National Textile University

Department of Computer Science

Subject:

Opreating System

Submitted to:

Sir Nasir

Submitted by:

Ahmad Fawad

Reg number:

1129

Lab no. :
11

Semester:

5th

Docker file code Backend:

```
FROM node:lts-alpine

WORKDIR /app

COPY package*.json ./

RUN npm install

COPY server.js .

EXPOSE 3000
```

```
CMD ["node", "server.js"]
```

Dockerfile code frontend:

```
FROM nginx:trixie

COPY index.html /usr/share/nginx/html/

EXPOSE 80
```

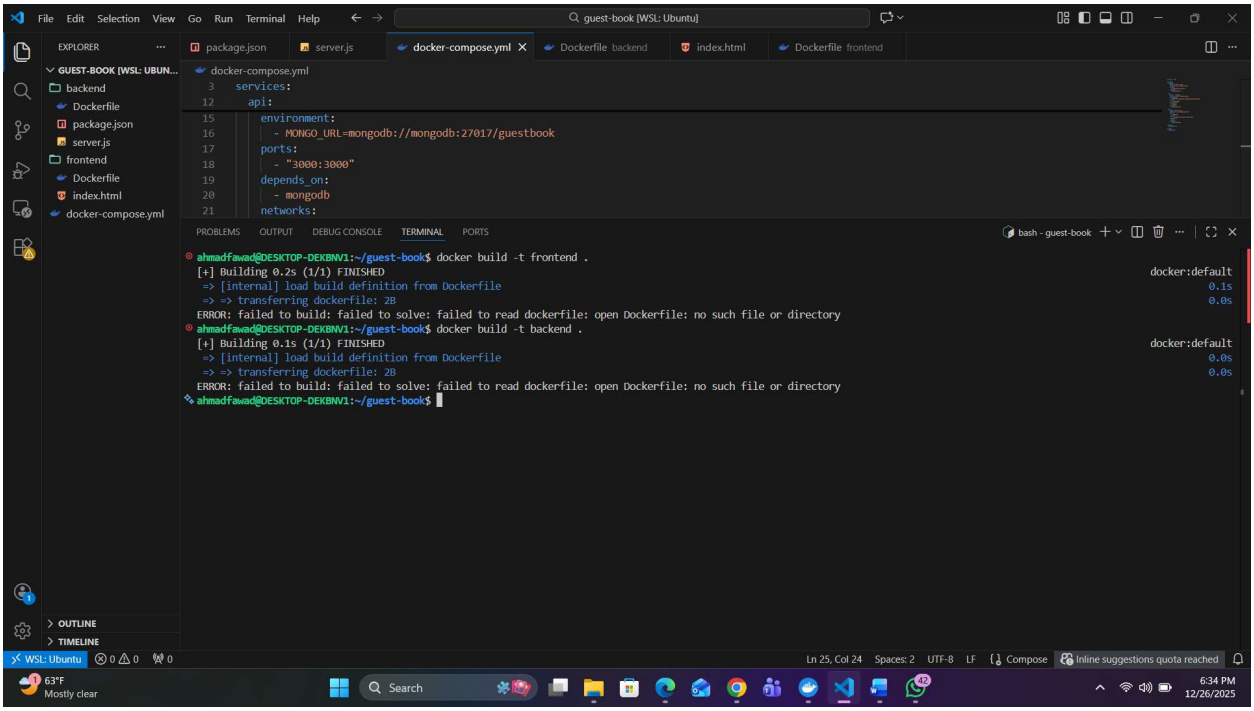
Docker-compose.yml

```
version: "3.8"

services:
  mongodb:
    image: mongo:7-jammy
    container_name: guestbook-db
    volumes:
      - mongo_data:/data/db
    networks:
      - guestbook-net

  api:
    build: ./backend
```

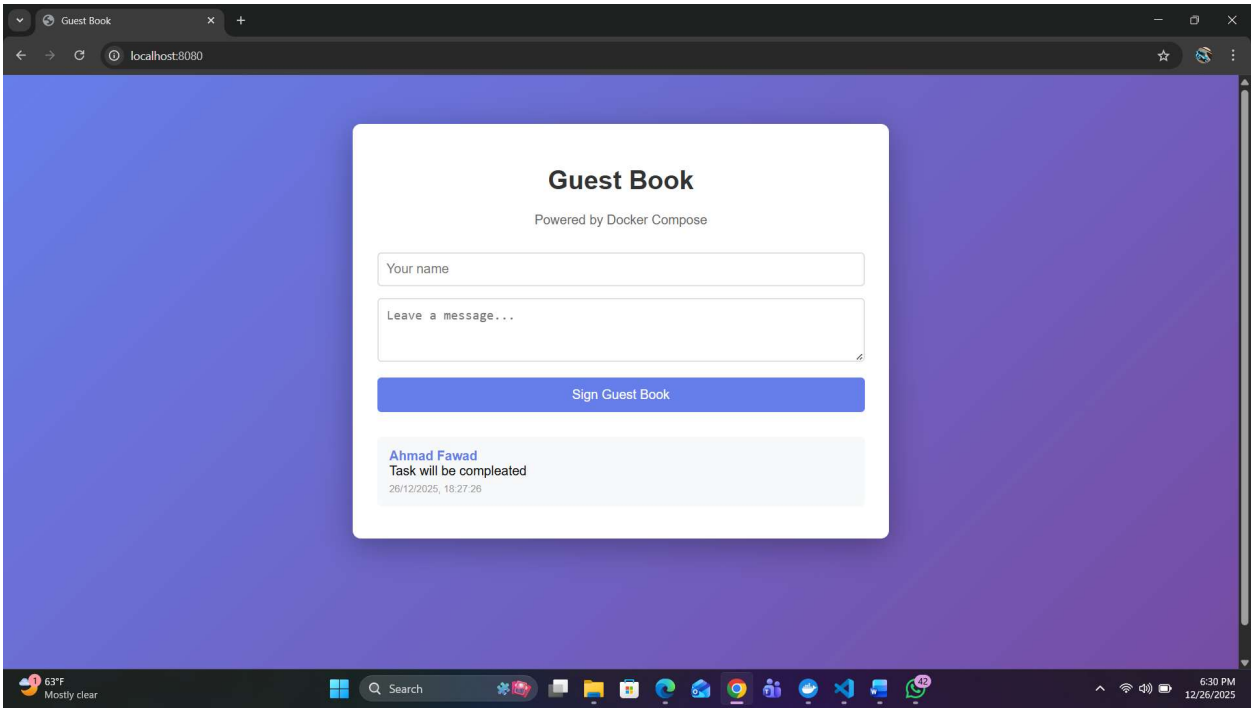
```
    container_name: guestbook-api
    environment:
      - MONGO_URL=mongodb://mongodb:27017/guestbook
    ports:
      - "3000:3000"
    depends_on:
      - mongodb
    networks:
      - guestbook-net

  web:
    image: nginx:alpine
    container_name: guestbook-web
    ports:
      - "8080:80"
    volumes:
      - ./frontend:/usr/share/nginx/html
    depends_on:
      - api
    networks:
      - guestbook-net

networks:
  guestbook-net:

volumes:
```

mongo_data:

image build both front and back end:



Final output:


Guest Book
localhost:8080
Guest Book
Powered by Docker Compose
Your name
Leave a message...
Sign Guest Book
Ahmad Fawad
Task will be compleated
26/12/2025, 18:27:26
63°F
Mostly clear
Search
6:30 PM
12/26/2025