Lab 7 - Web App, pt. 1

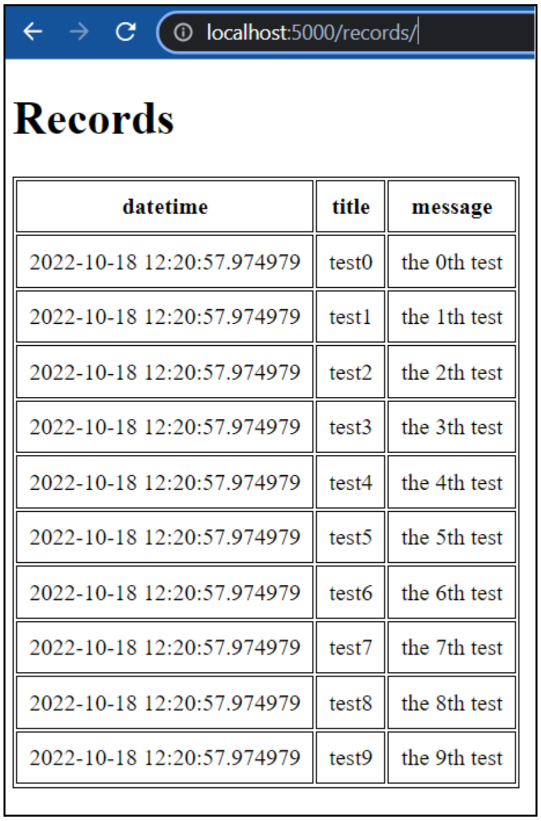
Objectives:

- Flask app running locally.
- Flask app communicates with your data service (ReadRecords).

Features:

- Viewing all documents from your collection in a table.

Image 1: Viewing all documents in a table



localhost:5000/records/

Records

datetime	title	message
2022-10-18 12:20:57.974979	test0	the 0th test
2022-10-18 12:20:57.974979	test1	the 1th test
2022-10-18 12:20:57.974979	test2	the 2th test
2022-10-18 12:20:57.974979	test3	the 3th test
2022-10-18 12:20:57.974979	test4	the 4th test
2022-10-18 12:20:57.974979	test5	the 5th test
2022-10-18 12:20:57.974979	test6	the 6th test
2022-10-18 12:20:57.974979	test7	the 7th test
2022-10-18 12:20:57.974979	test8	the 8th test
2022-10-18 12:20:57.974979	test9	the 9th test

Prerequisites / prelab

- HTML fundamentals
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  - If you want a nice looking interface (for fun), I suggest checking out Bootstrap. (but you're not graded on visual design).
- Iterating over Python lists and dictionaries:
  - Python - Loop Lists
  - Python - Loop Dictionaries
- Prelab - do the Flask quickstart up to and including "Rendering Templates"
  - https://flask.palletsprojects.com/en/2.2.x/quickstart/
- Your data service is working / running

- locally (e.g., at localhost:7071) and/or
- in the MongoDB Atlas cloud

Steps

1. Start with a basic Flask app.
2. Create a route "records." (or whatever route / endpoint makes sense for your service)
3. Use the Python requests module to read the records from your data service.
4. Use json_util.loads() to read the JSON data into a Python list of dictionaries.
5. pass the data to render_template
6. Create the template

Note: you may do things in a different order. you should include some light testing along the way (e.g. printing things)

Resources & tips

Helpful links:

- Template Designer Documentation — Jinja Documentation (3.1.x)
- How to iterate through a list of dictionaries in Jinja template? - Stack Overflow

Submission & grading

Submission (individual):

- Submit screenshots:
  - terminal view (running flask server), and
  - browser view
- Submit these files:
  - app.py   your flask app
  - records.html   your records view template file

Grading:

item	**pts**
app.py	8
records.html	8
screenshot	4

Notes /gotchas:

- Flask version problem
    - running this command: flask --app app --debug run
    - gives this error: no such option: --app
- Solution:
    - update your flask version: pip install --upgrade flask