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Budowanie Programu

1. Znajdź projekt umożliwiający łatwe wywołanie testów jednostkowych

https://create-react-app.dev/?fbclid=IwAR1pKgPuEWyCTD0NTjecLyqDJOOUruuG6RkCQZ1YOoy2_agRZBaXPtoJrQM

2. Przeprowadź budowę/konfigurację środowiska

```
konrad@konrad-VirtualBox:~$ nodejs --version
v10.19.0
konrad@konrad-VirtualBox:~$ npm --version
6.14.4
```

```
Success! Created new_app at /home/konrad/new_app/new_app
Inside that directory, you can run several commands:

  npm start
    Starts the development server.

  npm run build
    Bundles the app into static files for production.

  npm test
    Starts the test runner.

  npm run eject
    Removes this tool and copies build dependencies, configuration files
    and scripts into the app directory. If you do this, you can't go back!

We suggest that you begin by typing:

  cd new_app
  npm start

Happy hacking!
konrad@konrad-VirtualBox:~/new_app$
```

```
konrad@konrad-VirtualBox:~/new_app$ npm run build

> new_app@0.1.0 build /home/konrad/new_app
> react-scripts build

Creating an optimized production build...
Compiled successfully.

File sizes after gzip:

  41.34 KB  build/static/js/2.faa81ec8.chunk.js
  1.62 KB   build/static/js/3.722dc0ba.chunk.js
  1.16 KB   build/static/js/runtime-main.a4d2e358.js
  588 B     build/static/js/main.dd3dc6ad.chunk.js
  531 B     build/static/css/main.8c8b27cf.chunk.css

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

The build folder is ready to be deployed.
You may serve it with a static server:

  npm install -g serve
  serve -s build

Find out more about deployment here:

  https://cra.link/deployment

konrad@konrad-VirtualBox:~/new_app$ █
```

3. Uruchom testy

```
PASS  src/App.test.js
  ✓ renders learn react link (45 ms)

Test Suites: 1 passed, 1 total
Tests:       1 passed, 1 total
Snapshots:   0 total
Time:        1.974 s, estimated 2 s
Ran all test suites.

Watch Usage: Press w to show more.

konrad@konrad-VirtualBox:~/new_app$
```

4. Ponów ten proces w kontenerze

```
konrad@konrad-VirtualBox:~/new_app$ sudo docker run -it ubuntu
```

5. Wybierz i uruchom platformę

```
root@42944d0904ab:/# apt-get update
```

6. Zaopatrz ją w odpowiednie oprogramowanie wstępne

```
root@42944d0904ab:/# apt-get install -y nodejs && apt-get install -y npm
```

7. Sklonuj aplikację

```
root@42944d0904ab:/# npx create-react-app new_app
```

8. Skonfiguruj środowisko i uruchom build

```
root@42944d0904ab:/# cd new_app
root@42944d0904ab:/new_app# npm run build
```

9. Uruchom testy

```
PASS  src/App.test.js
  ✓ renders learn react link (118 ms)

Test Suites: 1 passed, 1 total
Tests:       1 passed, 1 total
Snapshots:   0 total
Time:        2.755 s
Ran all test suites.

Watch Usage
 › Press f to run only failed tests.
 › Press o to only run tests related to changed files.
 › Press q to quit watch mode.
 › Press p to filter by a filename regex pattern.
 › Press t to filter by a test name regex pattern.
 › Press Enter to trigger a test run.


root@42944d0904ab:/new_app#
```

10. Stwórz Dockerfile, który ma to osiągnąć

```
*DOCKERFILE                                    ×

 1 FROM node:latest
 2
 3 RUN apt-get update -y
 4 RUN apt-get install -y nodejs
 5 RUN apt-get install -y npm
 6 RUN npx create-react-app new_app
 7
 8 WORKDIR /new_app
 9
10 CMD ["npm","run","build"]
```

11. Na bazie platformowego obrazu...

```
1 FROM node:latest
```

12. ...doinstaluj wymagania wstępne...

```
3 RUN apt-get update -y
4 RUN apt-get install -y nodejs
5 RUN apt-get install -y npm
```

13. ...sklonuj repozytorium...

```
6 RUN npx create-react-app new_app
7
8 WORKDIR /new_app
```

14. ...zbuduj kod

```
10 CMD ["npm","run","build"]
```

15. Zaprezentuj Dockerfile i jego zbudowanie

```
konrad@konrad-VirtualBox:~/new_app$ sudo docker build -t app -f DOCKERFILE .

konrad@konrad-VirtualBox:~/new_app$ sudo docker images
REPOSITORY     TAG        IMAGE ID        CREATED          SIZE
app            latest     4c84539a4c47    31 seconds ago   1.69GB
node           latest     6dc0a5fbad51    7 days ago       992MB
ubuntu         latest     ba6acccedd29    5 weeks ago      72.8MB
```

16. Na bazie obrazu utworzonego poprzednim dockerfilem stwórz kolejny, który będzie uruchamiał testy

```
1 FROM app
2
3 CMD ["npm","test"]
```

```
konrad@konrad-VirtualBox:~/new_app$ sudo docker build -t app-test -f DOCKERFILE-test .
Sending build context to Docker daemon  383.8MB
Step 1/2 : FROM app
 ---> 4c84539a4c47
Step 2/2 : CMD ["npm","test"]
 ---> Running in 9a949802d879
Removing intermediate container 9a949802d879
 ---> bba71fe604f2
Successfully built bba71fe604f2
Successfully tagged app-test:latest
```

```
konrad@konrad-VirtualBox:~/new_app$ sudo docker run app-test

> new_app@0.1.0 test
> react-scripts test

PASS src/App.test.js
  ✓ renders learn react link (36 ms)

Test Suites: 1 passed, 1 total
Tests:       1 passed, 1 total
```