School of Computer Science Engineering and Technology

Course- B.Tech
Course Code- CSET231

Type- Elective(Full Stack)
Course Name- Programming Methodologies for Backend Development

Year- 2022-23
Date- 15-Apr-2023

Semester- Even
Batch- (4th semester) Full Stack specialization

Lab Assignment (Week 10, Assignment 18)

CO-Mapping

Exp. No.	Name	CO1	CO2	CO3
18	Use Docker to package a Node.js application	--	✓	✓

Objective: To learn to use Docker to package a Node.js application.

Q1 Install docker desktop

Q2 Create a sample nodejs project with app.js which uses express to show hello world on web page.

Q3 Create these files:

1. .dockerignore:

```
node_modules
npm-debug.log
```

2. Dockerfile

```
FROM node:latest

RUN mkdir -p ../dockerized

WORKDIR ../dockerized

COPY package*.json ../dockerized
```

```
RUN npm install express

COPY . ../dockerized

EXPOSE 9080
CMD [ "node", "app" ]
```

3. Docker-compose.yml

```
version: '2'

services:
  your-app:
    build: .
    ports:
     - "9080:9080"
    restart: always
    container_name: app_container
    volumes:
     - ./src:E:\\Mohit\\2022\\Apr2022\\5Apr22\\app\\src
    environment:
     - SERVER_PORT=9080
```

(Give the full path to your code where you have placed your app.js file)

Q4 Run following commands on command prompt:

```
docker-compose build
docker run -it -p 9080:9080 app_your-app
```

Q5 Check by opening url, hello world should be displayed there:

http://localhost:9080

Q6 (Optional)

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Test to push to docker image to docker site using:

docker login

docker push yourname/your-app:latest

Check from another machine using same login:

docker login

docker pull yourname/your-app:latest

docker run yourname/your-app

Open the same url on different machine and see if it works fine.