

# Lab3

## Reactjs

1. cd /var/www  
sudo mkdir lab3

```
devuser@server:~$ cd /var/www
```

```
devuser@server:/var/www$ sudo mkdir lab3
```

2. sudo chown -R \$USER:\$USER /var/www/lab3

```
devuser@server:~$ sudo chown -R $USER:$USER /var/www/lab3
```

3. cd lab3

```
devuser@server:/var/www$ cd lab3
```

4. npx create-react-app my-react-app

```
devuser@server:/var/www/lab3$ npx create-react-app my-react-app
Need to install the following packages:
create-react-app@5.0.1
Ok to proceed? (y) y
npm WARN deprecated tar@2.2.2: This version of tar is no longer supported, and will not receive security updates. Please upgrade asap.

Creating a new React app in /var/www/lab3/my-react-app.

Installing packages. This might take a couple of minutes.
Installing react, react-dom, and react-scripts with cra-template...

added 1463 packages in 32s

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

Initialized a git repository.

Installing template dependencies using npm...

added 69 packages, and changed 1 package in 4s

246 packages are looking for funding
  run `npm fund` for details
Removing template package using npm...

removed 1 package, and audited 1532 packages in 11s

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

8 vulnerabilities (2 moderate, 6 high)

To address all issues (including breaking changes), run:
  npm audit fix --force

Run `npm audit` for details.
Git commit not created Error: Command failed: git commit -m "Initialize project using Create React App"
    at checkExecSyncError (node:child_process:890:11)
    at execSync (node:child_process:962:15)
    at tryGitCommit (/var/www/lab3/my-react-app/node_modules/react-scripts/scripts/init.js:62:5)
    at module.exports (/var/www/lab3/my-react-app/node_modules/react-scripts/scripts/init.js:350:25)
    at [eval]:3:14
    at runScriptInThisContext (node:internal/vm:144:10)
    at node:internal/process/execution:109:14
    at [eval]-wrapper:6:24
    at runScript (node:internal/process/execution:92:62) {
  status: 128,
  signal: null,
  output: [ null, null, null ],
  pid: 30746,
  stdout: null,
  stderr: null
}
Removing .git directory...

Success! Created my-react-app at /var/www/lab3/my-react-app
Inside that directory, you can run several commands:
```

5. cd my-react-app

```
devuser@server:/var/www/lab3$ cd my-react-app
```

6. npm start

```
devuser@server:/var/www/lab3/my-react-app$ npm start
```

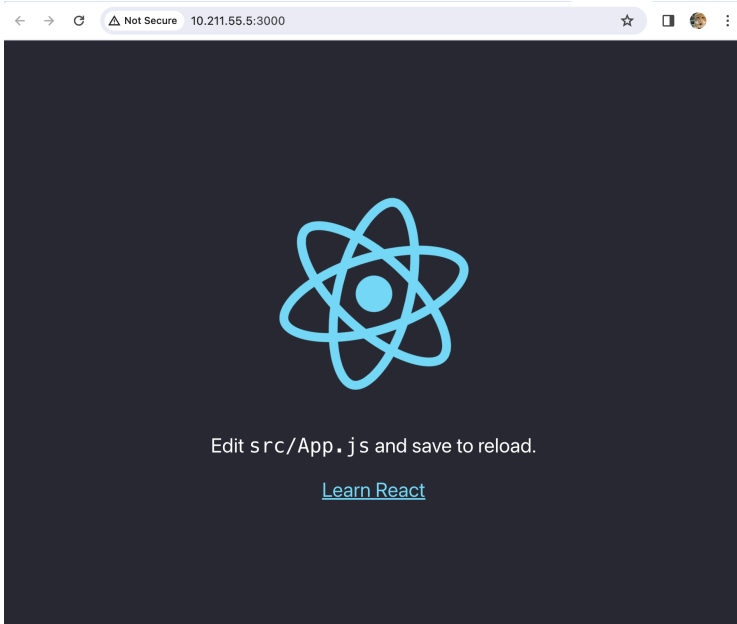
```
Compiled successfully!

You can now view my-react-app in the browser.

  Local:            http://localhost:3000
  On Your Network:  http://10.211.55.5:3000

Note that the development build is not optimized.
To create a production build, use npm run build.

webpack compiled successfully
```



