Problem 1:
First creating an nginx.conf file and deleting the default conf file from the nginx files and copying the nginx file into it and copying the index.html into the usr/bin/html
Editing the default listening port of nginx

```
    include /etc/nginx/conf.d/*.conf;

    server {
        listen        4000;
        listen        [::]:4000;
        server_name   _;
        root          /usr/share/nginx/html;

        # Load configuration files for the defa
    include /etc/nginx/default.d/*.conf;
```

| ⚓ Prob1.dockerfile ✕ | ⚙ nginx.conf | <> index.html | ▷ |

⚓ Prob1.dockerfile > ...

```
1   FROM nginx:latest
2   RUN rm /etc/nginx/conf.d/default.conf
3   EXPOSE 4000
4   COPY nginx.conf /etc/nginx/
5   COPY index.html /usr/share/nginx/html
```

root@www:/home/vomato/docker

```
[root@www docker]# docker image build --file Prob1.dockerfile -t mynginx_image .
```

Then binding port 5000 to the exposed port 4000 when running the container

https://docs.google.com/document/d/1oBV344F-S

Operating Systems An   AWS M Motwally Labs in tomato@Tom

root@www:/home/vomato

```
docker container run -d -p 5000:4000 mynginx_image
```

```
[root@www docker]# curl localhost:5000
<!DOCTYPE html>
<html>

<head>
 <!-- Basic -->
 <meta charset="utf-8" />
 <meta http-equiv="X-UA-Compatible" content="IE=edge" />
 <!-- Mobile Metas -->
 <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no" />
 <!-- Site Metas -->
 <meta name="keywords" content="" />
 <meta name="description" content="" />
 <meta name="author" content="" />

 <title>Oxer</title>

 <!-- slider stylesheet -->
 <link rel="stylesheet" type="text/css" href="https://cdnjs.cloudflare.com/ajax/libs/OwlCarousel2/2.3.4/assets/owl.carousel.min.cs
s" />

 <!-- bootstrap core css -->
 <link rel="stylesheet" type="text/css" href="css/bootstrap.css" />
```
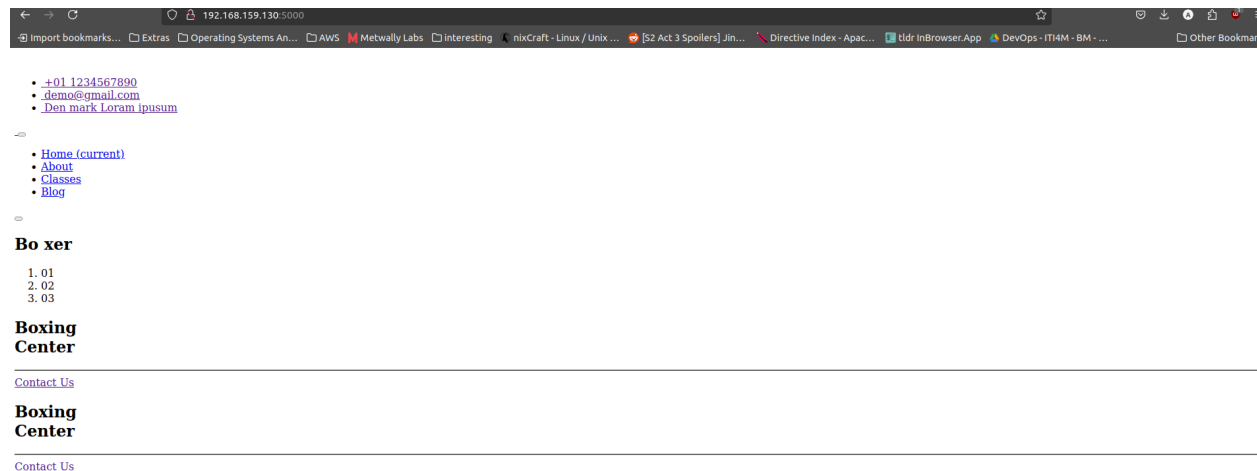
This is the view of my html page from my machine

