

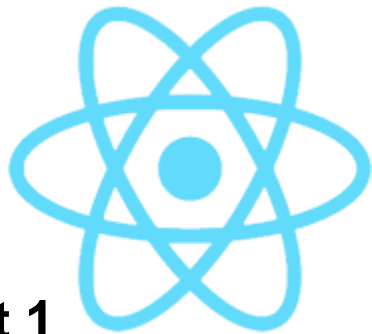


# Northeastern University

## **CSYE 7220 DevOps Lecture 4 nginx**

*23 May 2024*





# React



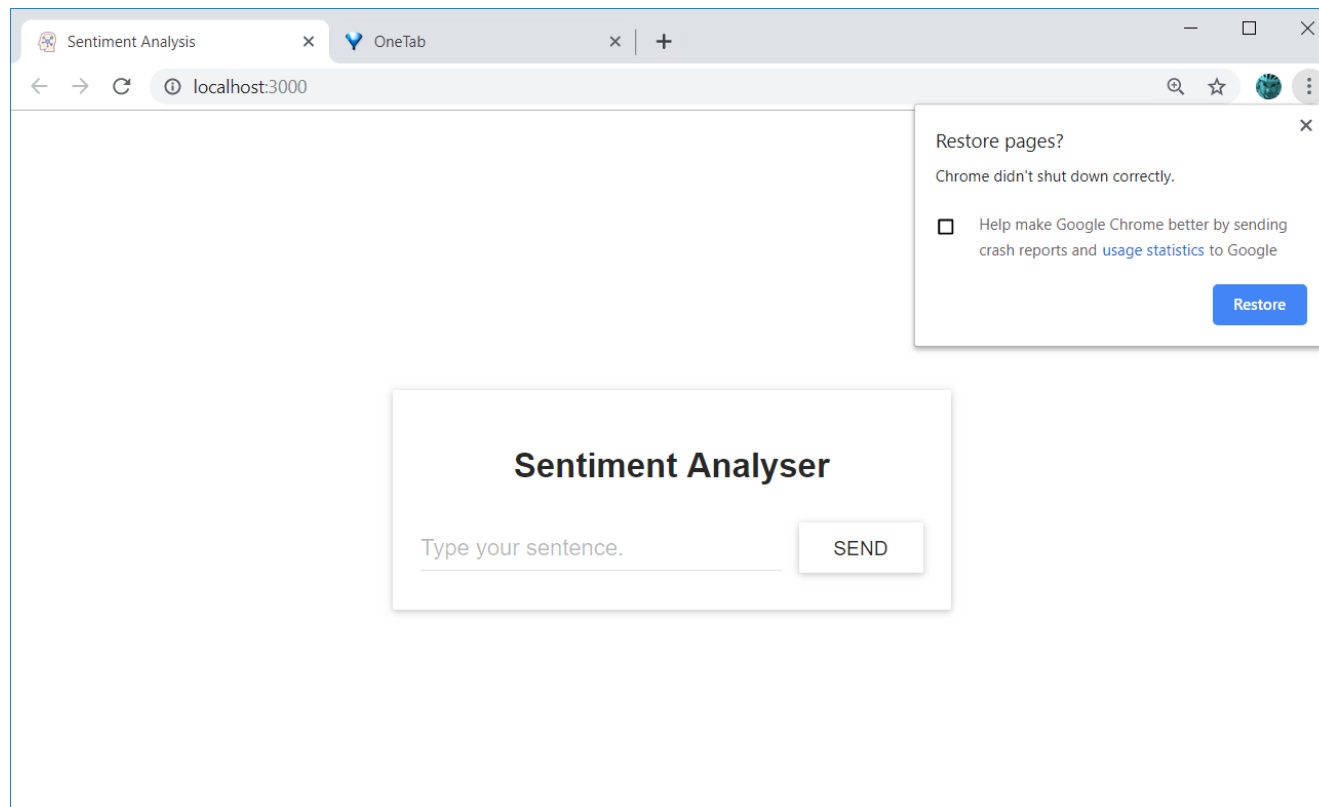
Part 1

## PRODUCTIZING REACTJS APP WITH NGINX



# npm start (runs with React web server)

- Start your react application with `npm start`, access it on `localhost:3000`





# Productizing your React app

- We need to run with production Web server, e.g. nginx
- To build your application into static files and serve them using a web server, to `sa-frontend` folder..
- ..execute the following command:
  - `npm run build`
- This generates a folder named `build` in your project tree
- It contains all the static files needed for your ReactJS app
- You can take these files and server them out as a static website on AWS S3, for example
- But we're going serve them out of a container, instead!
- So we'll need a Web server in that container
- So let's pick a Web server that is already containerized!
- Let's pick `nginx`