## 7. เปลี่ยน port sudo nano package.json

```
devuser@server:/var/www/lab3/my-react-app$ sudo nano package.json
```

```
GNU nano 6.2
{
  "name": "my-react-app",
  "version": "0.1.0",
  "private": true,
  "dependencies": {
    "@testing-library/jest-dom": "^5.17.0",
    "@testing-library/react": "^13.4.0",
    "@testing-library/user-event": "^13.5.0",
    "react": "^18.2.0",
    "react-dom": "^18.2.0",
    "react-scripts": "5.0.1",
    "web-vitals": "^2.1.4"
  },
  "scripts": {
    "start": "PORT=3001 react-scripts start",
    "build": "react-scripts build",
    "test": "react-scripts test",
    "eject": "react-scripts eject"
  },
  "eslintConfig": {
    "extends": [
      "react-app",
      "react-app/jest"
    ]
  },
  "browserslist": {
    "production": [
      ">0.2%",
      "not dead",
      "not op_mini all"
    ],
    "development": [
      "last 1 chrome version",
      "last 1 firefox version",
      "last 1 safari version"
    ]
  }
}
```

Compiled successfully!

You can now view **my-react-app** in the browser.

**Local:** <http://localhost:3001>  
**On Your Network:** <http://10.211.55.5:3001>

Note that the development build is not optimized.  
To create a production build, use `npm run build`.

webpack compiled **successfully**

8. sudo ufw allow 3001

```
devuser@server:/var/www/lab3/my-react-app$ sudo ufw allow 3001
Skipping adding existing rule
Skipping adding existing rule (v6)
```

9. cd /etc/nginx/sites-available

```
devuser@server:~$ cd /etc/nginx/sites-available
```

sudo cp myapp my-eract-app

```
devuser@server:/etc/nginx/sites-available$ sudo cp myapp my-eract-app
```

10. sudo nano my-react-app

```
devuser@server:/etc/nginx/sites-available$ sudo nano my-react-app
```

```
server {
    listen 80;
    listen [::]:80;
    server_name my-react-app.se-rmutl.net;

    location / {
        proxy_pass http://127.0.0.1:3001; # !!! - change to your app port
        proxy_http_version 1.1;
        proxy_set_header Upgrade $http_upgrade;
        proxy_set_header Connection 'upgrade';
        proxy_set_header Host $host;
        proxy_cache_bypass $http_upgrade;
    }
}
```

11. sudo systemctl restart nginx

```
devuser@server:/etc/nginx/sites-available$ sudo systemctl restart nginx
```

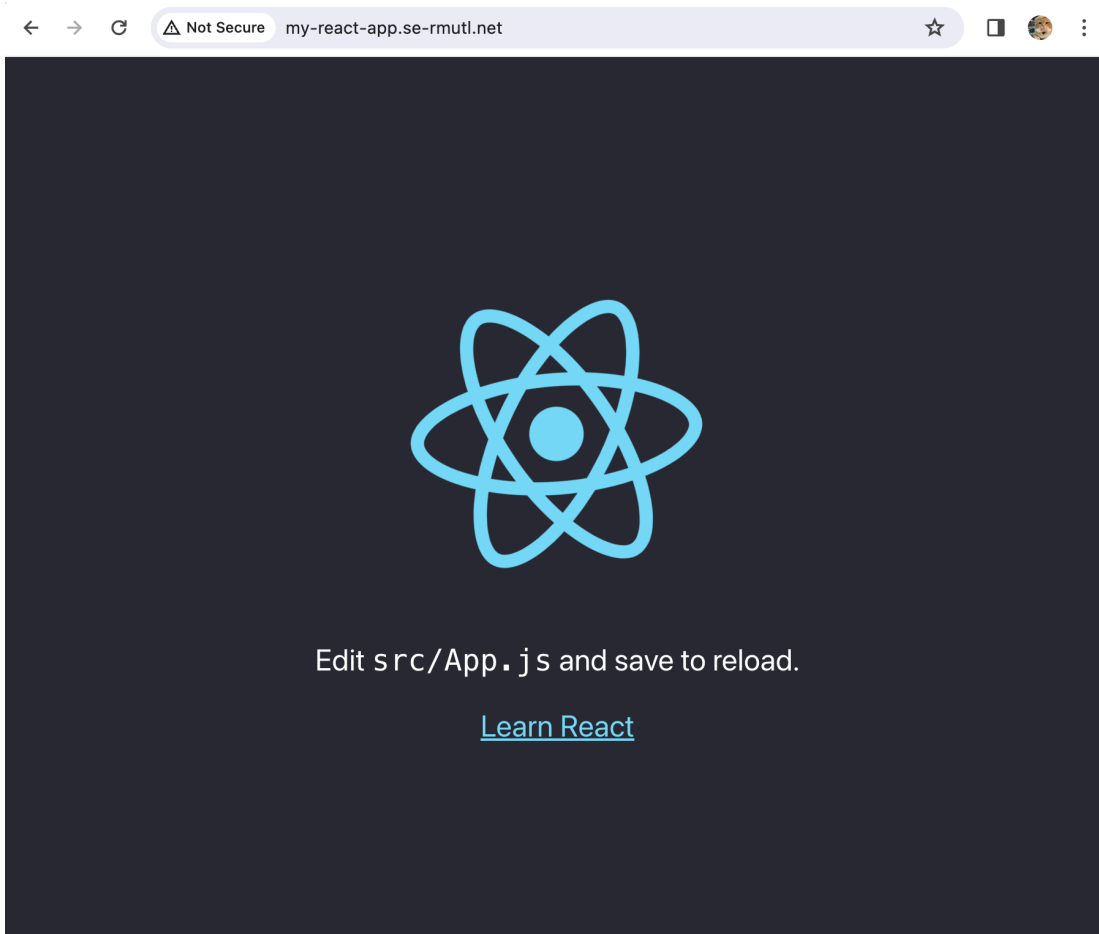
12. sudo nginx -t

```
devuser@server:/etc/nginx/sites-available$ sudo nginx -t
nginx: the configuration file /etc/nginx/nginx.conf syntax is ok
nginx: configuration file /etc/nginx/nginx.conf test is successful
```

