Oladapo,

You have passed all our initial screening and assessment steps for the "Python Software Engineer, Commercial Systems" role, and we would like to invite you to the next round of interviews, which will focus on your technical skill. As the first step, we kindly ask you to finish a simple coding exercise.

Please build an audit log service. The service will accept event data sent by other systems and provide an HTTP endpoint for querying recorded event data by field values.

Examples of events recorded:

* a new customer account was created for a given identity
* a customer performed an action on a resource
* a customer was billed a certain amount
* a customer account was deactivated

The list of event types is open-ended, all events should contain a common set of fields and a set of fields specific to the event type. The code should not need to be modified for it to accept a new event type. Also note that this service is write-intensive.

Model an audit trail of events received from such services with a schema that captures the invariant data content along with the variant, event-specific content. Design and document a microservice API that can receive, store and retrieve these events.

The service should use authentication for the event submission and querying endpoints.

The microservice must be developed in Python or Go and run as an HTTP server. Try to use features available in the language of your choice and avoid extensive usage of frameworks or generated code. Feel free to use any data storage mechanisms that you find appropriate.

You are not expected to solve all possible operational and scalability issues. However, make sure to document important design and architecture decisions including the rationale and trade-offs. If you decide to take any shortcuts, make sure to leave TODO notes in the code with brief information on how these shortcuts can be addressed in the future. You will be asked for a plan to address these concerns in follow-up interviews.

Please note that the delivery of the solution must be completed before in-person interviews take place. To review your solution we ask you to:

* Create a private GitHub repository with the code (please do not share your solution publicly);
* Give the following users read access to the repository - ijansky, frankban;
* Provide instructions for deploying the solution using a single command on Ubuntu;
* Provide instructions for testing the solution using CURL.
* Upload a document with the link to the GitHub repository to the URL at the bottom of this email.

Your solution will not be used or copied in any of our products. This exercise is for interview purposes only.

Looking forward to your solution!