UPES

UNIVERSITY OF TOMORROW

Application Containerization And Orchestration Lab

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Batch – DevOps B4

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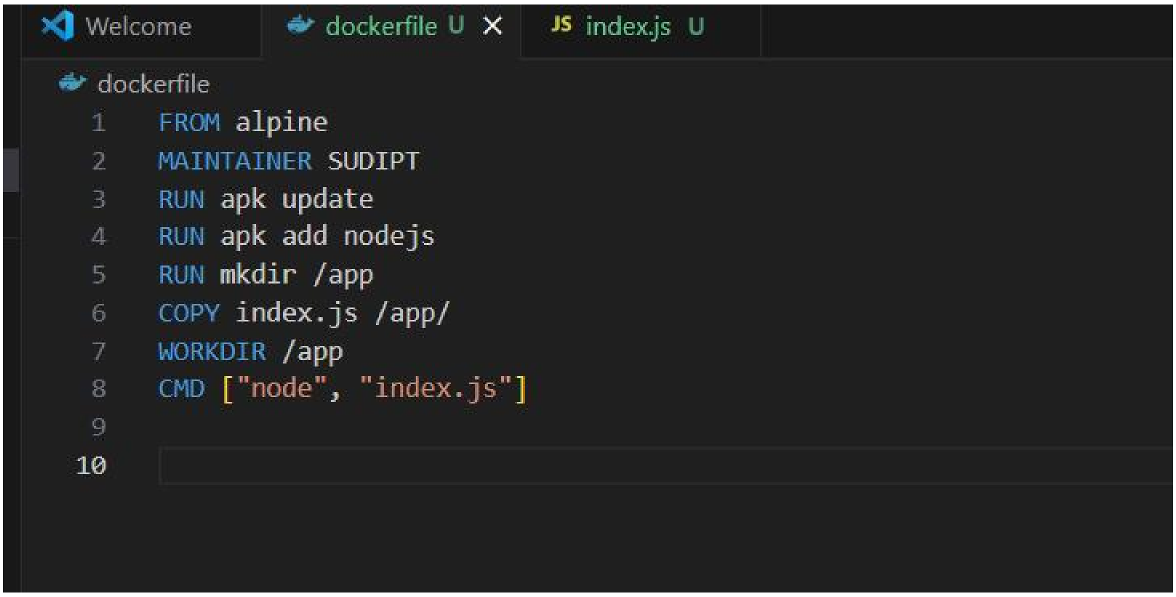
EXPERIMENT 5

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
```

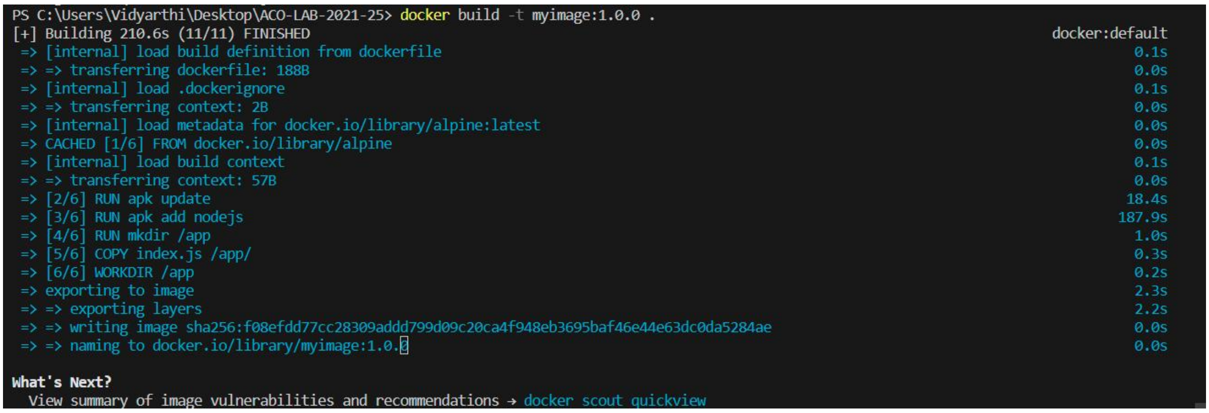


