NATIONAL TEXTILE

UNIVERSITY

DEPARTMENT OF COMPUTER SCIENCE

SUBMITTED BY:

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SECTION SE: 5th(A)

Lab - 14

SUBMITTED TO:

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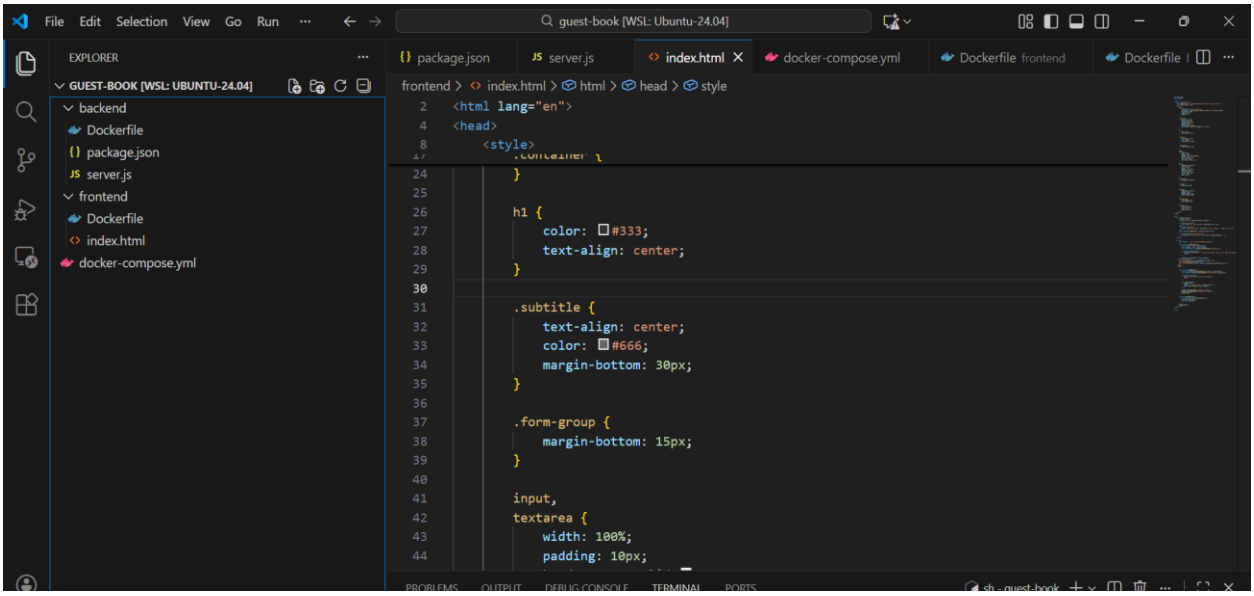
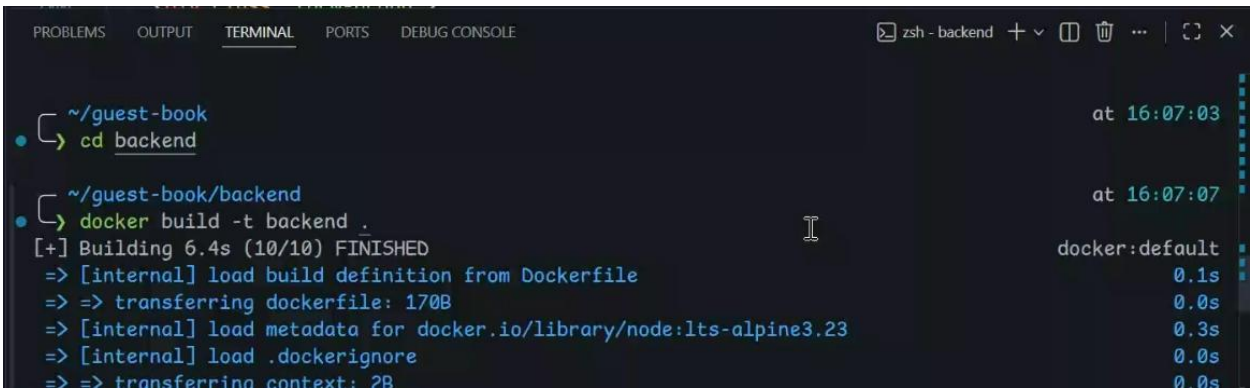
SUBMISSION DATE:

