

Problem Statement:

Develop a FastAPI application to interact with GitHub's API and MongoDB.

<https://fastapi.tiangolo.com/tutorial/first-steps/>

<https://docs.github.com/en/rest?apiVersion=2022-11-28>

<https://www.mongodb.com/>

The application should have two endpoints:

Ingest Contributors Endpoint(github public repository):

- Accepts a POST request with a JSON body containing a GitHub public repository owner and repo name.
- Fetches all contributors of the specified repository from GitHub's API.

<https://docs.github.com/en/rest/repos/repos?apiVersion=2022-11-28#list-repository-contributors>

- Inserts contributors' data into a MongoDB collection.
- Returns a success message along with the total number of contributors ingested.
- Add input validation and error handling as necessary

Sample Request:

```
curl --location 'http://localhost:8000/ingest-contributors' \  
--header 'Content-Type: application/json' \  
--data '{  
    "owner": "facebook",  
    "repo": "react"  
}'
```

Sample Output:

```
{ "message": "Successfully ingested 422 contributors into  
facebook_react.contributors" }
```

Get Contributor Info Endpoint:

- Accepts a POST request with parameters: owner, repo, username, and type (e.g., "User" or "Bot").
- Retrieves contributor information from the MongoDB collection based on the provided parameters.
- Returns the username, avatar URL, whether the contributor is a site admin, and the number of contributions.
- Add input validation and error handling as necessary

Sample Request:

```
curl --location 'http://localhost:8000/contributors' \  
  
--header 'Content-Type: application/json' \  
  
--data '{  
  
    "owner": "facebook",  
  
    "repo": "react",  
  
    "username": "zpao",  
  
    "type": "User"  
  
}'
```

Sample Response:

```
{  
  
    "username": "zpao",  
  
    "avatar_url": "https://avatars.githubusercontent.com/u/8445?v=4",  
  
    "site_admin": false,  
  
    "contributions": 1778  
  
}
```

Deliverables:

GitHub Repository Link:

- Provide a GitHub repository link containing:
 - FastAPI application code (main.py).
 - A requirements.txt file listing the necessary dependencies.
 - docker_compose.yml , if you have used docker for mongodb

Google Drive Link:

- Include a very short video demonstrating the execution of the two API endpoints, showing the mongo collection created.
 - Show how to make requests to the endpoints using tools like cURL or Postman.
 - Capture the responses returned by the endpoints.

Additional Notes & Hints:

- Use Python Version greater than 3.8
- You can choose any public github repo, facebook/react is a good one to test with.
- MongoDB can be installed in multiple ways as described here
<https://www.mongodb.com/docs/manual/installation>

Local installation/Managed Mongo through Atlas/Docker(docker-compose)
We suggest using docker-compose and use mongoDB compass as client to connect to local mongo

<https://www.mongodb.com/products/tools/compass>

Note: This is an open-book assignment. You are free to choose any resources you would like. Subsequent evaluations will assess your comprehension of the implemented concepts and your capacity to adapt the code to meet additional requirements.

Deadline:

Please submit your solution along with the GitHub repository and Google Drive link in 48 hours. If you have any questions or need clarification, feel free to reach out. Good luck!