UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

APPLICATION CONTAINERIZATION AND ORCHESTRATION LAB

COURSE: B.Tech CSE (Devops)

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EXPERIMENT 5

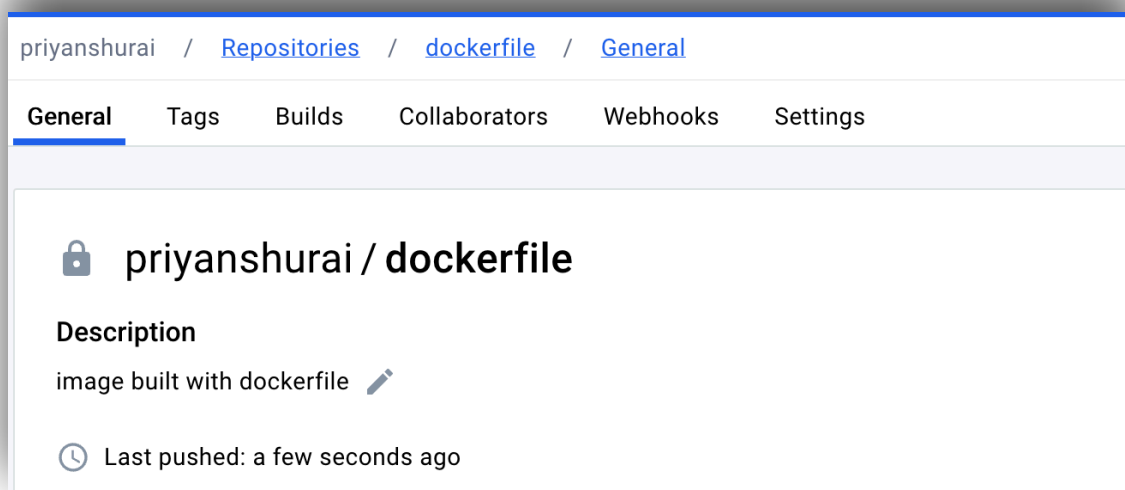**AIM: Working with Dockerfile to Build and Push Docker Image**

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
```

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

```
priyanshurai@MacBook-Air EXPERIMENT 5 (Dockerfile) (2) % docker buildx build -t myimage:0.1 .
[+] Building 463.1s (10/11)
 => [internal] load .dockerignore
 => => transferring context: 2B
 => [internal] load build definition from Dockerfile
 => => transferring dockerfile: 177B
 => [internal] load metadata for docker.io/library/alpine:latest
 => CACHED [1/7] FROM docker.io/library/alpine
 => [internal] load build context
 => => transferring context: 205B
 => [2/7] RUN apk update
 => [3/7] RUN apk add nodejs
 => [4/7] RUN mkdir /app
 => [5/7] COPY index.js /app
 => [6/7] WORKDIR /app
 => [7/7] RUN node index.js
```

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

priyanshurai / Repositories / dockerfile / General

General   Tags   Builds   Collaborators   Webhooks   Settings

🔒 **priyanshurai / dockerfile**

Description

image built with dockerfile ✏️

🕐 Last pushed: a few seconds ago

4. Tag the recently created image using following command.

5. Login to Dockerhub from console using following command.

```
priyanshurai@MacBook-Air EXPERIMENT 5 (Dockerfile) (2) % docker tag 5628e5ea3c17 priyanshurai/nginx
priyanshurai@MacBook-Air EXPERIMENT 5 (Dockerfile) (2) % docker login
Authenticating with existing credentials...
Login Succeeded
```

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

```
priyanshurai@MacBook-Air EXPERIMENT 5 (Dockerfile) (2) % docker push priyanshurai/nginx
Using default tag: latest
The push refers to repository [docker.io/priyanshurai/nginx]
3033c8a8ba59: Mounted from library/nginx
cb1c835f32b9: Mounted from library/nginx
94677b587bab: Mounted from library/nginx
0367492d0972: Mounted from library/nginx
21bb29481bb4: Mounted from library/nginx
66544fa913ad: Mounted from library/nginx
f4e4d9391e13: Mounted from library/httpd
latest: digest: sha256:736342e81e97220f954b8c33846ba80d2d95f59b30225a5c63d063c8b250b0ab size: 1778
```

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

```
priyanshurai@MacBook-Air EXPERIMENT 5 (Dockerfile) (2) % Docker run -d priyanshurai/nginx
f27711efd4f0bf9f60a9f1aa960eebd993c10dda0fc7a10b7b6d8645f523c85d
priyanshurai@MacBook-Air EXPERIMENT 5 (Dockerfile) (2) %
```