13. sudo nano /etc/hosts

```
fang@admins-iMac-2 ~ % sudo nano /etc/hosts
```

```
10.211.55.5      my-react-app.se-rmutl.net
```



# Nextjs

1. cd /var/www/lab3

```
devuser@server:~$ cd /var/www/lab3
```

2. npx create-next-app@latest ubuntu-next-app

```
devuser@server:/var/www/lab3$ npx create-next-app@latest ubuntu-next-app
Need to install the following packages:
create-next-app@14.0.4
Ok to proceed? (y) y
✓ Would you like to use TypeScript? ... No / Yes
✓ Would you like to use ESLint? ... No / Yes
✓ Would you like to use Tailwind CSS? ... No / Yes
✓ Would you like to use 'src/' directory? ... No / Yes
✓ Would you like to use App Router? (recommended) ... No / Yes
✓ Would you like to customize the default import alias (@/*)? ... No / Yes
Creating a new Next.js app in /var/www/lab3/ubuntu-next-app.

Using npm.

Initializing project with template: app-tw

Installing dependencies:
- react
- react-dom
- next

Installing devDependencies:
- typescript
- @types/node
- @types/react
- @types/react-dom
- autoprefixer
- postcss
- tailwindcss
- eslint
- eslint-config-next

reify:js-yaml: timing reifyNode:node_modules/graphemer Completed in 1476ms
```

3. cd ubuntu-next-app

```
devuser@server:/var/www/lab3$ cd ubuntu-next-app
```

4. npm run build

```
devuser@server:/var/www/lab3/ubuntu-next-app$ npm run build
```

5. npm start

```
devuser@server:/var/www/lab3/ubuntu-next-app$ npm start

> ubuntu-next-app@0.1.0 start
> next start

   ▲ Next.js 14.0.4
   - Local:      http://localhost:3000

✓ Ready in 208ms
```

6. sudo nano package.json

```
{
  "name": "ubuntu-next-app",
  "version": "0.1.0",
  "private": true,
  "scripts": {
    "dev": "next dev -p 3002",
    "build": "next build",
    "start": "next start -p 3002",
    "lint": "next lint"
  },
  "dependencies": {
    "react": "^18",
    "react-dom": "^18",
    "next": "14.0.4"
  },
  "devDependencies": {
    "typescript": "^5",
    "@types/node": "^20",
    "@types/react": "^18",
    "@types/react-dom": "^18",
    "autoprefixer": "^10.0.1",
    "postcss": "^8",
    "tailwindcss": "^3.3.0",
    "eslint": "^8",
    "eslint-config-next": "14.0.4"
  }
}
```

