

MID EXAM PROJECT REPORT

DISTRIBUTED PARALLEL SYSTEM

Website using docker

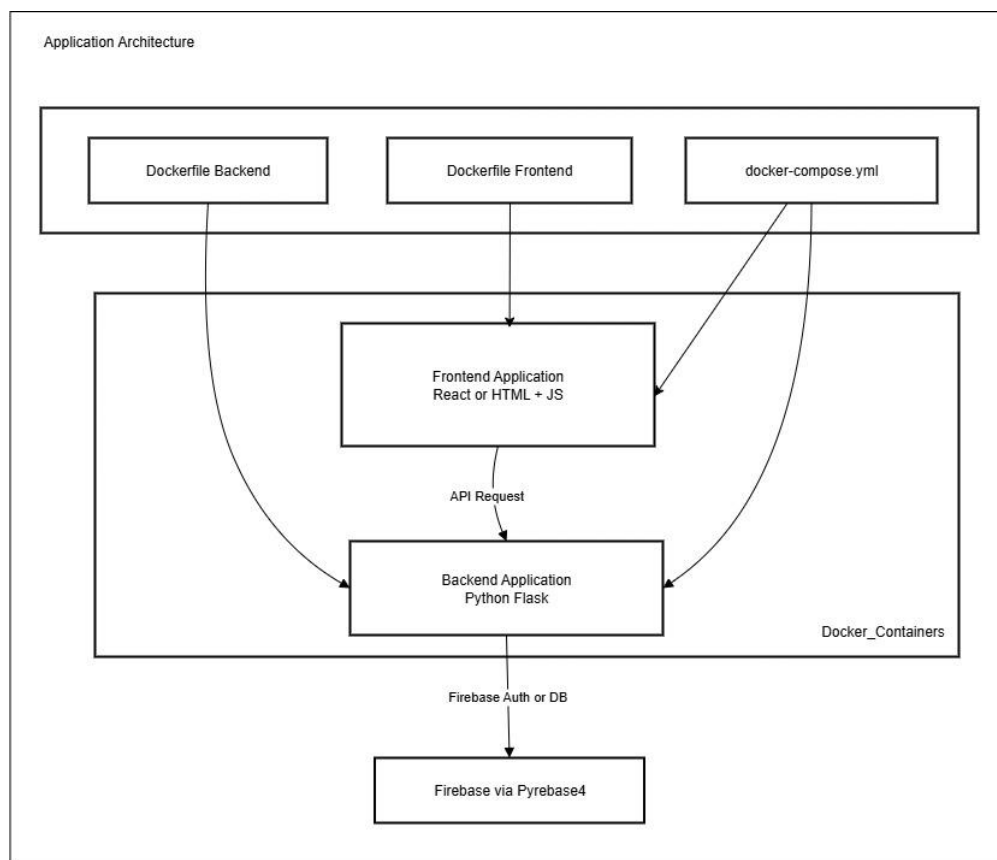
Group 3 – Information Technology Class 3

