



NATIONAL TEXTILE

UNIVERSITY

DEPARTMENT OF COMPUTER SCIENCE

SUBMITTED BY:

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23-NTU-CS-1149

SECTION SE: 5th(A)

Lab 3-docker

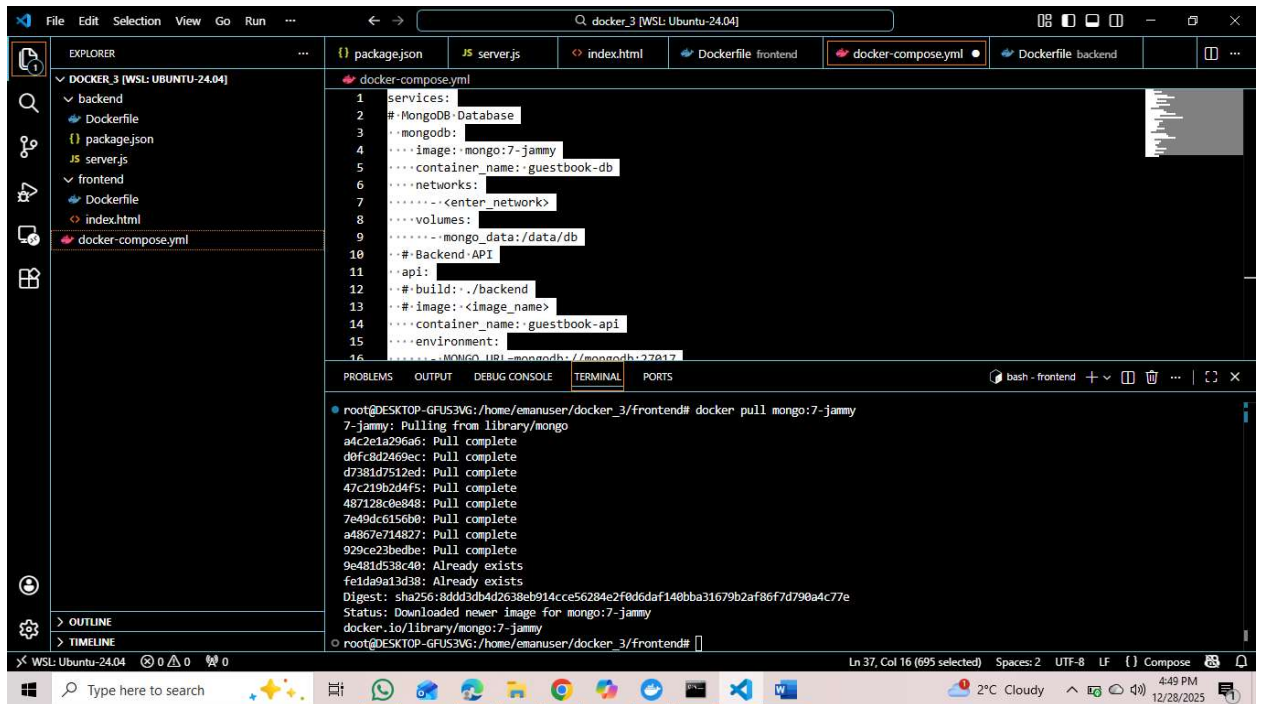
SUBMITTED TO:

