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DEVSECOPS BATCH B1 HONS.

EXPERIMENT – 5

Building a Docker Image for an HTML App Using Nginx

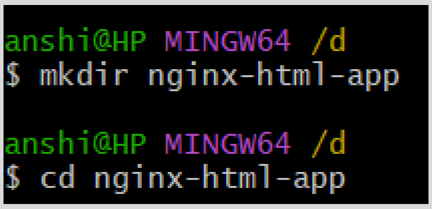
1. Setup

- Docker installed on your machine.
- A simple HTML file for the app.

2. Step 1: Create the HTML File

Create a directory for your HTML app and place an index.html file in it.

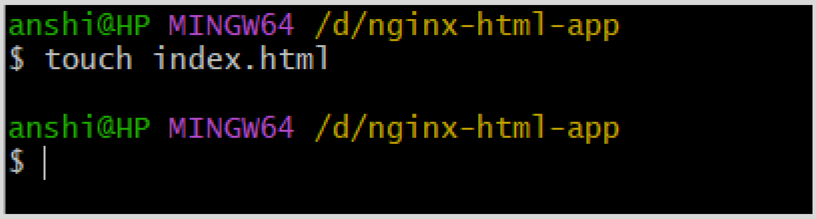
```
mkdir nginx-html-app

cd nginx-html-app
```



```
anshi@HP MINGW64 /d
$ mkdir nginx-html-app

anshi@HP MINGW64 /d
$ cd nginx-html-app
```

Inside the nginx-html-app directory, create the HTML file.

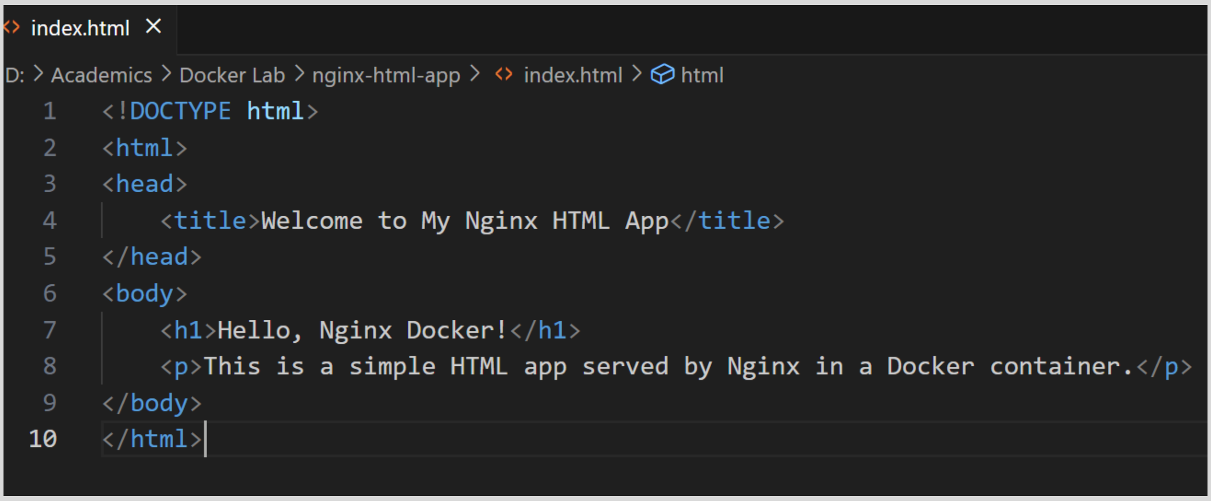
```
touch index.html
```



```
anshi@HP MINGW64 /d/nginx-html-app
$ touch index.html

anshi@HP MINGW64 /d/nginx-html-app
$ |
```

Edit the index.html file with the following content (or any custom HTML content you want):

```
<!DOCTYPE html>
<html>
<head>
   <title>Welcome to My Nginx HTML App</title>
</head>
<body>
   <h1>Hello, Nginx Docker!</h1>
   <p>This is a simple HTML app served by Nginx in a Docker container.</p>
</body>
</html>
```



index.html ×

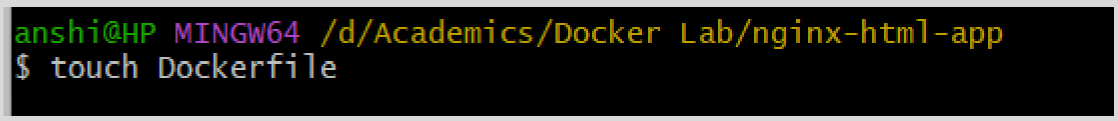
D: > Academics > Docker Lab > nginx-html-app > index.html > html

```
<!DOCTYPE html>
<html>
<head>
    <title>Welcome to My Nginx HTML App</title>
</head>
<body>
    <h1>Hello, Nginx Docker!</h1>
    <p>This is a simple HTML app served by Nginx in a Docker container.</p>
</body>
</html>
```

3. Step 2: Create a Dockerfile

In the same directory, create a Dockerfile. This file will define how to build the Docker image using Nginx as the base image.