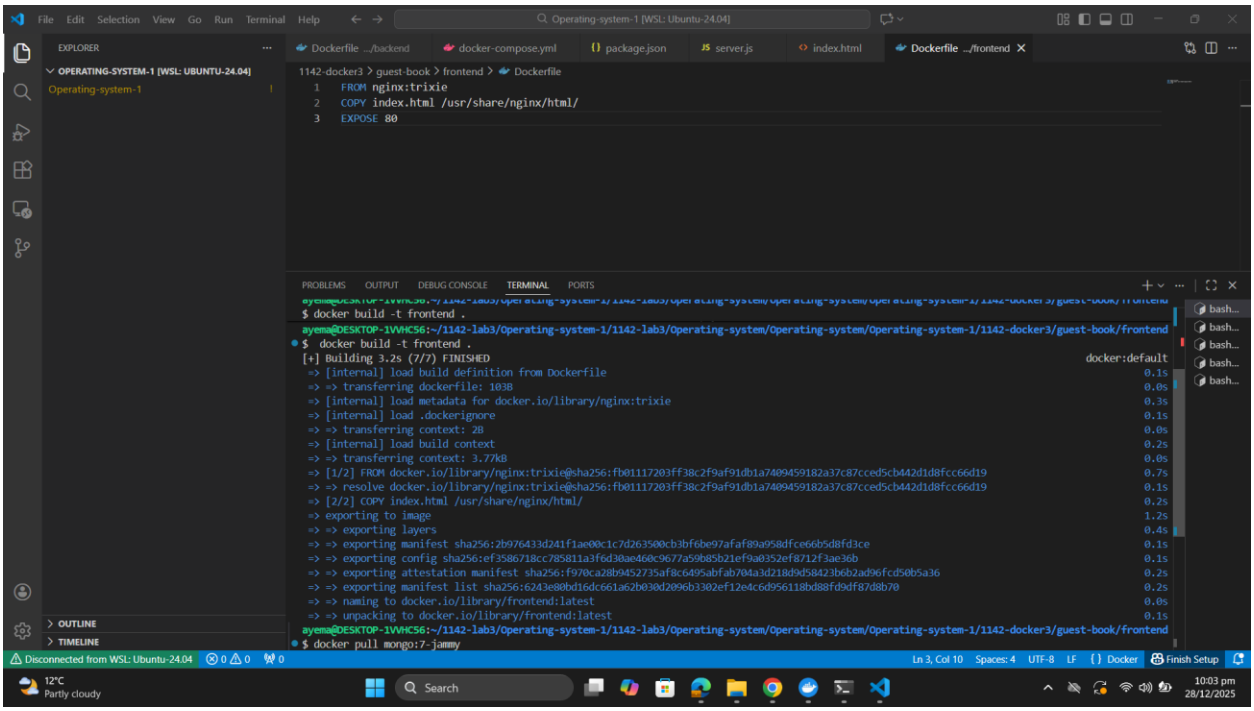
12-28-2025

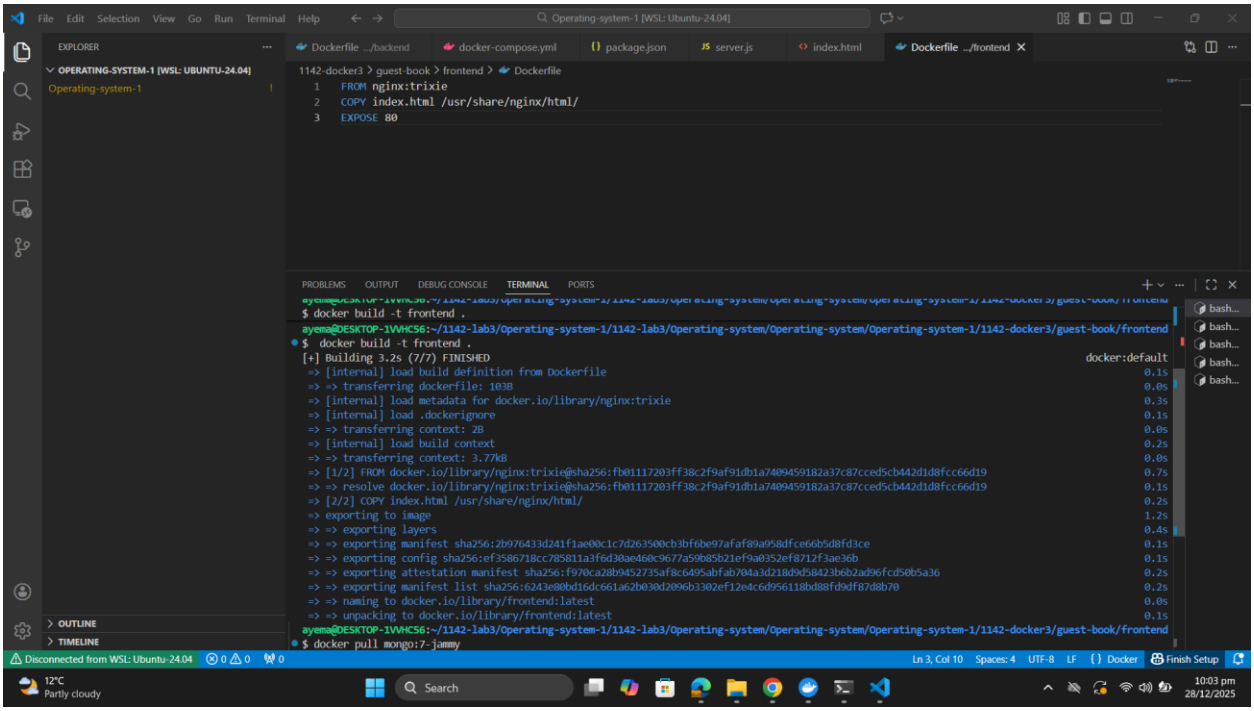
1. **Screenshot of Whole project structure:**



