

Scenario

We are developing a health monitoring platform that tracks participating patients' daily health metrics such as steps, resting heart rate etc. We collect these data through wearable trackers and sync them into our cloud database. At the same time we also build APIs for our client app to view these data.

Task Description

You are given a zipped folder containing MongoDB dump files. Unzip and use `mongorestore` to recover it into your local MongoDB. It should be restored to a database named *empower-auth*. Your task is to build a RESTful API server that sits on top of this database.

This API service should include:

1. A *login* endpoint that allows a patient to login with username and password. Use the *Patient* collection in the db as your datasource--its schema should be self explaining. Choose whatever auth method of your liking.
2. A *summary* endpoint that displays a patient's steps, distance, calorie burn and active minutes in a given date. Use the *activity_daily_summary* collection in the db as your datasource--its schema should be self explaining. This endpoint is only accessible to a logged in user and the summary data returned naturally belongs to that user. I presume the implementation is dependent on how you device your *login* endpoint in task 1.
3. A *rank* endpoint that returns a list of *Patient.username* s. The list is ordered by the total steps a user has accumulated throughout the history, in **Descending** order. Use the same *activity_daily_summary* collection in the db as your datasource.

Requirements

- Use the Python Flask framework to build your API server.
- Include a readme file in the root folder that documents your endpoints.
- Unit test your code as much as possible. Use the *pytest* tool.
- Initialize a git repository in your project folder so we can view your commit histories.
- Provide a *start.sh* (*start.bat* in Windows) script file in the root folder that builds the dependencies and then starts the server.
- Host the Flask server at <http://localhost:5000> and MongoDB at <http://localhost:27017>

Submission

- Zip your project folder and email it to wang.c@nus.edu.sg
- Do not include the database dump files as we have the same copy on our local machines.

Good luck!
Chen