```
FROM alpine
MAINTAINER SUDIPT
RUN apk update
RUN apk add nodejs
RUN mkdir /app
COPY index.js /app/
WORKDIR /app
CMD ["node", "index.js"]

```

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

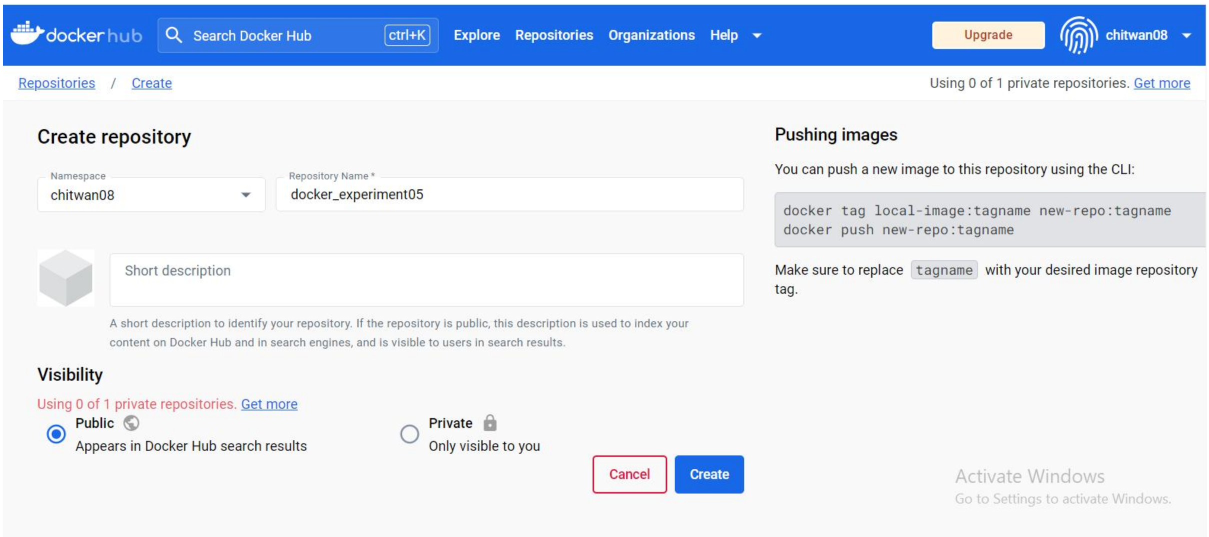
```
docker build -t myimage:1.0.1 .
```



```
PS C:\Users\Vidyarthi\Desktop\ACO-LAB-2021-25> docker build -t myimage:1.0.0 .
[+] Building 210.6s (11/11) FINISHED                                          docker:default
 => [internal] load build definition from dockerfile                                    0.1s
 => => transferring dockerfile: 188B                                                    0.0s
 => [internal] load .dockerignore                                                       0.1s
 => => transferring context: 2B                                                         0.0s
 => [internal] load metadata for docker.io/library/alpine:latest                        0.0s
 => CACHED [1/6] FROM docker.io/library/alpine                                          0.0s
 => [internal] load build context                                                       0.1s
 => => transferring context: 57B                                                        0.0s
 => [2/6] RUN apk update                                                               18.4s
 => [3/6] RUN apk add nodejs                                                          187.9s
 => [4/6] RUN mkdir /app                                                                1.0s
 => [5/6] COPY index.js /app/                                                           0.3s
 => [6/6] WORKDIR /app                                                                  0.2s
 => exporting to image                                                                  2.3s
 => => exporting layers                                                                 2.2s
 => => writing image sha256:f08efdd77cc28309addd799d09c20ca4f948eb3695baf46e44e63dc0da5284ae  0.0s
 => => naming to docker.io/library/myimage:1.0.0                                        0.0s

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

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



Repositories / Create

Using 0 of 1 private repositories. Get more

Create repository

Namespace: chitwan08

Repository Name *: docker_experiment05

Short description

A short description to identify your repository. If the repository is public, this description is used to index your content on Docker Hub and in search results, and is visible to users in search results.

Visibility

Using 0 of 1 private repositories. Get more

● Public — Appears in Docker Hub search results

○ Private — Only visible to you

Cancel Create

Pushing images

You can push a new image to this repository using the CLI:

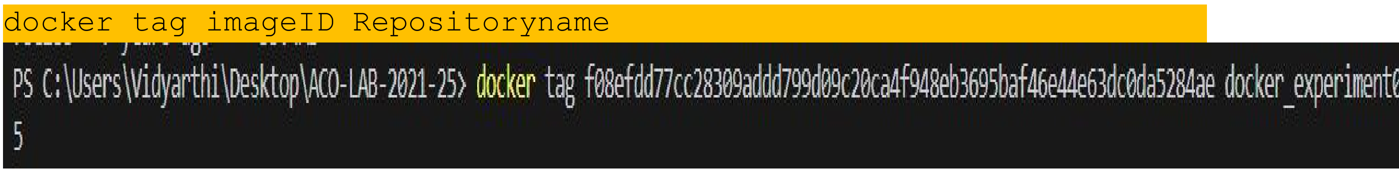
```
docker tag local-image:tagname new-repo:tagname
docker push new-repo:tagname
```

Make sure to replace `tagname` with your desired image repository tag.

