

Backend Home Assignment

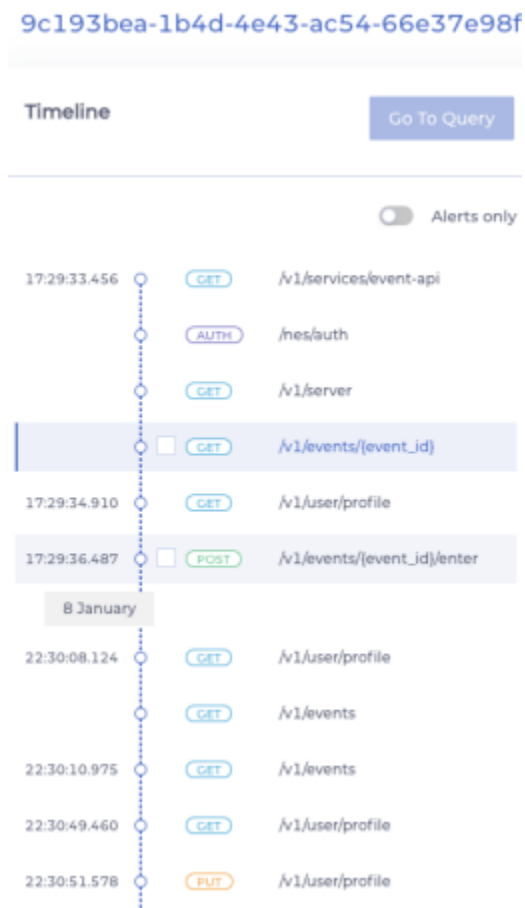


Introduction

- 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
- There is no one solution to this problem, it is an open task and you can take it wherever you would like to
- [Keep it simple, stupid!](#)
- If you are not sure about anything, make some assumptions and act accordingly
- We prefer that you'll use Python as the programming language

Frontend Component

- Assume that a front side is being provided by someone else
- The front side will show a vertical event timeline
- Users have the option to scroll down and up the timeline but also have the option to focus on a specific event
- Whenever the user reaches the "edge", a new batch of events will be loaded
- As a reference, here is how a user's timeline design should look like:



Input data & Analysis

- Attached is a dataset we have created containing events generated by different users
- Analyse the data, characterise 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 should query events of a specific user.
- The API should query events 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.

Task

- 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

Good Luck!