## 📄 Documentation – Flask + MongoDB Assignment

### 🔹 Step 1: Create Project Folder

```
mkdir flask-mongo-assignment
cd flask-mongo-assignment
```

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### 🔹 Step 2: Create Virtual Environment

```
python -m venv venv
venv\Scripts\activate     # for Windows
```

---

### 🔹 Step 3: Install Required Libraries

```
pip install flask pymongo dnspython
```

---

### 🔹 Step 4: Create `data.json` File

📂 Inside `flask-mongo-assignment/`, create file `data.json` with dummy user data:

```
[
  {
    "name": "Pranay Dodiya",
    "role": "Full Stack Developer"
  },
  {
    "name": "Amit Patel",
    "role": "Data Scientist"
  }
]
```

---

### 🔹 Step 5: Create `templates` Folder

```
mkdir templates
```

---

### 🔹 Step 6: Create `index.html` (inside `templates/`)

```
<!DOCTYPE html>
<html>
<head>
    <title>User Info</title>
</head>
<body>
    <h1>Submit User Info</h1>
    <form action="/add_user" method="POST">
        Name: <input type="text" name="name"><br><br>
        Role: <input type="text" name="role"><br><br>
        <button type="submit">Submit</button>
    </form>
</body>
</html>
```

---

### 🔹 Step 7: Create `users.html` (inside `templates/`)

```
<!DOCTYPE html>
<html>
<head>
    <title>All Users</title>
</head>
<body>
    <h1>Users List</h1>
    <ul>
        {% for user in users %}
            <li>{{ user.name }} - {{ user.role
}}</li>
        {% endfor %}
    </ul>
    <a href="/">Add Another User</a>
</body>
</html>
```

---

### 🔹 Step 8: Create Main Flask File `app.py`

```
from flask import Flask, request, render_template,
redirect, url_for
from pymongo import MongoClient

app = Flask(__name__)
```

```
# ✅ Replace <your_connection_string> with actual
MongoDB Atlas connection string
client =
MongoClient("mongodb+srv://<username>:<password>@clus
ter0.mongodb.net/")
db = client["flask_mongo_db"]
collection = db["users"]

@app.route("/")
def index():
    return render_template("index.html")

@app.route("/add_user", methods=["POST"])
def add_user():
    name = request.form["name"]
    role = request.form["role"]
    collection.insert_one({"name": name, "role":
role})
    return redirect(url_for("users"))

@app.route("/users")
def users():
    users_data = collection.find()
    return render_template("users.html",
users=users_data)

@app.route("/api")
def api():
    users_data = list(collection.find({}, {"_id":
0}))
    return {"users": users_data}

if __name__ == "__main__":
    app.run(debug=True)
```

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### 🔹 Step 9: Run Flask Server

```
py app.py
```

Server runs at: 👉 `http://127.0.0.1:5000/`

- `/` → User input form

- `/users` → Displays all users
- `/api` → Shows user data as JSON

**. Explanation**

- **app.py** → Flask app, handles form input, database insertion, and JSON reading.
- **index.html** → Frontend form where user enters data.
- **success.html** → Page displayed after form submission.
- **data.json** → Dummy dataset served at /data.