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Batch – 1(Devops)

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Lab Exercise 21- Building a Docker Image for an HTML App Using Nginx

1. Setup

You will need:

- 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
```

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

```
touch index.html
```

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

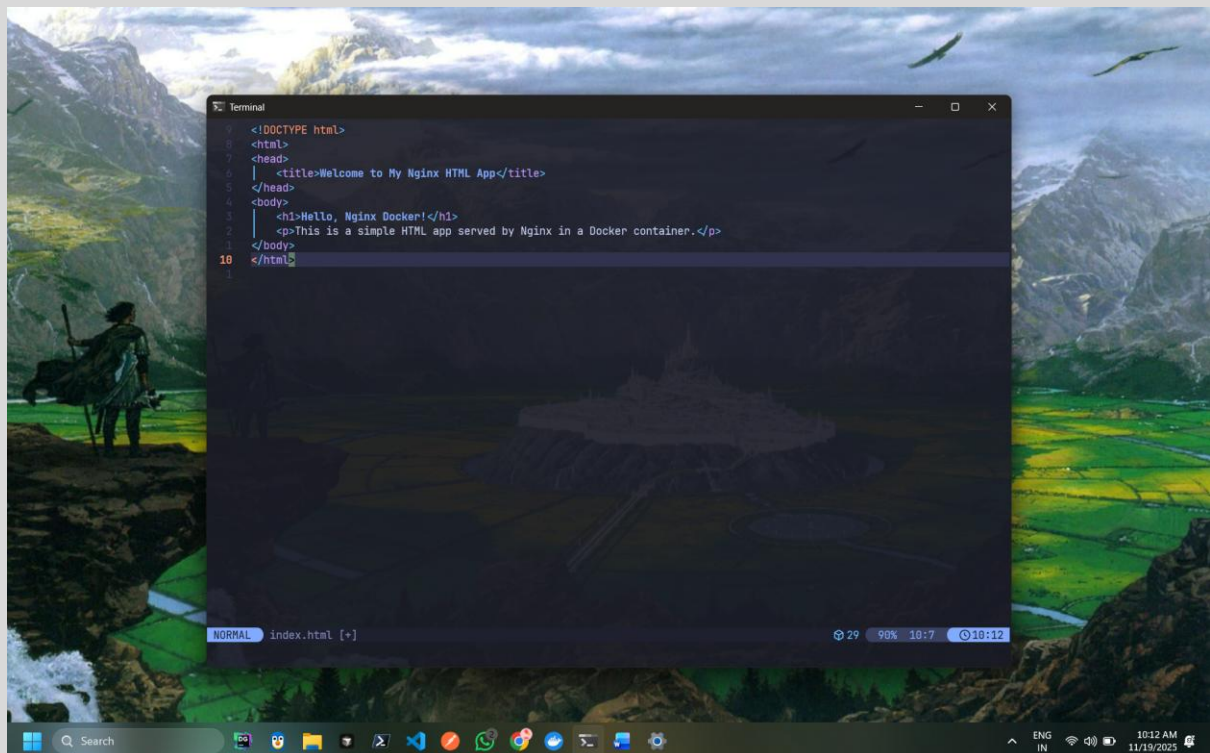
```
<!DOCTYPE html>

<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>
```



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
```

Edit the Dockerfile and add the following content:

```
FROM nginx:latest
```

```
COPY index.html /usr/share/nginx/html/
```

