



Application Containerization

And

Orchestration Lab

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Batch – DevOps B4

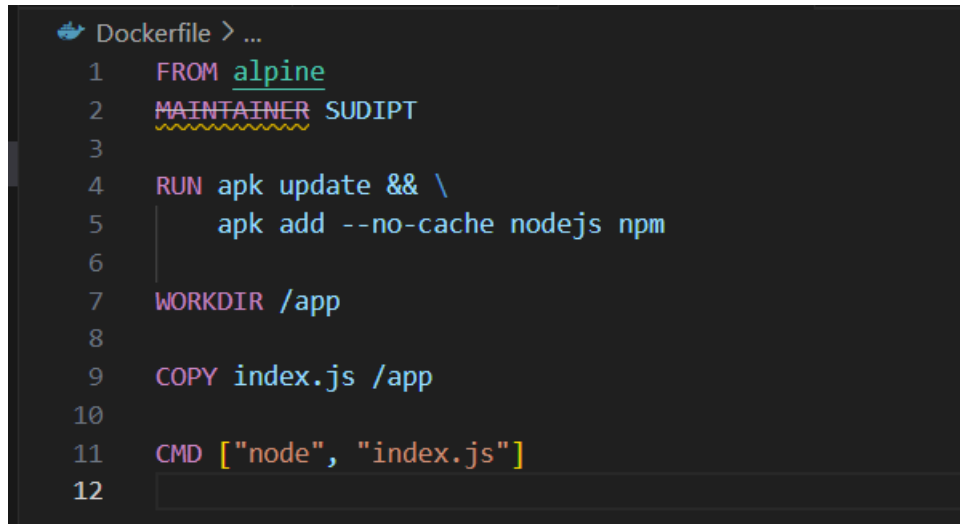
EXPERIMENT-5

AIM : Working with Dockerfile to Build and Push Docker Image

Steps to Complete:

1. Create following Dockerfile

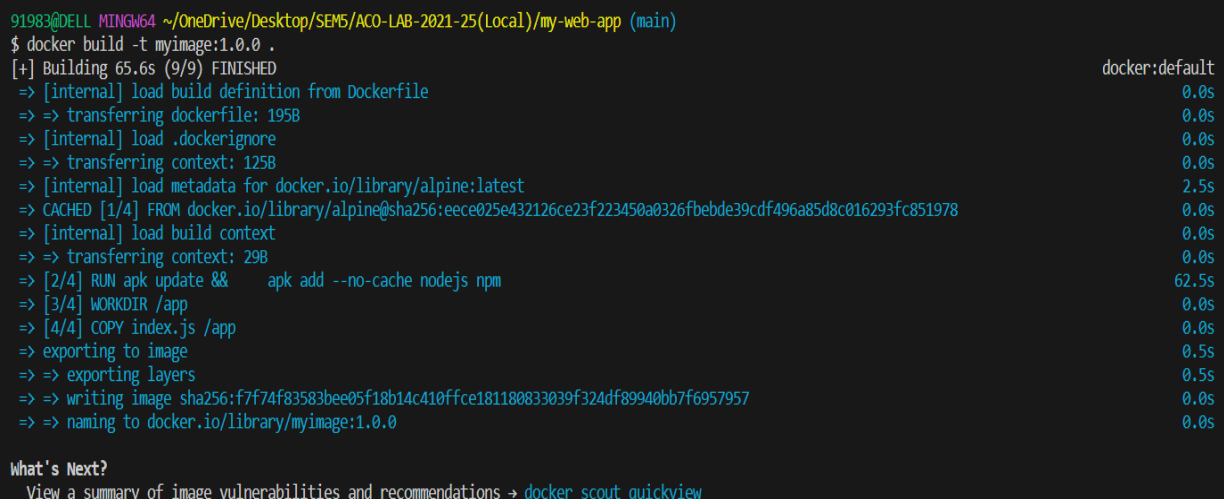
```
FROM alpine
MAINTAINER SUDIPT
RUN apk update
RUN apk add nodejs
RUN mkdir /app
COPY index.js /app
WORKDIR /app
RUN node index.js
```



```
Dockerfile > ...
1 FROM alpine
2 MAINTAINER SUDIPT
3
4 RUN apk update && \
5     apk add --no-cache nodejs npm
6
7 WORKDIR /app
8
9 COPY index.js /app
10
11 CMD ["node", "index.js"]
12
```