Activate Windows
Go to Settings to activate Windows.

4. Tag the recently created image using following command.

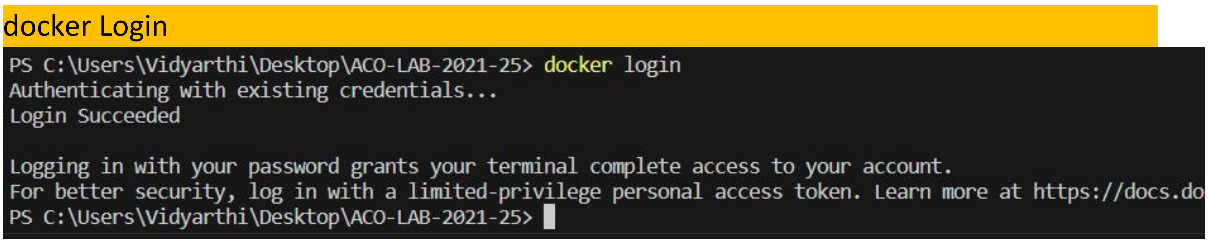
```
docker tag imageID Repositoryname
```



```
PS C:\Users\Vidyarthi\Desktop\ACO-LAB-2021-25> docker tag f08efdd77cc28309addd799d09c20ca4f948eb3695baf46e44e63dc0da5284ae docker_experiment0
5
```

5. Login to Dockerhub from console using following command.

```
docker Login
```

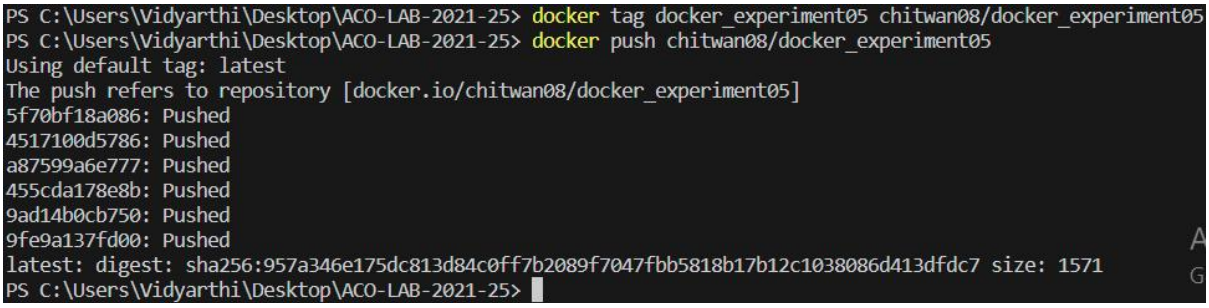


```
PS C:\Users\Vidyarthi\Desktop\ACO-LAB-2021-25> docker login
Authenticating with existing credentials...
Login Succeeded

Logging in with your password grants your terminal complete access to your account.
For better security, log in with a limited-privilege personal access token. Learn more at https://docs.do
PS C:\Users\Vidyarthi\Desktop\ACO-LAB-2021-25>
```

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

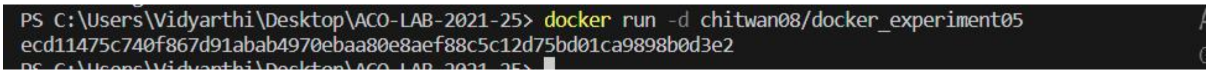
```
docker push Repositoryname
```



```
PS C:\Users\Vidyarthi\Desktop\ACO-LAB-2021-25> docker tag docker_experiment05 chitwan08/docker_experiment05
PS C:\Users\Vidyarthi\Desktop\ACO-LAB-2021-25> docker push chitwan08/docker_experiment05
Using default tag: latest
The push refers to repository [docker.io/chitwan08/docker_experiment05]
5f70bf18a086: Pushed
4517100d5786: Pushed
a87599a6e777: Pushed
455cda178e8b: Pushed
9ad14b0cb750: Pushed
9fe9a137fd00: Pushed
latest: digest: sha256:957a346e175dc813d84c0ff7b2089f7047fbb5818b17b12c1038086d413dfdc7 size: 1571
PS C:\Users\Vidyarthi\Desktop\ACO-LAB-2021-25>
```

7. Pull and Run the container of your deployed image on docker hub.

```
Docker run -d image_name
```



```
PS C:\Users\Vidyarthi\Desktop\ACO-LAB-2021-25> docker run -d chitwan08/docker_experiment05
ecd11475c740f867d91abab4970ebaa80e8aef88c5c12d75bd01ca9898b0d3e2
PS C:\Users\Vidyarthi\Desktop\ACO-LAB-2021-25>
```