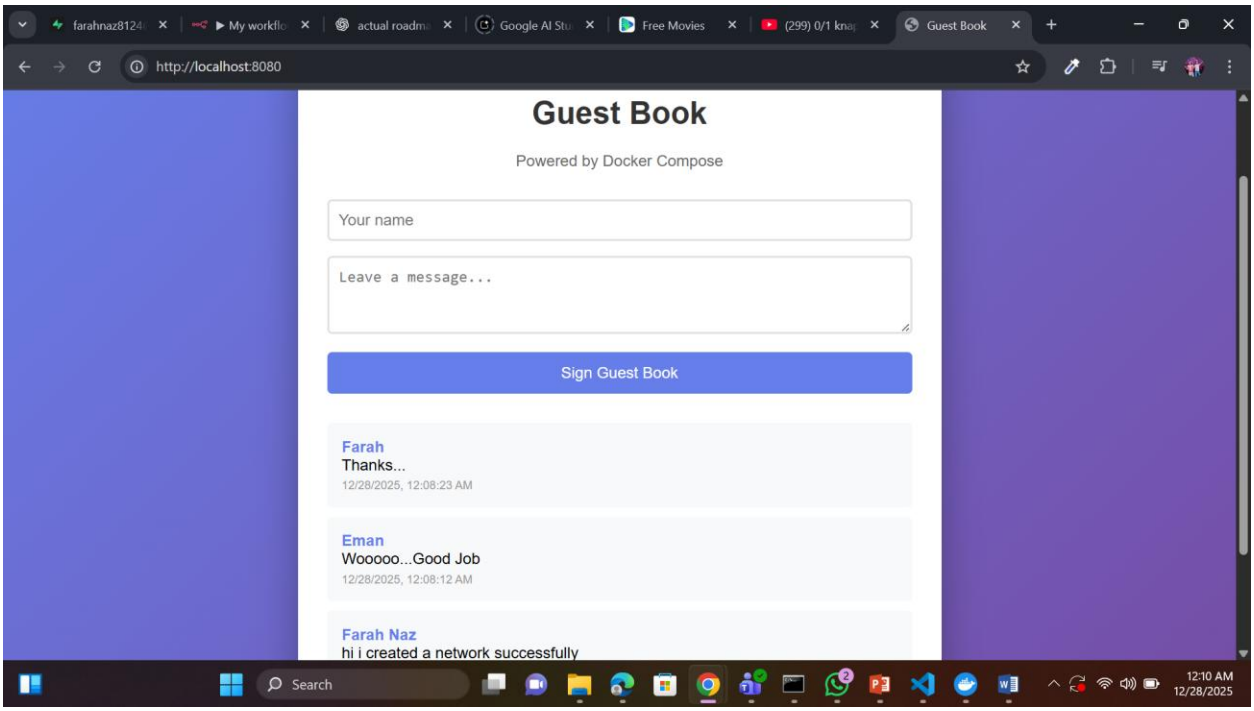
2. **Output of both image building commands e.g "docker build -t frontend ."**







3. Webpage at localhost:8080:



4. **Copy contents of docker-compose and both Dockerfiles in the pdf.**

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
  # Frontend
  web:
    build: ./frontend
    # image: <image_name>
    container_name: guestbook-web
    ports:
    - "8080:80"
    depends_on:
    - api
    networks:
    - guestbook-network
networks:
  guestbook-network:
volumes:
  mongo_data:
```

Docker file of backend:

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

Docker file of frontend:

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