

Coding Task - Backend Engineer

This exercise focuses on reading and processing application's access logs, building a data model and API that will be used to serve data to a frontend component. It is supposed to take a few hours and requires coding skills and understanding of APIs.

Notes

- There is no one solution to this problem, it is an open task and you can take it wherever you would like to.
- Try to stay clear and keep it as simple as possible.
- Wherever you are not sure about anything, make some assumptions and act accordingly.
- Prefer Python as the programming language for any implementation.

Input Dataset

Attached is a dataset we have created containing events generated by different users.

Data Analysis & Loading

- Analyze the data. Characterize and identify how user actions look in the logs and be able to detect them.
- Your backend should be able to load the file into memory and be able to query it's data.

API Requirements

- The API will query events of a specific user on a timeline, while a specific event is used as an anchor in the center of the timeline.
- A configurable number of events should be presented before and after the anchor event.
- Implement scrolling / 'Next' and 'Prev' to travel up and down on the timeline.

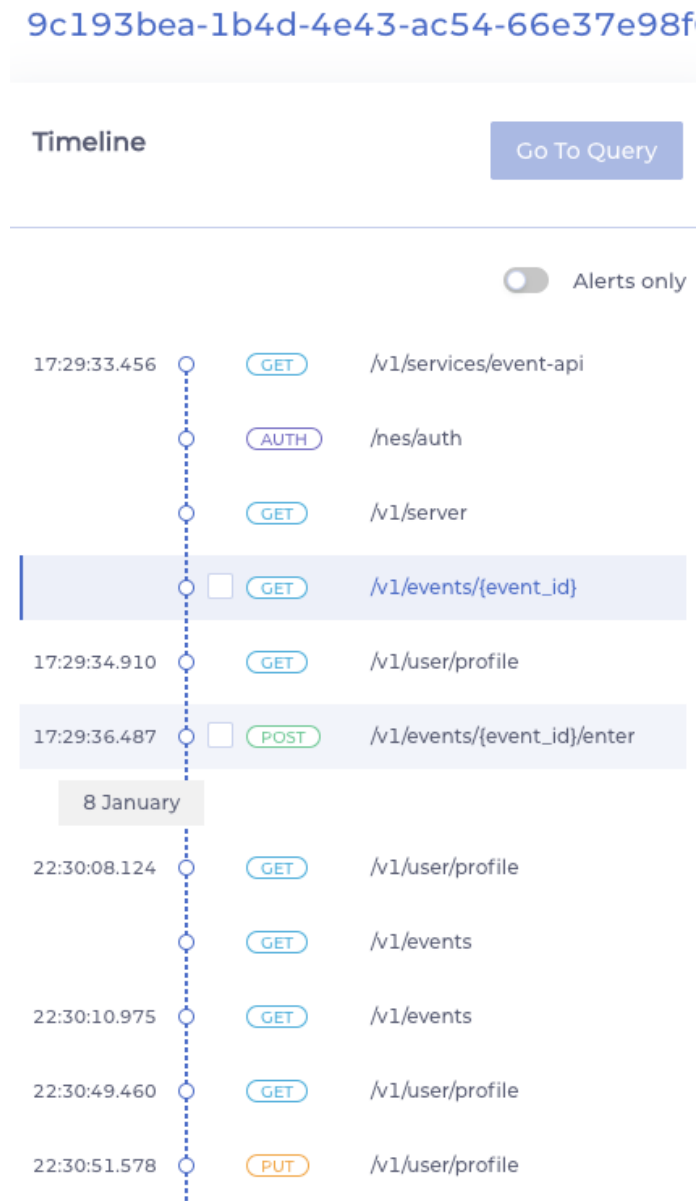
Implementation

Design and implement an API that allows you to support the requested requirements.

- Build a data model - how should the data look to support this component.

- Design a spec for the API - define a REST endpoint to serve the data.
- Implement the API.
- Write a test that proves the API actually works.

As a reference, here is how the user's timeline design looks in our application:



Good Luck!