- +01 1234567890
- demo@gmail.com
- Den mark Loram ipusum

- Home (current)
- About
- Classes
- Blog

Bo xer

1. 01
2. 02
3. 03

Boxing Center

Contact Us
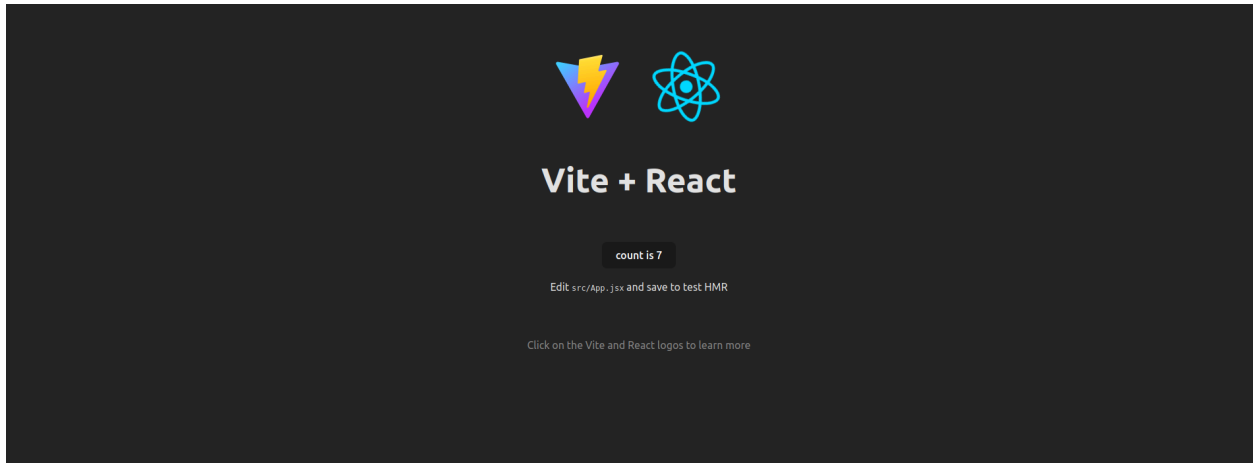
Boxing Center

Contact Us

Problem 2:

```
FROM node:latest
RUN npm install -g vite
RUN npm create vite@latest react-app -- --template react
WORKDIR /react-app
RUN npm install
COPY vite.config.js .
EXPOSE 5173
CMD ["npm","run","dev","--","--host"]
```

Adding the host to the server alognisde npm run dev – –host to expose the server and specify the source ip addr
And copying said vite configurations into my react app

```
import { defineConfig } from "vite";
import react from "@vitejs/plugin-react";

export default defineConfig({
 base: "/",
 plugins: [react()],
 preview: {
//      host:'0.0.0.0',
        port: 8080,
 }
 server: {
        host: '0.0.0.0',
        port: 5173,
        hmr: {
            host: 'localhost',
            port: 5173,
        },
 },
});
```