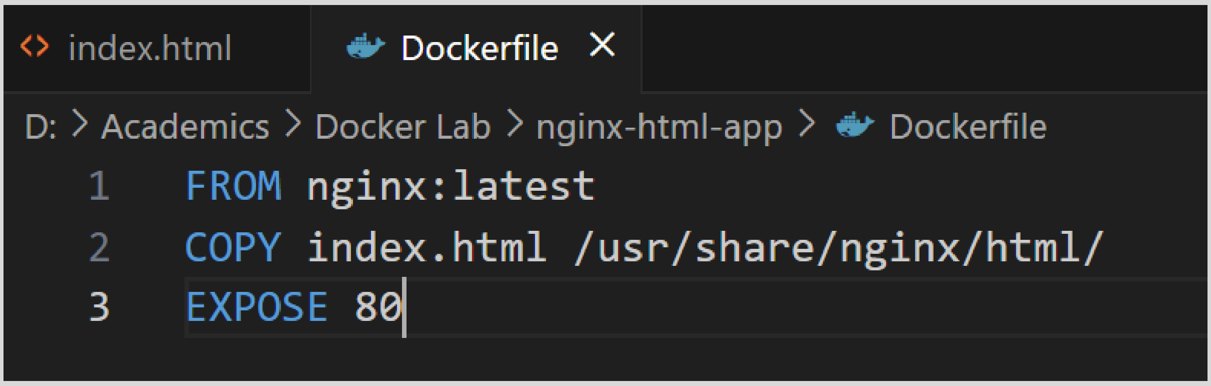
```
touch Dockerfile
```



```
anshi@HP MINGW64 /d/Academics/Docker Lab/nginx-html-app
$ touch Dockerfile
```

Edit the Dockerfile and add the following content:

```
FROM nginx:latest
COPY index.html /usr/share/nginx/html/
EXPOSE 80
```

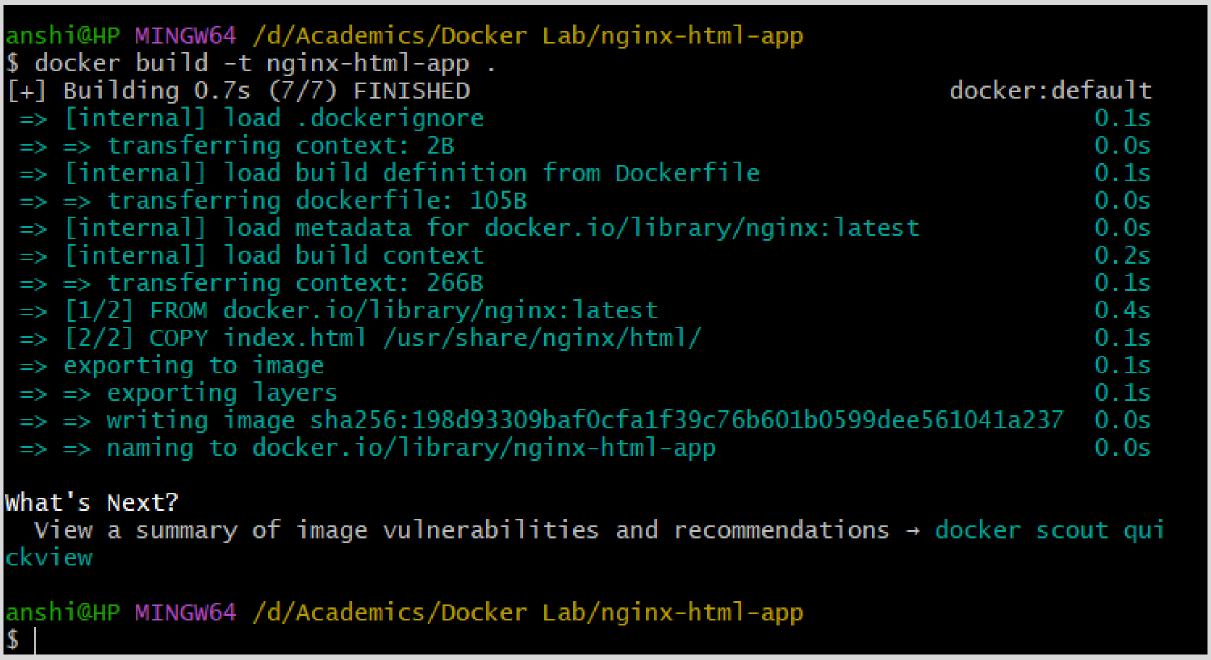


```
FROM nginx:latest
COPY index.html /usr/share/nginx/html/
EXPOSE 80
```

