NATIONAL TEXTILE

UNIVERSITY

DEPARTMENT OF COMPUTER SCIENCE

Subject

Operating System

SUBMITTED BY:

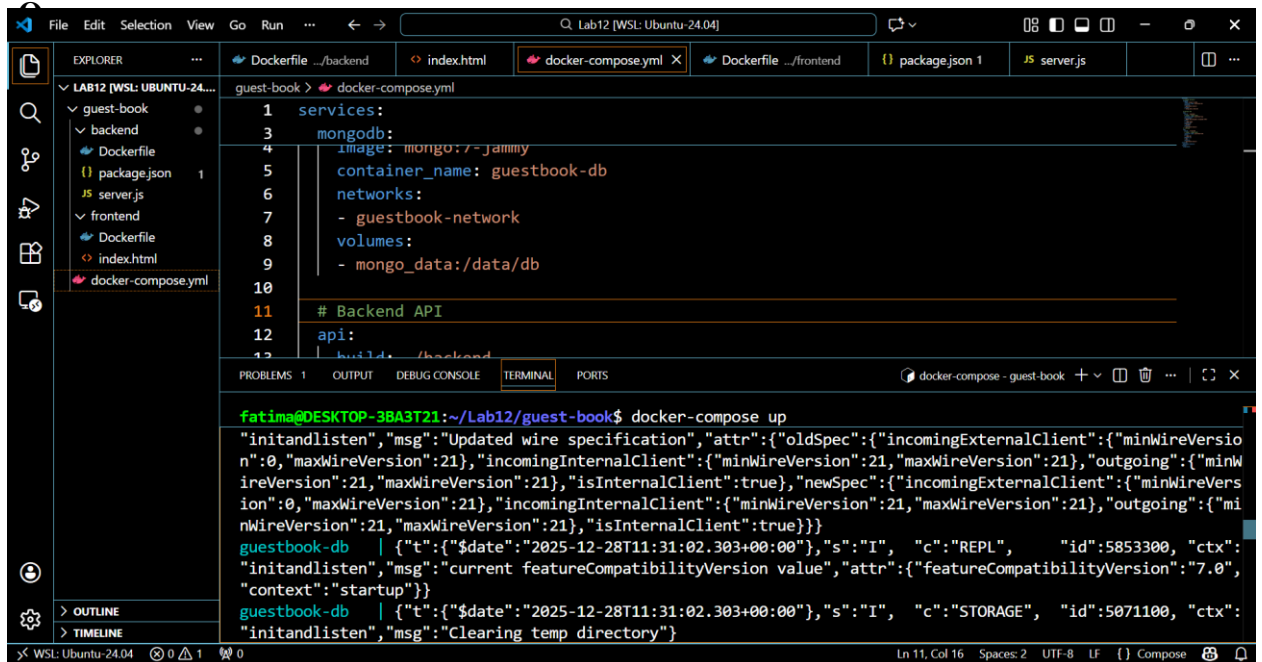Fatima Waseem: 23-NTU-CS1155

SECTION SE: 5th (A)

SUBMITTED TO:

Sir Nasir
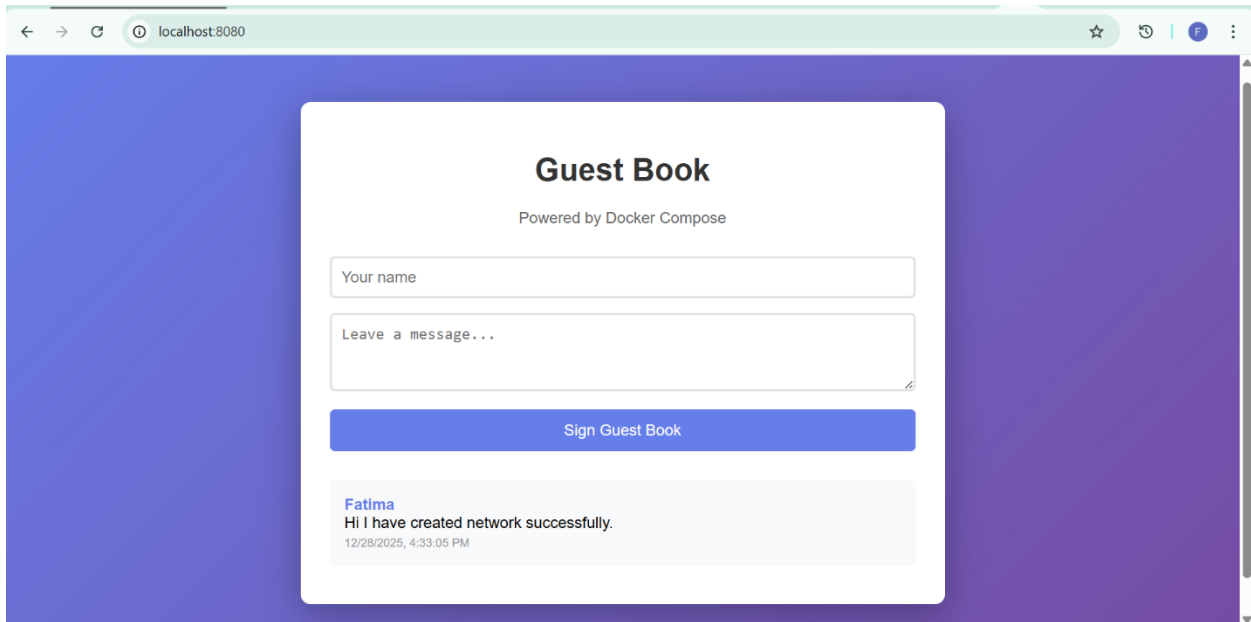
Lab 12

1. Screenshot of Whole Project:

2. Output of Both images:

3. Webpage at localhost: 8080

4. Docker compose file:

```yaml
services:
  # MongoDB Database
  mongodb:
    image: mongo:7-jammy
    container_name: guestbook-db
    networks:
      - guestbook-network
    volumes:
      - mongo_data:/data/db

  # Backend API
  api:
    build: ./backend
    # image: <image_name>
    container_name: guestbook-api
    environment:
      - MONGO_URL=mongodb://mongodb:27017
    ports:
      - "3000:3000"
    depends_on:
      - mongodb
    networks:
      - guestbook-network
```

```
22         networks:
23           - guestbook-network
24       # Frontend
25       web:
26         build: ./frontend
27         # image: <image_name>
28         container_name: guestbook-web
29         ports:
30         - "8080:80"
31         depends_on:
32         - api
33         networks:
34           - guestbook-network
35   networks:
36     guestbook-network:
37   volumes:
38     mongo_data:
39
```

Docker file backend:

```
1    FROM node:lts-alpine3.23
2    WORKDIR /app
3    COPY package*.json ./
4    RUN npm install
5    COPY server.js .
6    EXPOSE 3000
7    CMD ["npm", "start"]
```

Docker file frontend:

```
1    FROM nginx:trixie
2    COPY index.html /usr/share/nginx/html/
3    EXPOSE 80
```