## 7. sudo ufw allow 3002

```
devuser@server:/var/www/lab3/ubuntu-next-app$ sudo ufw allow 3002
Rule added
Rule added (v6)
```

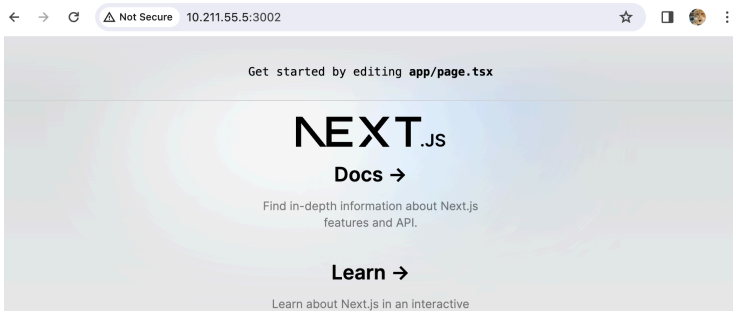
## 8. npm start

```
devuser@server:/var/www/lab3/ubuntu-next-app$ npm start

> ubuntu-next-app@0.1.0 start
> next start -p 3002

  ▲ Next.js 14.0.4
  - Local:        http://localhost:3002

✓ Ready in 192ms
```



## 9. cd /etc/nginx/sites-available

```
devuser@server:~$ cd /etc/nginx/sites-available
```

## 10. sudo cp myapp ubuntu-next-app sudo nano ubuntu-next-app

```
devuser@server:/etc/nginx/sites-available$ sudo cp myapp ubuntu-next-app
[sudo] password for devuser:
devuser@server:/etc/nginx/sites-available$ sudo nano ubuntu-next-app
```

```
server {
    listen 80;
    listen [::]:80;
    server_name ubuntu-next-app.se-rmutl.net;

    location / {
        proxy_pass http://127.0.0.1:3002; # !!! - change to your app port
        proxy_http_version 1.1;
        proxy_set_header Upgrade $http_upgrade;
        proxy_set_header Connection 'upgrade';
        proxy_set_header Host $host;
        proxy_cache_bypass $http_upgrade;
    }
}
```

## 11. sudo systemctl restart nginx

```
devuser@server:/etc/nginx/sites-available$ sudo systemctl restart nginx
```

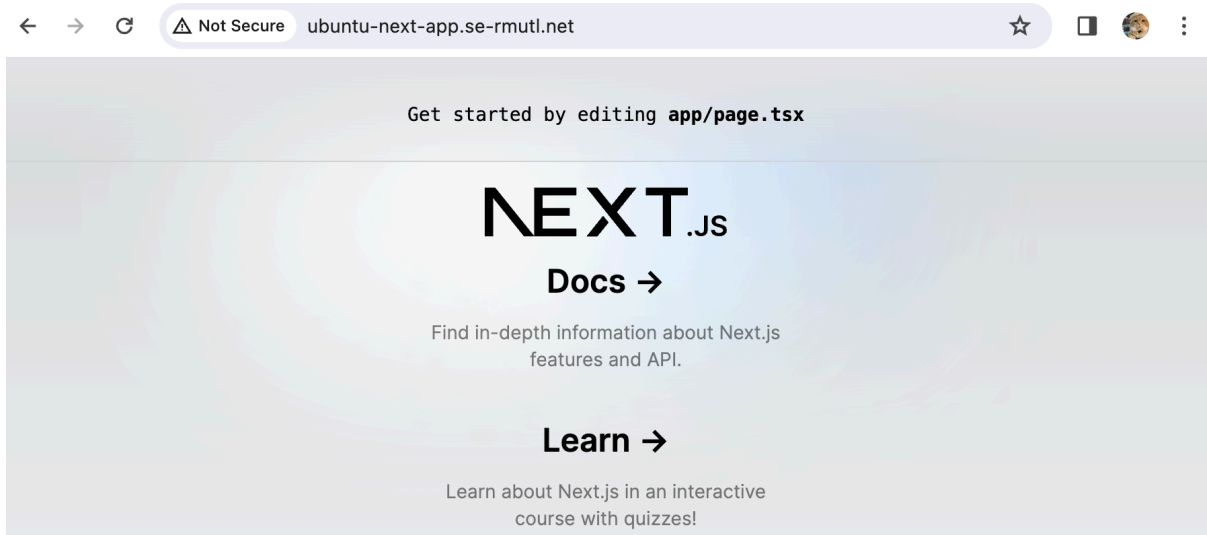
## 12. sudo nginx -t

```
devuser@server:/etc/nginx/sites-available$ sudo nginx -t
nginx: the configuration file /etc/nginx/nginx.conf syntax is ok
nginx: configuration file /etc/nginx/nginx.conf test is successful
```