2. Now we have dockerized the app, we will Build image from Dockerfile.

“ docker build -t myimage:1.0.0 . ”



```
91983@DELL MINGW64 ~/OneDrive/Desktop/SEM5/ACO-LAB-2021-25(Local)/my-web-app (main)
$ docker build -t myimage:1.0.0 .
[+] Building 65.6s (9/9) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 195B
=> [internal] load .dockerignore
=> => transferring context: 125B
=> [internal] load metadata for docker.io/library/alpine:latest
=> CACHED [1/4] FROM docker.io/library/alpine@sha256:eece025e432126ce23f223450a0326fbede39cdf496a85d8c016293fc851978
=> [internal] load build context
=> => transferring context: 29B
=> [2/4] RUN apk update && apk add --no-cache nodejs npm
=> [3/4] WORKDIR /app
=> [4/4] COPY index.js /app
=> exporting to image
=> => exporting layers
=> => writing image sha256:f7f74f83583bee05f18b14c410ffce181180833039f324df89940bb7f6957957
=> => naming to docker.io/library/myimage:1.0.0

What's Next?
View a summary of image vulnerabilities and recommendations -> docker scout quickview
```

3. Create account on Dockerhub and create a repository in it.

The screenshot shows the Docker Hub 'Create repository' page. The top navigation bar includes the Docker Hub logo, a search bar, and links for Explore, Repositories, Organizations, and Help. The user's profile 'swati1010' is visible in the top right. The main content area is titled 'Create repository' and includes a form with the following fields:

- Namespace:** A dropdown menu showing 'swati1010'.
- Repository Name:** A text input field containing 'dockerfile_experiment'.
- Short description:** A text area containing 'This is the repository created to experiment with the images built using Dockerfile.'

Below the form, there is a 'Visibility' section with two radio buttons: 'Public' (selected) and 'Private'. The 'Public' option is described as 'Appears in Docker Hub search results', and the 'Private' option is described as 'Only visible to you'. To the right of the form, there is a 'Pushing images' section with the text 'You can push a new image to this repository using the CLI:' and a code block containing the commands:

```
docker tag local-image:tagname new-repo:tagname
docker push new-repo:tagname
```

Below the code block, it says 'Make sure to replace `tagname` with your desired image repository tag.' At the bottom right of the form, there are 'Cancel' and 'Create' buttons.

4. Tag the recently created image using following command.

“ docker tag imageID Repositoryname ”

```
91983@DELL MINGW64 ~/OneDrive/Desktop/SEM5/ACO-LAB-2021-25(Local)/my-web-app (main)
$ docker tag f7f74f83583b dockerfile_experiment
```

5. Login to Dockerhub from console using following command.

“ docker login ”

```
91983@DELL MINGW64 ~/OneDrive/Desktop/SEM5/ACO-LAB-2021-25(Local)/my-web-app (main)
$ docker login
Authenticating with existing credentials...
Login Succeeded
```

6. Now push the image on Dockerhub using following command.

“ docker push RepositoryName ”

```
91983@DELL MINGW64 ~/OneDrive/Desktop/SEM5/ACO-LAB-2021-25(Local)/my-web-app (main)
$ docker push swati1010/dockerfile_experiment
Using default tag: latest
The push refers to repository [docker.io/swati1010/dockerfile_experiment]
ef299d924bbd: Preparing
7ede2d9ff365: Preparing
a48b037fba41: Preparing
cc2447e1835a: Preparing
denied: requested access to the resource is denied
```