



National Textile University  
**Department of Computer Science**

**Subject:**

Opreating System

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**Submitted to:**

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**Submitted by:**

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Reg number:

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1129

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Lab no. :

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Semester:

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5<sup>th</sup>

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## Docker file code Backend:

```
FROM node:its-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:

The screenshot shows a Visual Studio Code (VS Code) interface running on Windows, connected to a WSL (Ubuntu) workspace named "GUEST-BOOK [WSL: UBUN...]. The workspace contains several files:

- EXPLORER**: Shows the file structure: `backend` (Dockerfile, package.json, server.js) and `frontend` (Dockerfile, index.html).
- EDITOR**: Displays `docker-compose.yml` with the following content:

```
version: '3'
services:
  api:
    environment:
      - MONGO_URL=mongodb://mongodb:27017/guestbook
    ports:
      - "3000:3000"
    depends_on:
      - mongodb
    networks:
```

The **TERMINAL** tab shows the output of running `docker build` commands:

- frontend**: Failed to build because no Dockerfile was found.
- backend**: Failed to build because no Dockerfile was found.

The status bar at the bottom indicates the environment is "WSL: Ubuntu". The system tray shows the date as 12/26/2023 and the time as 6:57 PM. The taskbar at the bottom includes icons for File Explorer, Task View, Start, Search, Taskbar settings, and pinned applications.

## Final output:

