**Backend Developer Exercise**

As part of this assessment you will create a basic surveys API that is backed by a database. You will find an overview and specification of the API in this document. The API should be able to run locally on a computer.

Feel free to use whichever framework and database that you want for the API. You should use Python for the assessment, unless we have agreed for you to use a different language beforehand. You should include brief setup instructions with your code.

Once you have completed your assessment please upload it to a public GitHub repository or a similar service. Please send a link to your code to [product@prolific.co](mailto:product@prolific.co) or add GitHub user “prolific-oss” as a collaborator on GitHub.

The assessment should take around two hours. If you cannot commit this amount of time towards the assessment, just let us know as we'll be happy to discuss different alternatives. We will send you a £50 Amazon voucher for completing the assessment, whether you're successful or not. Please also feel free to email us with any questions.

**Overview**

The Surveys API stores data about surveys and responses to surveys.

Users can create and list surveys using the API. Each survey has a name and a number of available places.

Users can also create responses to surveys. Each survey response is recorded with a timestamp.

Each survey response counts towards the available places for a survey. Survey responses should only be created if there are still available places on the survey. For example if I try to create a 31st response to a survey with 30 places, I should receive an error.

**Specification**

A study record should have the following fields:

* ID
* survey name
* available places
* user\_id

A study response record should have the following fields:

* ID
* user\_id
* created\_at
* survey\_id

The API should include the following endpoints:

* List all surveys
* Create a new survey
* Create a new survey response
* List all surveys belonging to a user
* List all survey responses for a survey
* List all survey responses belonging to a user

Additional requirements:

* Users should not be able to submit a survey response if there are no more available places on a study
* Brief documentation to setup and run the API

**Example Requests**

This section includes example requests for the survey and survey response endpoints. Please feel free to use your own conventions for the API endpoints.

