MID EXAM PROJECT REPORT

DISTRIBUTED PARALLEL SYSTEM

Website using docker

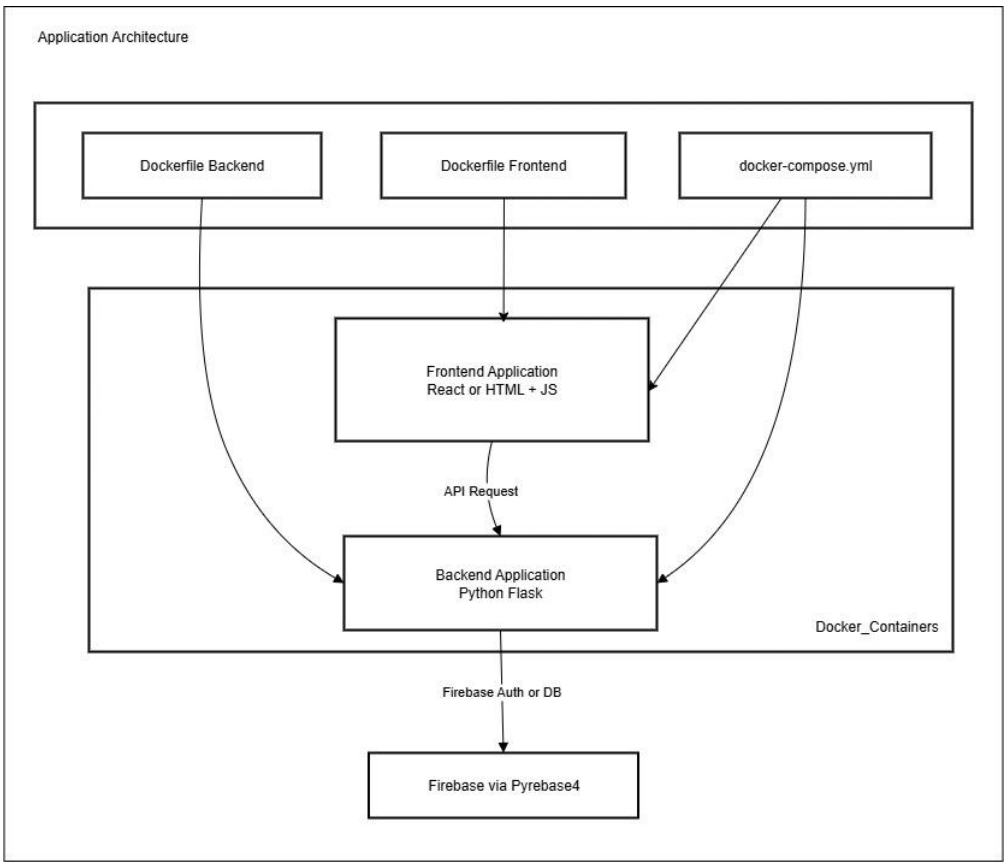
Group 3 – Information Technology Class 3

1. Anugrah Ananda Rivai (001202300178)
2. Putri Dinam Nahdiyah (001202300048)

Introduction/ Background

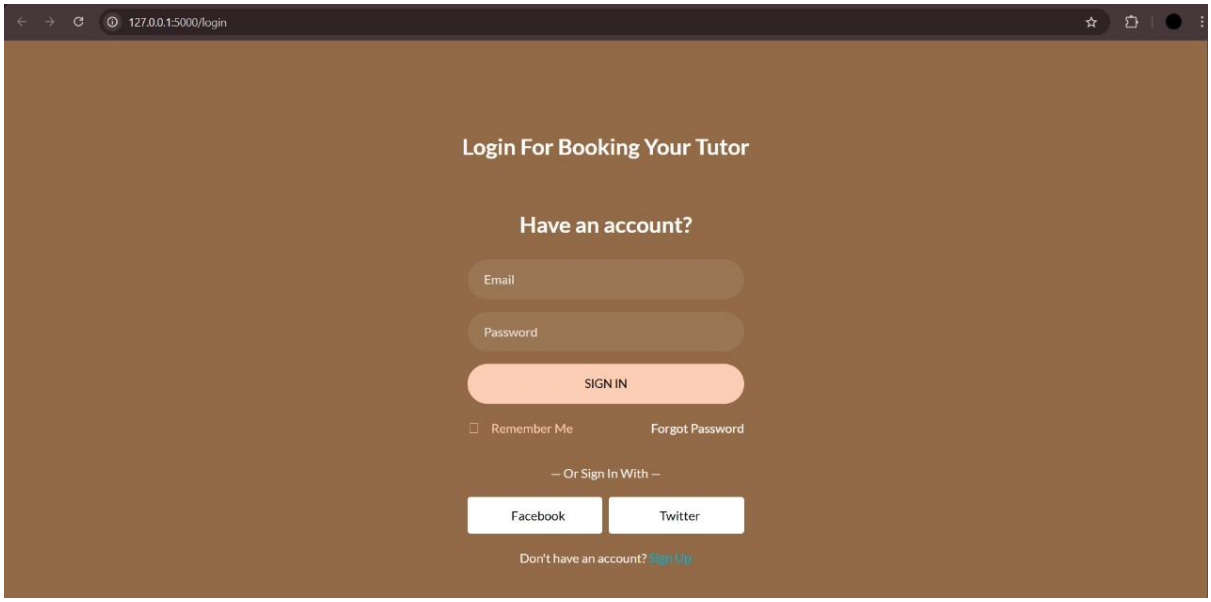
we created a website called your tutor, where this website is a place where people who want to find private tutors in certain fields online, and they can negotiate about the online and offline teaching system between the tutor and the client. we use docker, python as the backend, css and html as frontend, and firebase authentication.