4. Step 3: Build the Docker Image

Now that you have the Dockerfile and index.html, it's time to build the Docker image. Run the following command to build the image, giving it a tag (e.g., nginx-html-app):

```
docker build -t nginx-html-app .
```



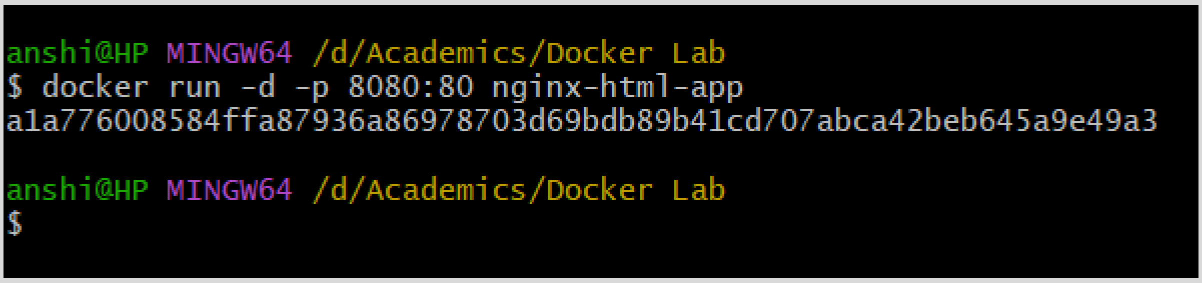
```
anshi@HP MINGW64 /d/Academics/Docker Lab/nginx-html-app
$ docker build -t nginx-html-app .
[+] Building 0.7s (7/7) FINISHED                                docker:default
 => [internal] load .dockerignore                                          0.1s
 => => transferring context: 2B                                            0.0s
 => [internal] load build definition from Dockerfile                       0.1s
 => => transferring dockerfile: 105B                                       0.0s
 => [internal] load metadata for docker.io/library/nginx:latest            0.0s
 => [internal] load build context                                          0.2s
 => => transferring context: 266B                                          0.1s
 => [1/2] FROM docker.io/library/nginx:latest                              0.4s
 => [2/2] COPY index.html /usr/share/nginx/html/                           0.1s
 => exporting to image                                                     0.1s
 => => exporting layers                                                    0.1s
 => => writing image sha256:198d93309baf0cfa1f39c76b601b0599dee561041a237  0.0s
 => => naming to docker.io/library/nginx-html-app                          0.0s

What's Next?
  View a summary of image vulnerabilities and recommendations → docker scout qui
ckview

anshi@HP MINGW64 /d/Academics/Docker Lab/nginx-html-app
$ |
```

Docker will use the Nginx base image, copy your index.html into the appropriate directory, and build the image.

5. Step 4: Run the Docker Container

After building the image, you can run the container with the following command:

```
docker run -d -p 8080:80 nginx-html-app
```

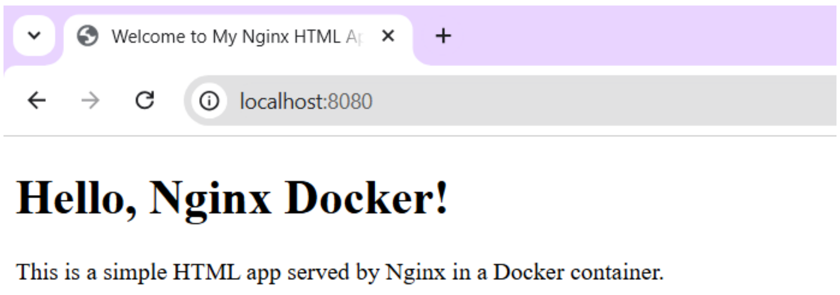


```
anshi@HP MINGW64 /d/Academics/Docker Lab
$ docker run -d -p 8080:80 nginx-html-app
a1a776008584ffa87936a86978703d69bdb89b41cd707abca42beb645a9e49a3

anshi@HP MINGW64 /d/Academics/Docker Lab
$
```

This command runs the container in detached mode (-d) and maps port 8080 on your host machine to port 80 inside the container, where Nginx is serving your HTML app.