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

Introduction/ Background

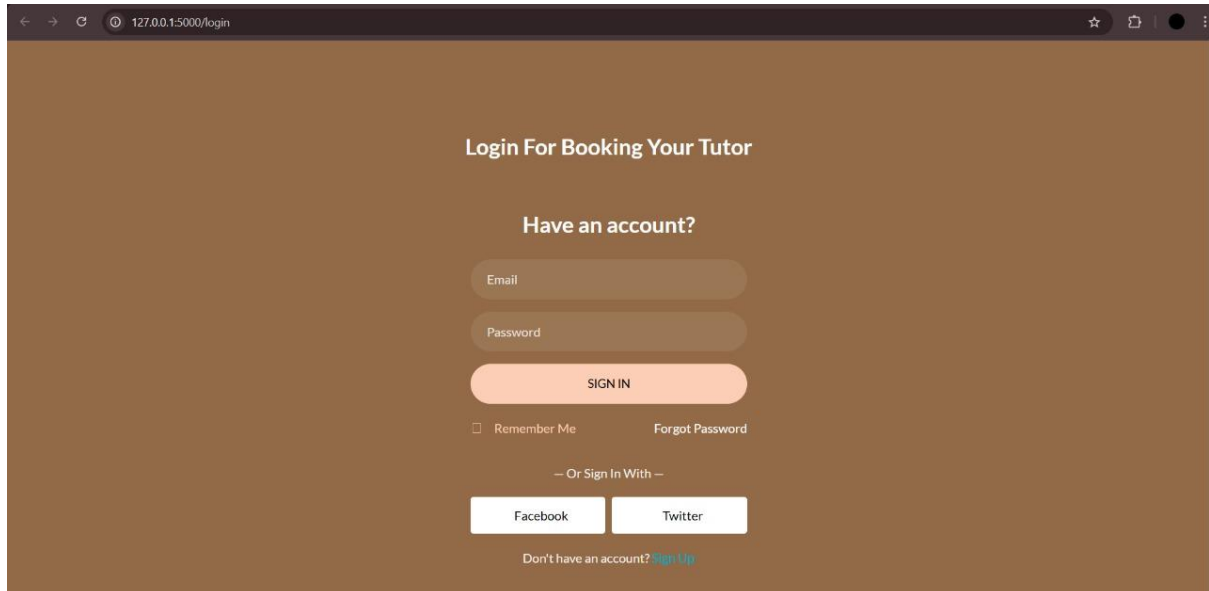
we created a website called your tutor, where this website is a place where people who want to find private tutors in certain fields online, and they can negotiate about the online and offline teaching system between the tutor and the client. we use docker, python as the backend, css and html as frontend,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

Application Architecture (dia)



Output :

User have to login first if they already have an account, but if they haven't, they have to sign up first 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 :

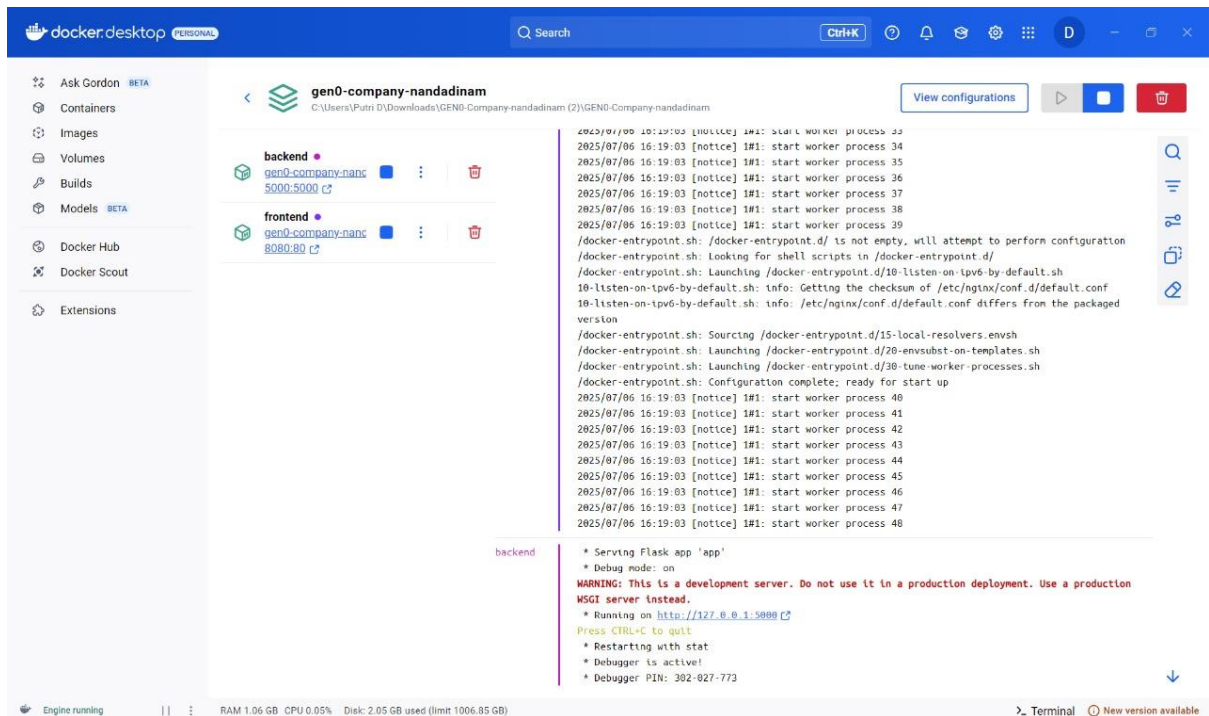
When we run python app.py, it will give us the web link

```
PS C:\Users\Putri D\Downloads\GEN0-Company-nandadinam (2)\GEN0-Company-nandadinam\backend> python app.py
C:\Users\Putri D\AppData\Roaming\Python\Python313\site-packages\gcloud\_init_.py:17: UserWarning: pkg_resources is deprecated as an API. See https://setuptools.pypa.io/en/latest/pkg_resources.html. The pkg_resources package is slated for removal as early as 2025-11-30. Refrain from using this package or pin to Setuptools<81.
  from pkg_resources import get_distribution
* Serving Flask app 'app'
* Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on http://127.0.0.1:5000
Press CTRL+C to quit
* Restarting with stat
C:\Users\Putri D\AppData\Roaming\Python\Python313\site-packages\gcloud\_init_.py:17: UserWarning: pkg_resources is deprecated as an API. See https://setuptools.pypa.io/en/latest/pkg_resources.html. The pkg_resources package is slated for removal as early as 2025-11-30. Refrain from using this package or pin to Setuptools<81.
  from pkg_resources import get_distribution
* Debugger is active!
```