Vite + React

count is 7

Edit src/App.jsx and save to test HMR

Click on the Vite and React logos to learn more

Creating the react app completely inside the docker container wouldnt be the sanest option but testing the streamlining operation
Problem 3:
Using nginx alpine and building the react app into dist file then copying that file to serve from nginx
Or using a node slim version and using serve to serve a static file but nginx will server more of a deployment setting while
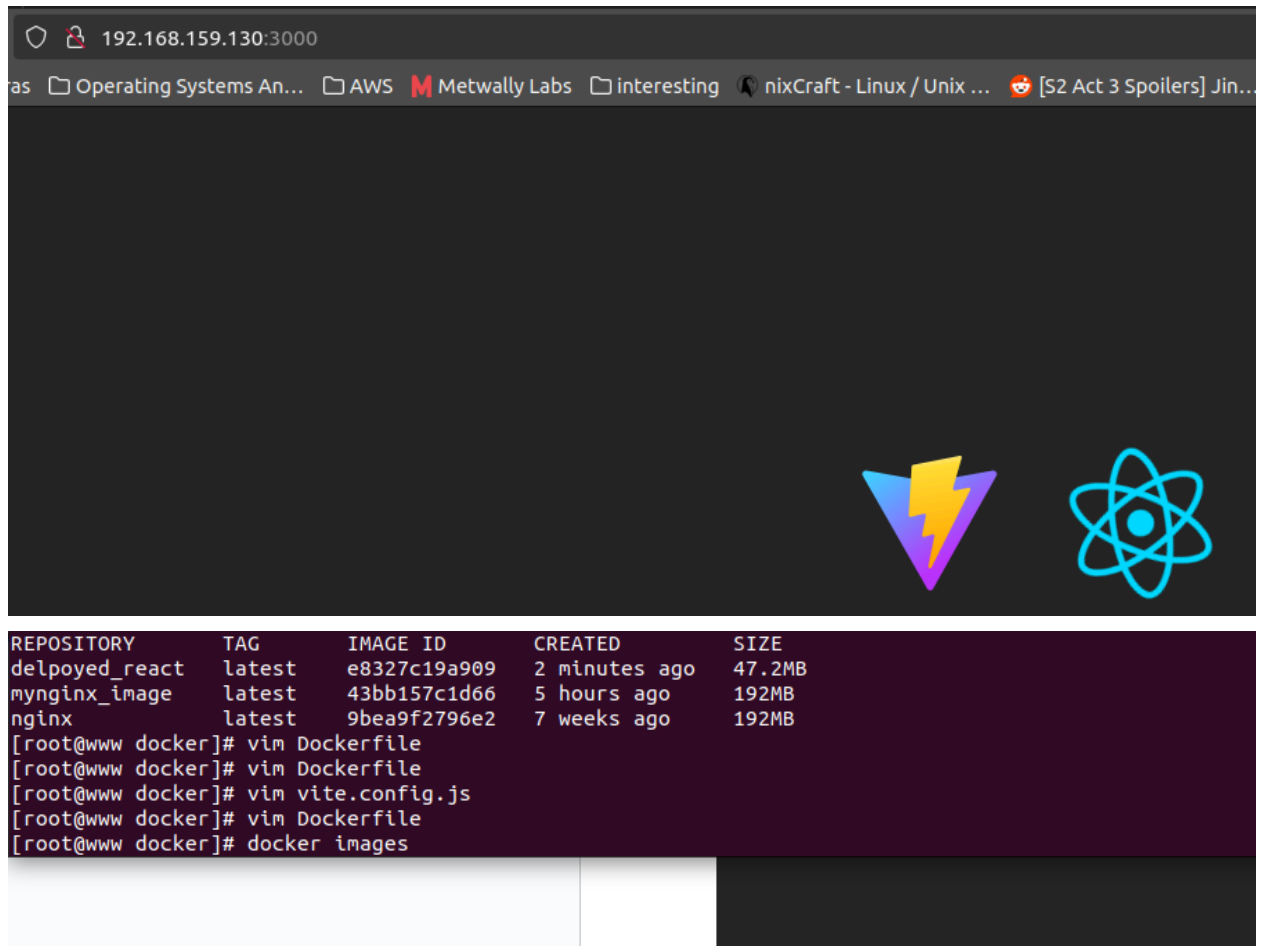
```
FROM node:latest AS building
RUN npm install -g vite
RUN npm create vite@latest react-app -- --template react
WORKDIR /react-app
RUN npm install
COPY vite.config.js .
RUN npm run build
#EXPOSE 5173
#CMD ["npm","run","dev","--","--host"]

FROM nginx:1.27.3-alpine
COPY --from=building react-app/dist/ /usr/share/nginx/html
EXPOSE 80

#FROM node:22-slim
#RUN npm i -g serve
#COPY --from=building /react-app/dist /serve
#EXPOSE 8080
#CMD ["serve","-s","-p","8080","serve"]
~
~
~
~
```

```
[root@www docker]# docker container run --rm -p 3000:80 delpoyed_react
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf
10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
/docker-entrypoint.sh: Sourcing /docker-entrypoint.d/15-local-resolvers.envsh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
/docker-entrypoint.sh: Configuration complete; ready for start up
2025/01/19 18:10:41 [notice] 1#1: using the "epoll" event method
2025/01/19 18:10:41 [notice] 1#1: nginx/1.27.3
```
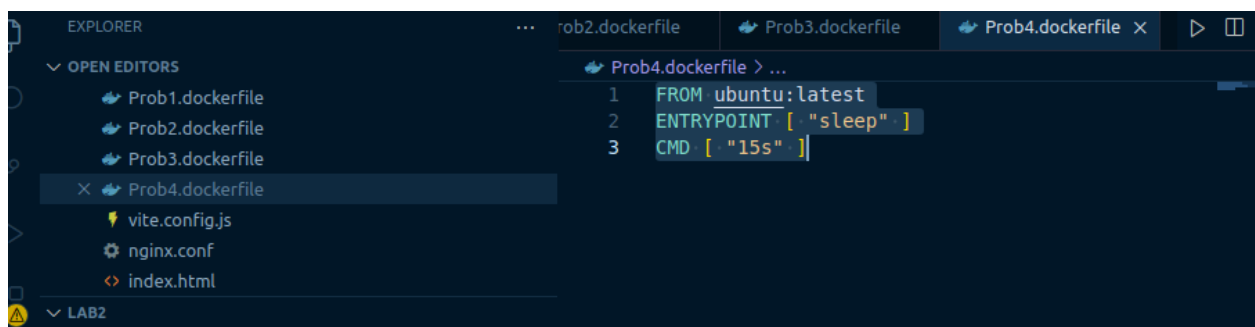
```
REPOSITORY        TAG      IMAGE ID       CREATED         SIZE
delpoyed_react    latest   e8327c19a909   2 minutes ago   47.2MB
mynginx_image     latest   43bb157c1d66   5 hours ago     192MB
nginx             latest   9bea9f2796e2   7 weeks ago     192MB
[root@www docker]# vim Dockerfile
[root@www docker]# vim Dockerfile
[root@www docker]# vim vite.config.js
[root@www docker]# vim Dockerfile
[root@www docker]# docker images
```

