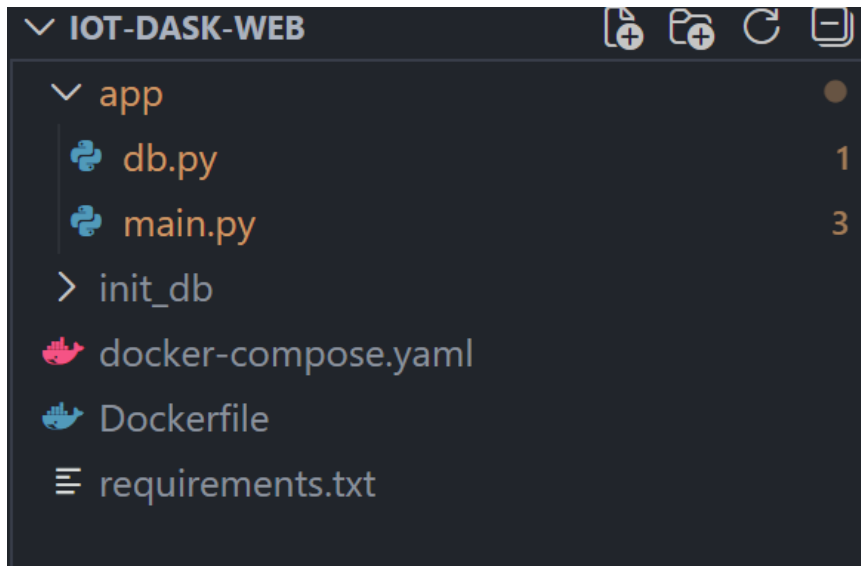


Nama : Muh Ibnu Fajar

Nim : 235510015

Prodi : Teknik Komputer S1



program db.py

```
from sqlalchemy import create_engine

DATABASE_URL = "mysql+pymysql://root:root@db:3306/iotdb"
engine = create_engine(DATABASE_URL)

DB_URL = "mysql+pymysql://root:root@db:3306/iotdb"

engine = create_engine(DB_URL)
```

Program main.py

```
from fastapi import FastAPI
from fastapi.responses import HTMLResponse
from datetime import datetime
import dask.dataframe as dd
from db import engine

app = FastAPI(title="IoT Dask Web API")
```

```

@app.get("/")
def root():
    return {"message": "IoT Dask Web API is running"}

@app.post("/sensor")
async def add_sensor(data: dict):
    return {
        "status": "ok",
        "data": data,
        "time": datetime.now()
    }

@app.get("/list", response_class=HTMLResponse)
def list_data():
    query = "SELECT * FROM iot_sensor_events"

    ddf = dd.read_sql_query(
        query,
        engine,
        index_col="event_id"
    )

    df = ddf.compute()
    html_table = df.to_html(index=False)

    return f"""
<html>
  <body>
    <h2>Data IoT Sensor Events</h2>
    {html_table}
  </body>
</html>
"""

```

Program docker-compose.yaml

```

version: "3.9"

services:
  db:
    image: mysql:8.0
    container_name: mysql_iot
    environment:

```

```
MYSQL_ROOT_PASSWORD: root
MYSQL_DATABASE: iotdb
ports:
  - "3307:3306"
volumes:
  - ./init_db:/docker-entrypoint-initdb.d

web:
  build: .
  container_name: iot_dask_web
  ports:
    - "8123:8123"
  depends_on:
    - db
```

#### File dockerfile

```
FROM python:3.11-slim

WORKDIR /app

COPY requirements.txt .
RUN pip install --no-cache-dir -r requirements.txt

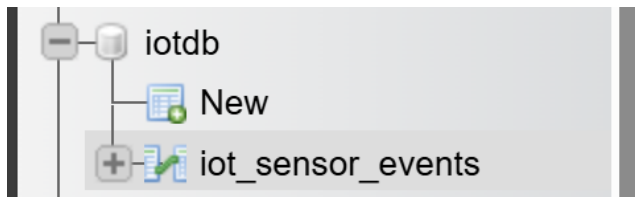
COPY app/ .

CMD ["uvicorn", "main:app", "--host", "0.0.0.0", "--port", "8123"]
```

#### requirements.txt


```
fastapi
uvicorn
sqlalchemy
pymysql
dask[dataframe]
pandas
```

## SQL





		event_id	sensor_node	sensor_type	sensor_value	event_time
<input type="checkbox"/>	Edit Copy Delete	1	NODE-A1	temperature	29.5	2026-01-20 10:24:16
<input type="checkbox"/>	Edit Copy Delete	2	NODE-B2	humidity	64.2	2026-01-20 10:24:16
<input type="checkbox"/>	Edit Copy Delete	3	NODE-C3	vibration	0.82	2026-01-20 10:24:16
<input type="checkbox"/>	Check all	With selected: Edit Copy Delete Export				


## Docker


 **iot-dask-web**  
C:\xampp\htdocs\Computasi cloud\iot-dask-web

db


 [mysql:8.0](#)  
[3307:3306](#)










web

 [iot-dask-web-web](#)  
[8123:8123](#)









Containers / iot\_dask\_web

iot\_dask\_web

 dde6f4493293  [iot-dask-web-web:latest](#)  
[8123:8123](#)

Logs

Inspect

Bind mounts

Exec

Files

Stats

```
INFO: Started server process [1]
INFO: Waiting for application startup.
INFO: Application startup complete.
INFO: Uvicorn running on http://0.0.0.0:8123 (Press CTRL+C to quit)
```

# IoT Dask Web API

0.1.0 OAS 3.1

/openapi.json

## default

GET	/	Root	✓
POST	/sensor	Add Sensor	✓
GET	/list	List Data	✓

## Schemas

HTTPValidationError > Expand all object

ValidationError > Expand all object