Docker :

This is what it looks like in the docker

| | | | | | | | | | |
|--------------------------|----------------------------------|----------------------------------|--------------|-----------------------------------|---------------|----------------|--|--|--|
| <input type="checkbox"/> | <input checked="" type="radio"/> | gen0-company-nandadinar | - | - | N/A | 55 seconds ago | | | |
| <input type="checkbox"/> | <input type="radio"/> | gen0-backend | 684fbd42b59d | gen0-company-nandadinar 5000:5000 | N/A | 55 seconds ago | | | |
| <input type="checkbox"/> | <input type="radio"/> | gen0-frontend | 508a78bfe563 | gen0-company-nandadinar 8080:80 | N/A | 55 seconds ago | | | |
| <input type="checkbox"/> | <input checked="" type="radio"/> | gen0-company-nandadinam-frontend | latest | 6c2c0f784e91 | 36 minutes ag | 61.56 MB | | | |
| <input type="checkbox"/> | <input checked="" type="radio"/> | <none> | <none> | 6d7a89fa1031 | 35 minutes ag | 528.55 MB | | | |
| <input type="checkbox"/> | <input checked="" type="radio"/> | gen0-company-nandadinam-backend | latest | daec3462ff7f | 26 minutes ag | 528.55 MB | | | |



Backend docker file

```
1 FROM python:3.10-slim
2
3 # 1. Install dependencies dulu
4 RUN apt-get update && apt-get install -y \
5     gcc \
6     libffi-dev \
7     build-essential \
8     && rm -rf /var/lib/apt/lists/*
9
10 # 2. Siapkan working dir dan install Python lib
11 WORKDIR /app
12 COPY requirements.txt .
13 RUN pip install --no-cache-dir -r requirements.txt
14
15 # 3. Copy source code
16 COPY . /app
17
18 EXPOSE 5000
19 CMD ["python", "app.py"]
20
```

Frontend docker file

```
1 FROM nginx:alpine
2
3 COPY default.conf /etc/nginx/conf.d/default.conf
4 COPY . /usr/share/nginx/html
5
```

Deafault.conf frontend

```
1 server {
2     listen 80;
3     server_name localhost;
4
5     location / {
6         root /usr/share/nginx/html;
7         index index.html;
8         try_files $uri $uri/ =404;
9     }
10 }
```

Docker compose yml

```
🐳 docker-compose.yml
  ▶ Run All Services
1  services:
2      ▶ Run Service
3      backend:
4          build:
5              context: ./backend
6          container_name: gen0-backend
7          ports:
8              - "5000:5000"
9
10         environment:
11             - FLASK_ENV=development
12         restart: unless-stopped
13
14     ▶ Run Service
15     frontend:
16         build:
17             context: ./frontend
18         container_name: gen0-frontend
19         ports:
20             - "8080:80"
21         volumes:
22             - ./frontend:/usr/share/nginx/html
23         restart: unless-stopped
```