Having a final 47.2mb image instead of a 1.4 gb image installing both vite and node and running a dev server

Problem4:


```
FROM ubuntu:latest
ENTRYPOINT [ "sleep" ]
CMD [ "15s" ]
```

```
[root@www docker]# docker image build -t ubuntu-sleep .
[+] Building 13.3s (5/5) FINISHED
 => [internal] load build definition from Dockerfile
 => => transferring dockerfile: 93B
 => [internal] load metadata for docker.io/library/ubuntu:latest
 => [internal] load .dockerignore
 => => transferring context: 2B
 => [1/1] FROM docker.io/library/ubuntu:latest@sha256:80dd3c3b9c6cecb9f1667e9290b3bc61b78c2678c02cbdae
 => => resolve docker.io/library/ubuntu:latest@sha256:80dd3c3b9c6cecb9f1667e9290b3bc61b78c2678c02cbdae
 => => sha256:80dd3c3b9c6cecb9f1667e9290b3bc61b78c2678c02cbdae5f0fea92cc6734ab 6.69kB / 6.69kB
 => => sha256:6e75a10070b0fcb0bead763c5118a369bc7cc30dfc1b0749c491bbb21f15c3c7 424B / 424B
 => => sha256:b1d9df8ab81559494794e522b380878cf9ba82d4c1fb67293bcf931c3aa69ae4 2.30kB / 2.30kB
 => => sha256:de44b265507ae44b212defcb50694d666f136b35c1090d9709068bc861bb2d64 29.75MB / 29.75MB
 => => extracting sha256:de44b265507ae44b212defcb50694d666f136b35c1090d9709068bc861bb2d64
```

```
 => => sha256:de44b265507ae44b212defcb50694d666f136b35c1090d9709068bc861bb2d64 29.75MB / 29.75MB
 => => extracting sha256:de44b265507ae44b212defcb50694d666f136b35c1090d9709068bc861bb2d64
 => exporting to image
 => => exporting layers
 => => writing image sha256:985fa696b41b14d41d9c2e0f132c395da31b3963c1f12ad560a61a62c854e905
 => => naming to docker.io/library/ubuntu-sleep
[root@www docker]# docker container run --rm ubuntu-sleep 30
[root@www docker]# docker container run --rm ubuntu-sleep 5
[root@www docker]# docker images
REPOSITORY        TAG       IMAGE ID       CREATED            SIZE
delpoyed_react    latest    e8327c19a909   About an hour ago  47.2MB
mynginx_image     latest    43bb157c1d66   7 hours ago        192MB
nginx             latest    9bea9f2796e2   7 weeks ago        192MB
ubuntu-sleep      latest    985fa696b41b   2 months ago       78.1MB
[root@www docker]#
```