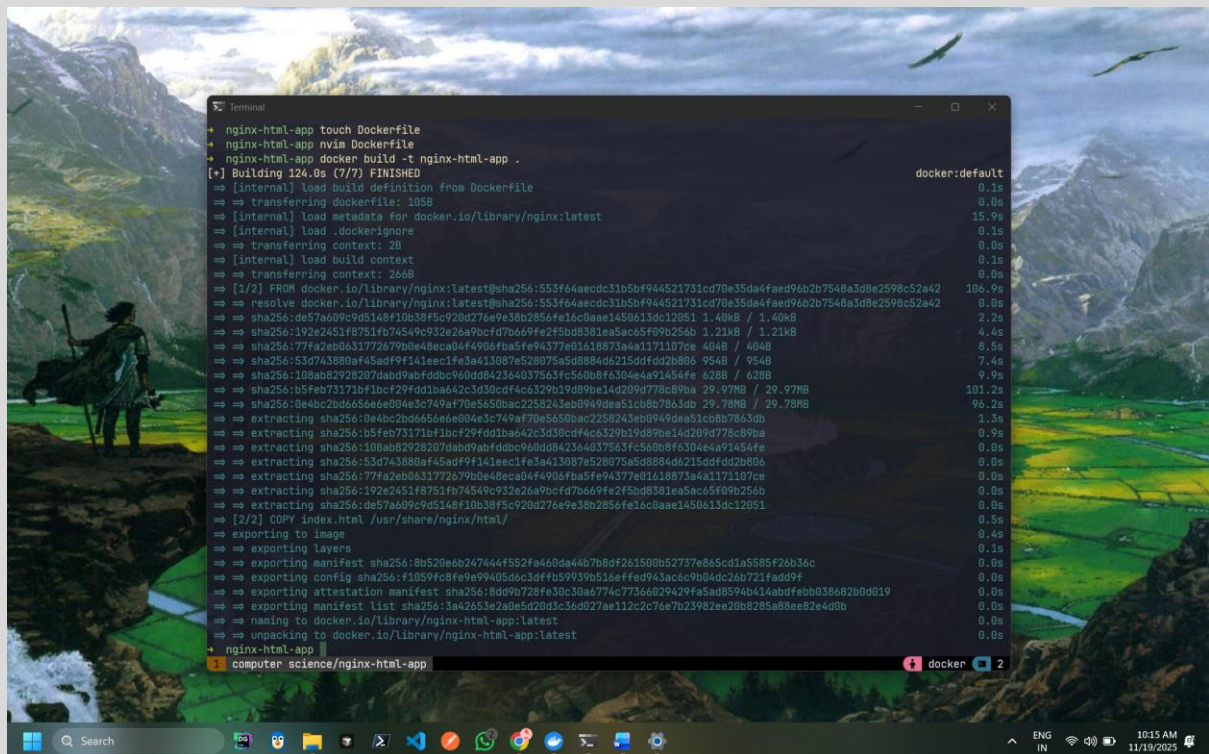
```
EXPOSE 80
```

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 .
```

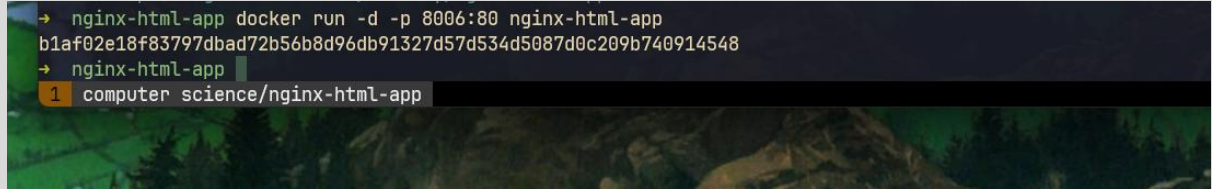
A screenshot of a Windows terminal window with a dark background and light text. The terminal shows the execution of the command 'docker build -t nginx-html-app .' and the subsequent build process. The output includes messages about loading build definitions, transferring Dockerfiles, and resolving Docker images. It also shows the progress of copying files from the local index.html to the container's /usr/share/nginx/html/ directory. The build completes successfully, and the image is tagged 'nginx-html-app'. The terminal window is overlaid on a scenic background image of a mountain landscape with a person in traditional attire. The Windows taskbar is visible at the bottom, showing the time as 10:15 AM on 11/19/2023.

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 8006:80 nginx-html-app
```

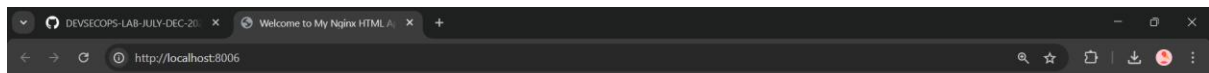


```
→ nginx-html-app docker run -d -p 8006:80 nginx-html-app
b1af02e18f83797dbad72b56b8d96db91327d57d534d5087d0c209b740914548
→ nginx-html-app
1 computer science/nginx-html-app
```

This command runs the container in detached mode (-d) and maps port 8006 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:8006>. 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`

`docker stop <container-id>`

`docker rm <container-id>`