## 13. sudo nano /etc/hosts

```
fang@admins-iMac-2 ~ % sudo nano /etc/hosts
```

```
10.211.55.5    ubuntu-next-app.se-rmutl.net
```



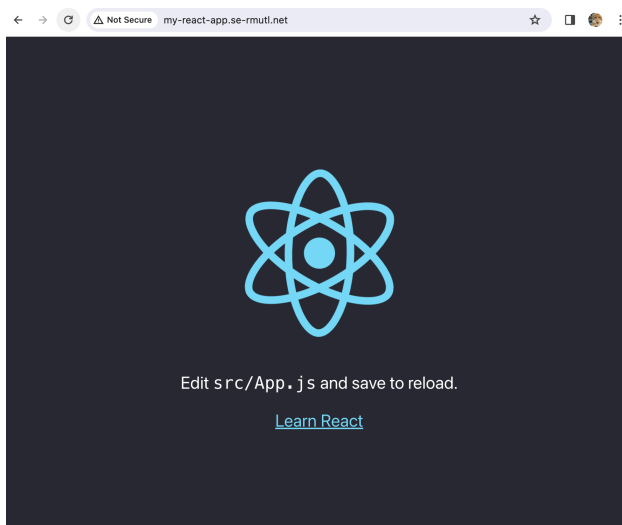
## PM2

- ติดตั้ง pm2 ในไฟล์  
`sudo npm install pm2 -g`
- cd my-react-app  
`pm2 start --name my-react-app npm -- start`

```
devuser@server:/var/www/lab3$ cd my-react-app
devuser@server:/var/www/lab3/my-react-app$ pm2 start --name my-react-app npm -- start
```

```
[PM2] Starting /usr/bin/npm in fork_mode (1 instance)
[PM2] Done.
```

id	name	namespace	version	mode	pid	uptime	u	status	cpu	mem	user
	watching										
0	my-react-app disabled	default	N/A	fork	34725	0s	0	online	0%	18.1mb	devuser





## pm2 stop my-react-app

```
devuser@server:/var/www/lab3/my-react-app$ pm2 stop my-react-app
[PM2] Applying action stopProcessId on app [my-react-app](ids: [ 0 ])
[PM2] [my-react-app](0) ✓
```

id	name	namespace	version	mode	pid	uptime	u	status	cpu	mem	user
	watching										
0	my-react-app	default	N/A	fork	0	0	15	stopped	0%	0b	devuser
	disabled										



## ทำกับ NextJs ด้วยเหมือนกัน

1. cd ubuntu-next-app

pm2 start --name ubuntu-next-app npm -- start

```
devuser@server:/var/www/lab3$ cd ubuntu-next-app
devuser@server:/var/www/lab3/ubuntu-next-app$ pm2 start --name ubuntu-next-app npm -- start
```

id	name	namespace	version	mode	pid	uptime	u	status	cpu	mem
	watching									
0	my-react-app	default	N/A	fork	35406	3m	15	online	0%	60.9mb
1	ubuntu-next-app	default	N/A	fork	35509	0s	0	online	0%	7.7mb



pm2 stop ubuntu-next-app

```
devuser@server:/var/www/lab3/ubuntu-next-app$ pm2 stop ubuntu-next-app
[PM2] Applying action stopProcessId on app [ubuntu-next-app](ids: [ 1 ])
[PM2] [ubuntu-next-app](1) ✓
```

id	name	namespace	version	mode	pid	uptime	⤵	status	cpu	mem
0	my-react-app	default	N/A	fork	35406	6m	15	online	0%	61.4mb
1	disabled									
1	ubuntu-next-app	default	N/A	fork	0	0	0	stopped	0%	0b
	disabled									

← → ↻ ⚠ Not Secure ubuntu-next-app.se-rmutl.net ☆ 📱 🌐 ⋮

## 502 Bad Gateway

nginx/1.18.0 (Ubuntu)