Defining the entry point with sleep and an argument of 15s which can be overridden when run
by adding the argument after the image name
This sets the entrypoint arguments to 5s instead of the default 15s

```
[root@www docker]# docker images
REPOSITORY        TAG       IMAGE ID       CREATED            SIZE
delpoyed_react    latest    e8327c19a909   About an hour ago  47.2MB
mynginx_image     latest    43bb157c1d66   7 hours ago        192MB
nginx             latest    9bea9f2796e2   7 weeks ago        192MB
ubuntu-sleep      latest    985fa696b41b   2 months ago       78.1MB
[root@www docker]# docker containers
docker: 'containers' is not a docker command.
See 'docker --help'
[root@www docker]# docker container ls
CONTAINER ID   IMAGE     COMMAND     CREATED     STATUS     PORTS      NAMES
[root@www docker]# docker container ls -a
CONTAINER ID   IMAGE           COMMAND               CREATED      STATUS                     PORTS
869b3832052f   mynginx_image   "/docker-entrypoint.…"  6 hours ago  Exited (0) 6 hours ago
[root@www docker]# docker container run --rm ubuntu-sleep 5
```

Problem 5:
First changing my image names to my username/imagename:latest

```
Removing login credentials for https://index.docker.io/v1/
[root@www docker]# docker image tag tomato_sleep tomatosoup3/tomato_sleep:latest
[root@www docker]# docker image tag tomato_deployed_react tomatosoup3/tomato_deployed_react:latest
[root@www docker]# docker push tomatosoup3/tomato_deployed_react
Using default tag: latest
The push refers to repository [docker.io/tomatosoup3/tomato_deployed_react]
fa66f1d39771: Preparing
5a760029e979: Preparing
23625999797d: Preparing
9aa22afcf27f: Preparing
59a5cb944b91: Preparing
598e577f3a23: Waiting
fd5f65a144ef: Waiting
a8903c9578e9: Waiting
ce5a8cde9eee: Waiting
```

Logging into dockerhub with my credentials using the cli with docker login -u username
And pushing the images

```
dented: requested access to the resource is dented
[root@www docker]# docker login -u tomatosoup3
Password:
WARNING! Your password will be stored unencrypted in /root/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credential-stores

Login Succeeded
[root@www docker]# docker push tomatosoup3/tomato_deployed_react
Using default tag: latest
The push refers to repository [docker.io/tomatosoup3/tomato_deployed_react]
fa66f1d39771: Pushed
5a760029e979: Mounted from library/nginx
23625999797d: Mounted from library/nginx
9aa22afcf27f: Mounted from library/nginx
59a5cb944b91: Mounted from library/nginx
```

```
5a760029e979: Mounted from library/nginx
23625999797d: Mounted from library/nginx
9aa22afcf27f: Mounted from library/nginx
59a5cb944b91: Mounted from library/nginx
598e577f3a23: Mounted from library/nginx
fd5f65a144ef: Mounted from library/nginx
a8903c9578e9: Mounted from library/nginx
ce5a8cde9eee: Mounted from library/nginx
latest: digest: sha256:5f19be917d7138e02d60d55dd79c20218f3d065b7d3367b9c7d3cdb8c5dc170f size: 2198
[root@www docker]# docker push tomatosoup3/tomato_sleep
Using default tag: latest
The push refers to repository [docker.io/tomatosoup3/tomato_sleep]
687d50f2f6a6: Pushed
latest: digest: sha256:2214484feacc07e440a937afa537ca201f75ca5f76bd70e0fd647ea29b819165 size: 529
[root@www docker]#
```