Assignment 3

# 1. Flask Application with /api Route

Code: app.py  
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from flask import Flask, jsonify  
import json  
  
app = Flask(\_\_name\_\_)  
  
@app.route('/api')  
def api():  
 with open('data.json', 'r') as file:  
 data = json.load(file)  
 return jsonify(data)  
  
if \_\_name\_\_ == '\_\_main\_\_':  
 app.run(debug=True)

Code: data.json  
--------------------  
[  
 {"name": "Alice", "age": 25},  
 {"name": "Bob", "age": 30}  
]

Explanation:  
- A simple Flask app that serves a JSON list through the /api route.  
- Reads data from a JSON file and returns it using jsonify.

# 2. Form Submission to MongoDB Atlas

Requirements:  
- Install: pip install flask pymongo dnspython  
- Set up MongoDB Atlas and get the connection string.

Code: form\_app.py  
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from flask import Flask, request, redirect, render\_template  
from pymongo import MongoClient  
  
app = Flask(\_\_name\_\_)  
  
client = MongoClient("your\_mongodb\_atlas\_connection\_string")  
db = client['mydb']  
collection = db['submissions']  
  
@app.route('/')  
def index():  
 return render\_template('form.html')  
  
@app.route('/submit', methods=['POST'])  
def submit():  
 name = request.form.get('name')  
 age = request.form.get('age')  
 if name and age:  
 try:  
 collection.insert\_one({'name': name, 'age': int(age)})  
 return redirect('/success')  
 except:  
 return "Error while submitting. Try again."  
 else:  
 return "Please fill all fields."  
  
@app.route('/success')  
def success():  
 return "Data submitted successfully"  
  
if \_\_name\_\_ == '\_\_main\_\_':  
 app.run(debug=True)

Code: templates/form.html  
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<!DOCTYPE html>  
<html>  
<head>  
 <title>Submit Data</title>  
</head>  
<body>  
 <h2>Enter Details</h2>  
 <form action="/submit" method="post">  
 Name: <input type="text" name="name"><br><br>  
 Age: <input type="number" name="age"><br><br>  
 <input type="submit" value="Submit">  
 </form>  
</body>  
</html>

Explanation:  
- Flask form captures user input.  
- Data is inserted into MongoDB Atlas.  
- On success: redirects to /success.  
- On failure: error is displayed without redirecting.

Repo Link : https://github.com/BabluuMemes20005/Tutude-Devops-Assignment