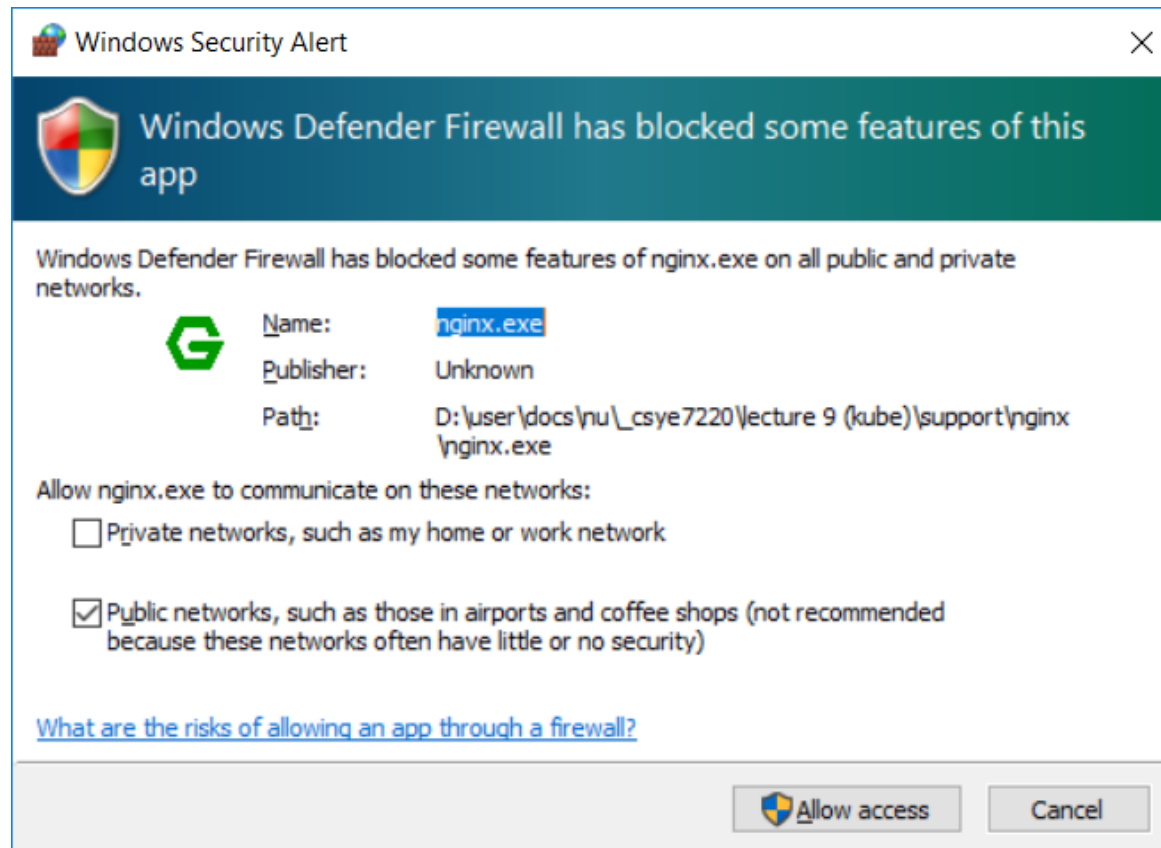


# nginx install

- <https://www.nginx.com/resources/wiki/start/topics/tutorials/install/>
- `unzip nginx-1.2.3.zip`
- `ren nginx-1.2.3 nginx`
- Move the contents of the `sa-frontend/build` folder to `nginx/html`
- Then `cd nginx`
- **Mac:** `nginx`
- **Windows:** `start nginx`
- Control:
  - `nginx -s [ stop | quit | reopen | reload`
- Run `tasklist` command-line utility to see nginx processes:
  - Windows: `tasklist /fi "imagename eq nginx.exe"`
  - Mac: `top`
- Mac Killing processes: `kill -9 pid_number`
- Windows killing processes: `taskkill /F /PID pid_number`

# Note: Windows Defender or other firewall

- Or any other firewall..





## Note: Mac

- On your Mac, nginx installs under `/usr/local/etc`
  - On Ubuntu, too
- To go to that folder, open **F**inder, then click on **C**ommand + **S**hift + **G**
- To change the default port, edit `nginx.conf` and change:

```
server {  
    listen      8081;  
    server_name localhost;
```





# Serving static files with Nginx

- Install and start the **Nginx** WebServer
  - <https://www.nginx.com/resources/wiki/start/topics/tutorials/install/>
- Then move the contents of the `sa-frontend/build` folder to `<your_nginx_installation_dir>/html`
- This way the generated `index.html` file will be accessible in `<your_nginx_installation_dir>/html/index.html`
  - This is the default file that Nginx serves out
- By default the Nginx WebServer listens on port 80
  - You can specify a different port by updating `server.listen` property in the file. If you are running IIS, **you should do this!**  
`<your_nginx_installation_dir>/conf/nginx.conf`
  - For me, I'm defaulting nginx to port 8081
- Open your browser and hit the endpoint `localhost`, see the ReactJS application appear!
- Type your sentence and press the Send button: **404 error**



# Note on killing `nginx.exe`

- ❑ `nginx.exe` is a zombie process and if you kill it with `kill` or `taskkill`, it will restart itself!
- ❑ Need to kill it using `nginx -s quit`, with the same distribution of `nginx` that started the original process, making sure there is a `logs/nginx.pid` file that contains just the pid of the `nginx` process!



