LAB-1:Nodejs Project

Requirements:
Install : 1.nodejs for windows

Install Node.js Properly

Step 1 — Download Node.js

Go to:
https://nodejs.org

Click **LTS (Recommended)** version.

Step 2 — Install

During installation:
>>Keep all default options
>>Make sure **"Add to PATH"** is checked

Click **Next** → **Next** → **Install**

Step 3 — Verify Installation

Open a **new** PowerShell window and run:

```
node -v
npm -v
```

You should see version numbers like:

```
v20.x.x
10.x.x
```

If yes → Node.js is successfully installed.
2.docker
3.Extension:
--docker dx and docker

check:

```
docker -v
node –v
```

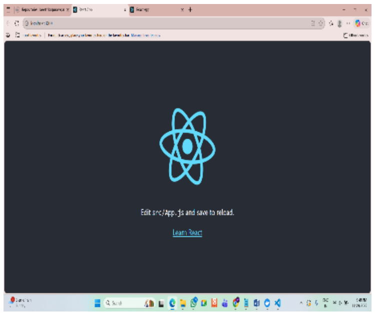
Nodejs Project:

Go to Desktop
create folder – DockerProject (open through Vs code – cd DockerProject (make sure you are in proper directory))

Check:
npx –v (to check version)
Set-ExecutionPolicy RemoteSigned -Scope CurrentUser(powershell)
create file inside that folder using
npx create-react-app testapp
(--Installing packages. This might take a couple of minutes.
You can now view testapp in the browser.)

this will create file testapp inside DockerProject

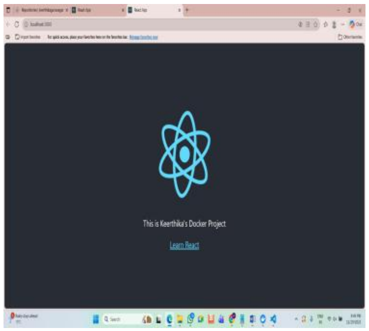
Run:
cd testapp
npx start
--Local: http://localhost:3000
--On Your Network: http://172.26.176.1:3000
It will open the web page in the Browser



Edit src/App.js and save to reload.

Learn React

To come out of it press ctrl+c
--and then make changes in src file -- app.js --10th line Edit – This is docker project



This is Keerthika's Docker Project

Learn React

Note : make sure you have logged in docker and docker Hub

docker login -u keerthikagunasegar
Password:Keerthika@2004

Build Docker Image:
--create a file inside testapp:

Dockerfile

```
FROM node:18

WORKDIR /app

COPY package*.json ./

RUN npm install

COPY . .

EXPOSE 3000

CMD ["npm", "start"]
```

Run:
Without tag: docker build .
With tag: docker build -t nodeproject .

Run:
docker image ls (lists the images from docker)

docker run -p 3000:3000 image_id

open in browser

http://localhost:3000 (this will show your image on the browser)

SUMMARY:

```
docker build .     -- Build Docker image from Dockerfile
docker build -t name .   -- Build image with a tag (name)

docker image ls    -- List all Docker images

docker run <image_id>    -- Run a container from the image
docker run -p 3000:3000 <image_id>    -- Run container & expose port to browser

docker ps -a   -- Show all containers (running + stopped)

docker run -d -p 3000:3000 <image_id>  -- Run container in detached (background) mode

docker stop <container_id>  -- Stop a running container
docker rm <container_id>  -- Remove a container

docker rmi <image_id>   -- Delete an image
```