

# Setup Instructions

## 1.Prerequisites:

Ensure the following are installed:

- Python **3.12.3**
- MySQL Server
- MySQL Workbench
- FastAPI & Required Dependencies

## 2.Install Required Dependencies

```
pip install pandas mysql-connector-python fastapi uvicorn
```

## 3. Set Up and Run FastAPI in Jupyter

Jupyter Notebook does not handle asynchronous event loops well, so we use `nest_asyncio` to fix that.

### Steps:

1. Open a Jupyter Notebook (Google Colab, JupyterLab, or Kaggle).
2. Add the following code in a new cell and run it to start FastAPI.

```
import nest_asyncio
```

```
import uvicorn
```

```
from fastapi import FastAPI
```

```
nest_asyncio.apply() # Allows FastAPI to run inside Jupyter
```

```
app = FastAPI()
```

```
@app.get("/")
```

```
async def home():
```

```
    return {"message": "FastAPI is running in Jupyter!"}
```

```
uvicorn.run(app, host="127.0.0.1", port=8000)
```

## 4.MySQL Setup and Connection

### Modify Your Database Connection Settings

If using **Google Colab** or an **online Jupyter service**, you cannot connect to a **local MySQL server** directly. Instead:

1. Use a **remote MySQL database** (AWS RDS, Google Cloud SQL, etc.).
2. If MySQL is on your local machine, use **ngrok** or SSH tunneling.

Otherwise, if using **Jupyter locally**, ensure **MySQL Workbench** is running and update the connection details:

```
import mysql.connector

DB_HOST = "123.1.1" # Change if using a remote MySQL server(your sql server IP)
DB_USER = "User_name"
DB_PASSWORD = "your_password" # Make sure this is secure
DB_NAME = "database name"

mydb = mysql.connector.connect(
    host=DB_HOST, user=DB_USER, password=DB_PASSWORD, database=DB_NAME
)

print("Connected to MySQL successfully!")
```

**Check:** Run this cell—if no errors, the connection is working.

#### 4. Running Your Full Code

Now, you can run your **FastAPI + MySQL + ETL pipeline** inside Jupyter Notebook.

- Place the **FastAPI API code** in one cell and run it.
- Run the **ETL pipeline code** separately.

NOTE: Please run the API code and FASTAPI code in same notebook as given in the code folder in the ZIP

#### 5. Access the API

Alternative API documentation: <http://127.0.0.1:8000/redoc>

**Interactive API docs:** <http://127.0.0.1:8000/docs>

NOTE : Here “127.0.0.1” represents database host or mysql server IP