6. Step 5: Verify

Open a browser and go to http://localhost:8080. You should see your HTML page with the message “Hello, Nginx Docker!”.



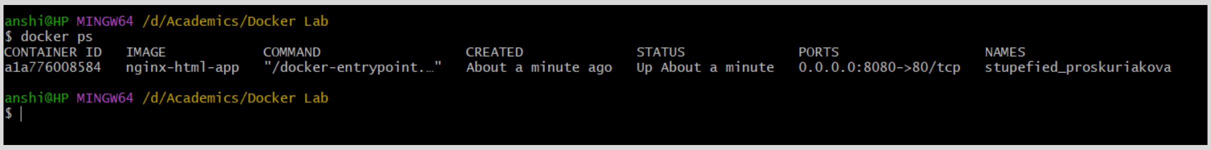
Hello, Nginx Docker!

This is a simple HTML app served by Nginx in a Docker container.

7. Step 6: Stop and Remove the Container

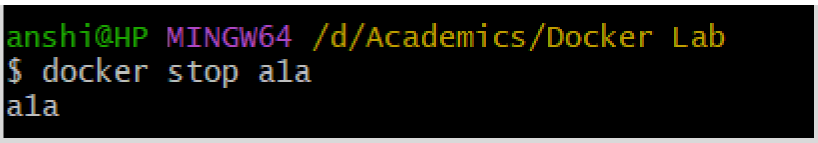
Once you're done, you can stop and remove the container:

```
docker ps  # to see running containers
```



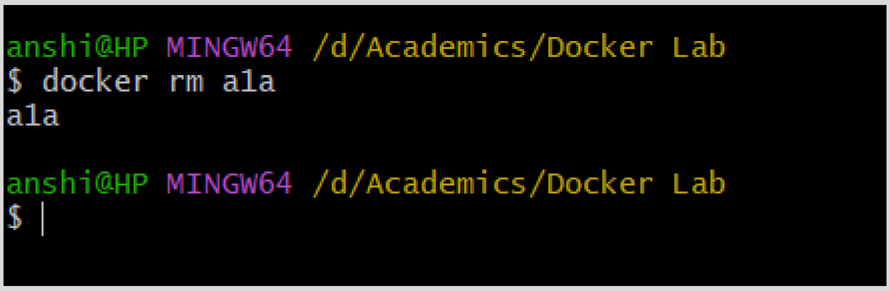
```
anshi@HP MINGW64 /d/Academics/Docker Lab
$ docker ps
CONTAINER ID   IMAGE            COMMAND                  CREATED              STATUS              PORTS                  NAMES
a1a776008584   nginx-html-app   "/docker-entrypoint.…"   About a minute ago   Up About a minute   0.0.0.0:8080->80/tcp   stupefied_proskuriakova

anshi@HP MINGW64 /d/Academics/Docker Lab
$ |
```

```
docker stop <container-id>
```

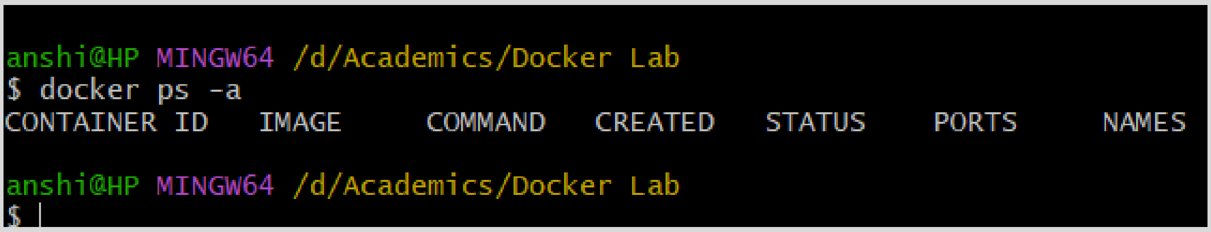


```
anshi@HP MINGW64 /d/Academics/Docker Lab
$ docker stop a1a
a1a
```

docker rm <container-id>



```
anshi@HP MINGW64 /d/Academics/Docker Lab
$ docker rm a1a
a1a

anshi@HP MINGW64 /d/Academics/Docker Lab
$ |
```



```
anshi@HP MINGW64 /d/Academics/Docker Lab
$ docker ps -a
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS     NAMES

anshi@HP MINGW64 /d/Academics/Docker Lab
$ |
```