



## NATIONAL TEXTILE

## UNIVERSITY

DEPARTMENT OF COMPUTER SCIENCE

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**Lab - 10**

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## 1. Screenshot of Whole project structure:

The screenshot shows the VS Code interface with the following details:

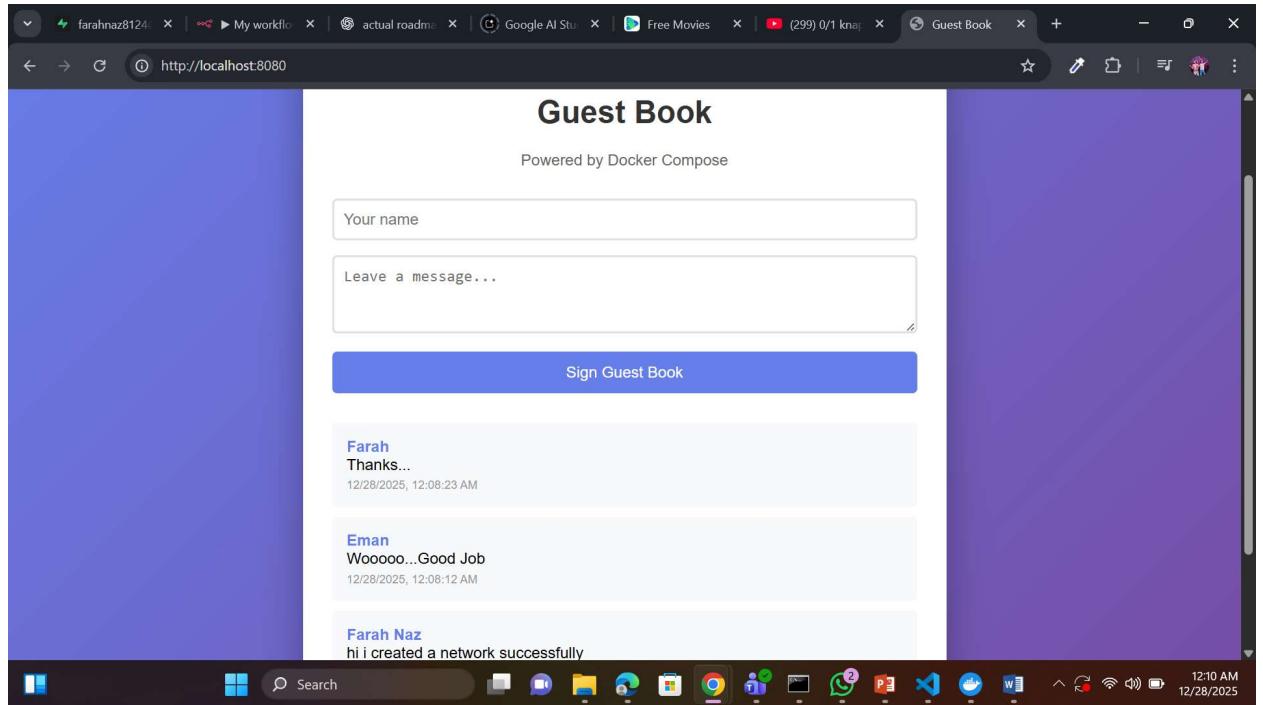
- File Explorer:** Shows the project structure under "GUEST-BOOK [WSL: UBUNTU-24.04]". It includes a "backend" folder containing a Dockerfile and package.json, and a "frontend" folder containing a Dockerfile, index.html, and docker-compose.yml.
- Code Editor:** Displays the content of index.html. The code includes CSS styles for h1 and .form-group elements, and HTML forms for input and textarea fields.
- Terminal:** Shows the command "docker compose up --build" being run in the WSL Ubuntu-24.04 environment. The output indicates a timestamp and meta checkpoint information.
- Bottom Bar:** Includes the WSL status bar, a taskbar with various icons, and system status indicators like battery level and signal strength.

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

The screenshot shows the VS Code interface with the following details:

- File Explorer:** Shows the project structure under "GUEST-BOOK [WSL: UBUNTU-24.04]". It includes a "backend" folder containing a Dockerfile and package.json, and a "frontend" folder containing a Dockerfile, index.html, and docker-compose.yml.
- Terminal:** Shows the command "docker build -t backend ." being run in the WSL Ubuntu-24.04 environment. The output shows the build process for the backend image, including copying files, running npm install, and exporting layers.
- Terminal:** Shows the command "cd .." being run in the terminal.
- Terminal:** Shows the command "farah@DESKTOP-QLMRLIR:~/guest-book\$ cd frontend" being run in the terminal.
- Terminal:** Shows the command "farah@DESKTOP-QLMRLIR:~/guest-book\$ docker build -t frontend ." being run in the WSL Ubuntu-24.04 environment. The output shows the build process for the frontend image, including loading the Dockerfile, transferring context, and loading build context.
- Bottom Bar:** Includes the WSL status bar, a taskbar with various icons, and system status indicators like battery level and signal strength.

### 3. Webpage at localhost:8080:



### 4. Copy contents of docker-compose and both Dockerfiles 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
```