Sir Nasir Mehmood

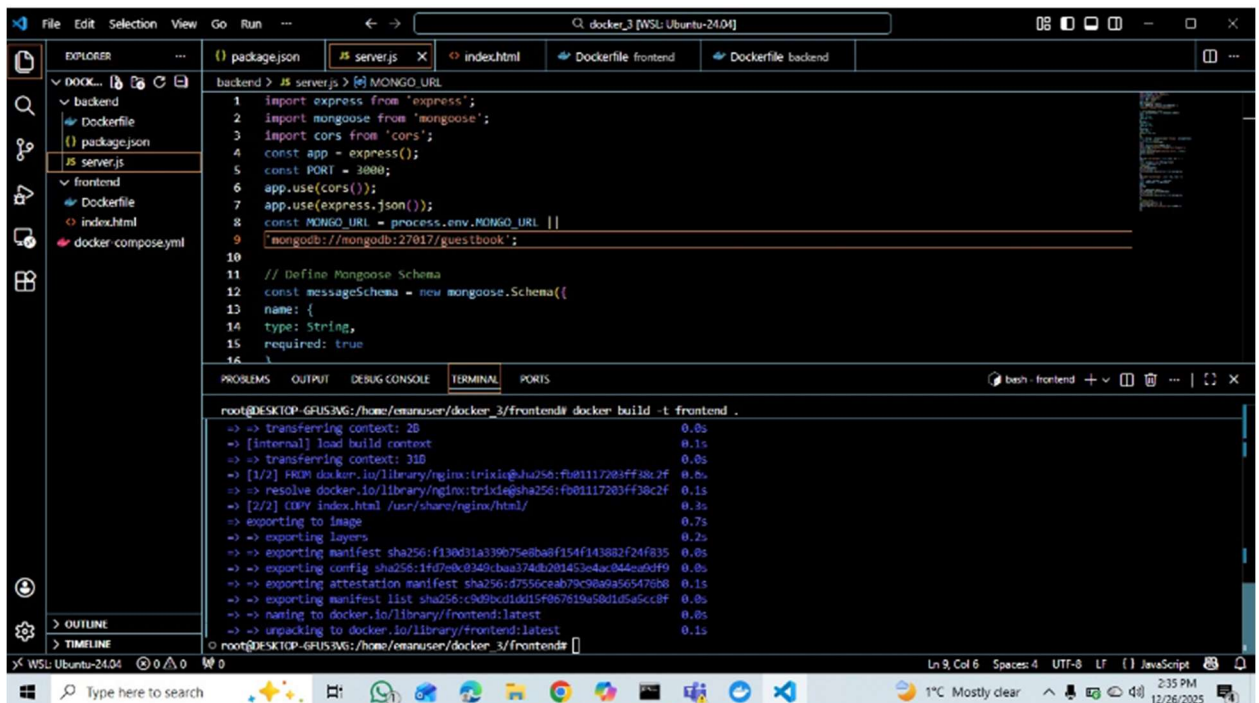
SUBMISSION DATE:

12-28-2025

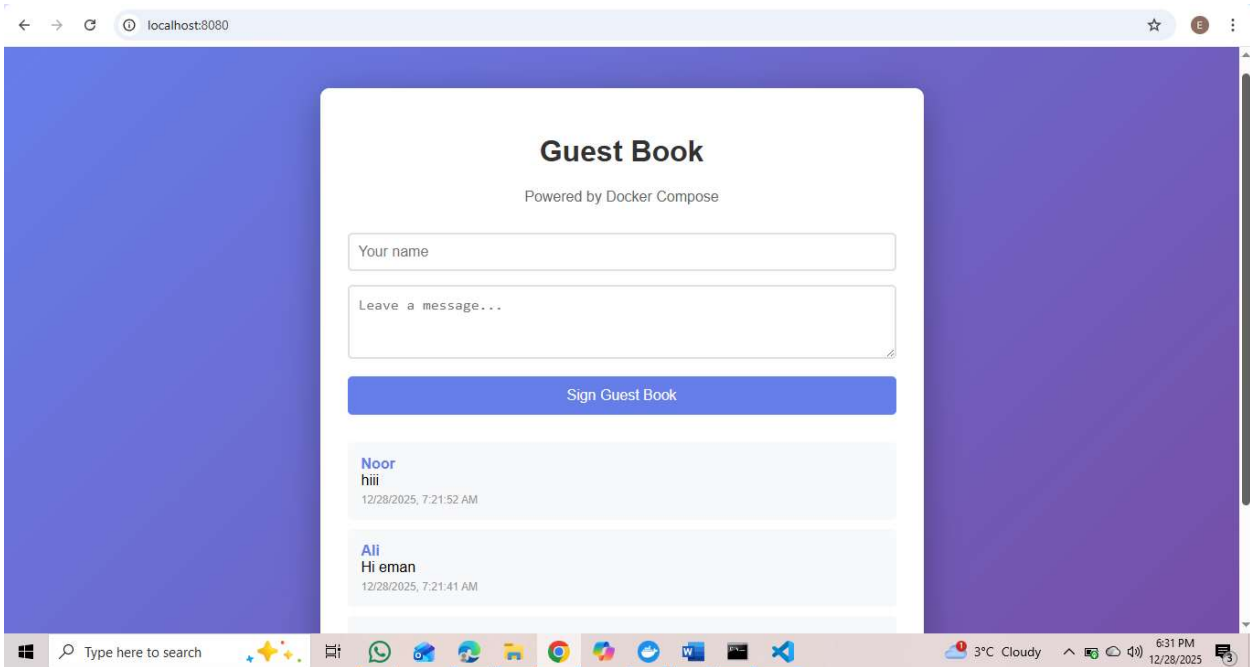
1. Screenshot of Whole project structure:



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 Docker files in the pdf.

Docker compose file:

```
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

```