuous Delivery, usually with a human in the loop (a reviewed PR and/or a release gate)
 - Automated testing sprinkled everywhere too
- CICD pipelines can be custom made or off the shelf, you probably shouldn't try to make your own