Aplication Architecture (dia)



Output :

User have to login first if they already have an account, but if they haven't, they have to sign up fisrt and then their account will registered in firebase. Frontend send request to backend and the backed uses firebase to validate. Respons goes back to frontend.

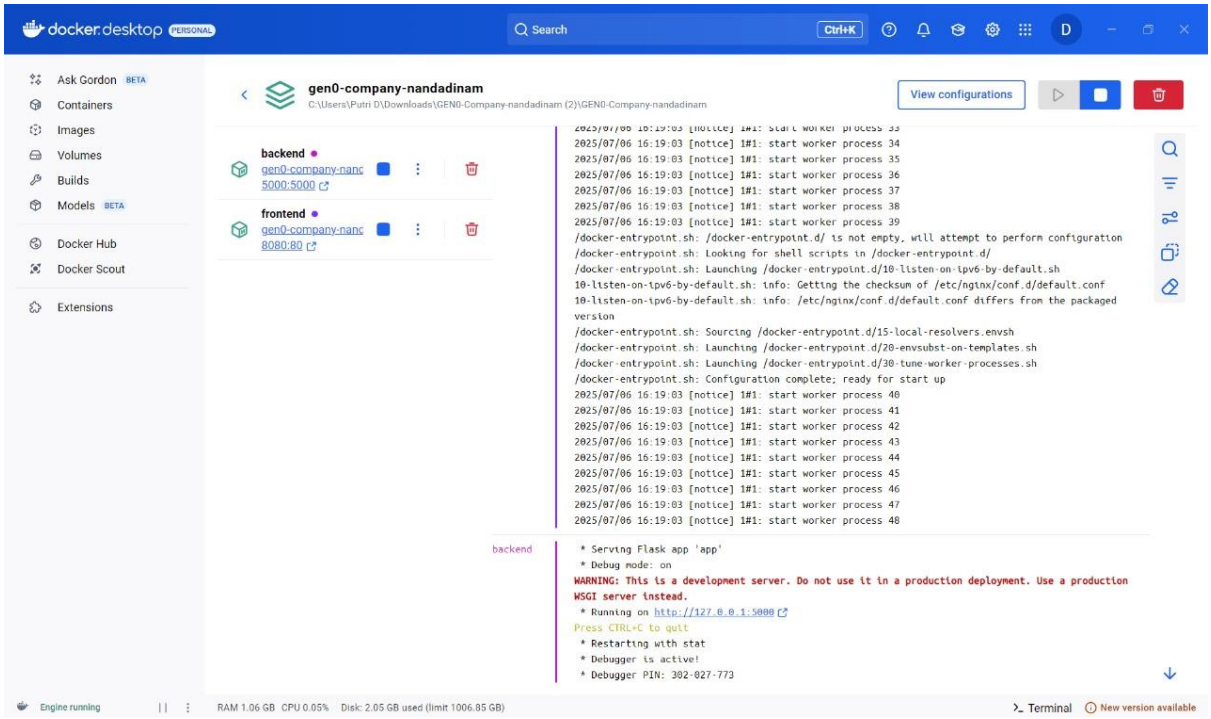


App.py :

When we run python app.py, it will give us the web link

Docker :

This is what it looks like in the docker



Backend docker file

```dockerfile
FROM python:3.10-slim

# 1. Install dependencies dulu
RUN apt-get update && apt-get install -y \
    gcc \
    libffi-dev \
    build-essential \
    && rm -rf /var/lib/apt/lists/*

# 2. Siapkan working dir dan install Python lib
WORKDIR /app
COPY requirements.txt .
RUN pip install --no-cache-dir -r requirements.txt

# 3. Copy source code
COPY . /app

EXPOSE 5000
CMD ["python", "app.py"]
```

Frontend docker file

```
FROM nginx:alpine

COPY default.conf /etc/nginx/conf.d/default.conf
COPY . /usr/share/nginx/html

```

Deafault.conf frontend

```
server {
    listen 80;
    server_name localhost;

    location / {
        root /usr/share/nginx/html;
        index index.html;
        try_files $uri $uri/ =404;
    }
}
```

Docker compose yml

docker-compose.yml

```
▷Run All Services
services:
  ▷Run Service
  backend:
    build:
      context: ./backend
    container_name: gen0-backend
    ports:
      - "5000:5000"

    environment:
      - FLASK_ENV=development
    restart: unless-stopped

  ▷Run Service
  frontend:
    build:
      context: ./frontend
    container_name: gen0-frontend
    ports:
      - "8080:80"
    volumes:
      - ./frontend:/usr/share/nginx/html
    restart: unless-stopped
```