Flask + MongoDB Atlas App Documentation

# 1. Overview

This Flask application demonstrates:  
- Creating an API endpoint that returns JSON data from a file.  
- Handling form submissions and storing data in MongoDB Atlas.  
- Displaying success or error messages based on the outcome of the submission.

# 2. app.py

from flask import Flask, jsonify, render\_template, request, redirect, url\_for, flash  
from pymongo import MongoClient  
import json  
  
app = Flask(\_\_name\_\_)  
app.secret\_key = 'your\_secret\_key'  
  
# MongoDB Atlas Connection  
client = MongoClient('your\_mongodb\_atlas\_connection\_string')  
db = client['flask\_app']  
collection = db['form\_data']  
  
# API route to return JSON list from a file  
@app.route('/api')  
def api():  
 try:  
 with open('data.json') as f:  
 data = json.load(f)  
 return jsonify(data)  
 except FileNotFoundError:  
 return jsonify({"error": "data.json file not found"}), 404  
  
# Home route with form  
@app.route('/', methods=['GET', 'POST'])  
def index():  
 if request.method == 'POST':  
 name = request.form.get('name')  
 email = request.form.get('email')  
 try:  
 collection.insert\_one({"name": name, "email": email})  
 return redirect(url\_for('success'))  
 except Exception as e:  
 flash(str(e))  
 return render\_template('form.html')  
 return render\_template('form.html')  
  
@app.route('/success')  
def success():  
 return "Data submitted successfully"  
  
if \_\_name\_\_ == '\_\_main\_\_':  
 app.run(debug=True)

# 3. templates/form.html

<!DOCTYPE html>  
<html>  
<head>  
 <title>Submit Form</title>  
</head>  
<body>  
 <h1>Submit Data</h1>  
 {% with messages = get\_flashed\_messages() %}  
 {% if messages %}  
 <ul style="color:red;">  
 {% for message in messages %}  
 <li>{{ message }}</li>  
 {% endfor %}  
 </ul>  
 {% endif %}  
 {% endwith %}  
 <form method="post">  
 <label>Name:</label><br>  
 <input type="text" name="name" required><br><br>  
 <label>Email:</label><br>  
 <input type="email" name="email" required><br><br>  
 <input type="submit" value="Submit">  
 </form>  
</body>  
</html>

# 4. data.json

[  
 {"id": 1, "value": "Apple"},  
 {"id": 2, "value": "Banana"},  
 {"id": 3, "value": "Cherry"}  
]

# 5. MongoDB Atlas Connection

To use MongoDB Atlas, sign in to https://cloud.mongodb.com/, create a cluster, and get your connection string.  
Replace 'your\_mongodb\_atlas\_connection\_string' with your actual connection URI.