

Take Home Test - Marketplace Backend

Thank you for your interest in working within our Marketplace department at GetYourGuide! In order to move forward in our evaluation, we ask all of our candidates to complete this exercise. We hope you'll enjoy the time spent on it, as it's an accurate representation of the kinds of tasks we do. Feel free to make assumptions when you are not sure of any data in this file, and describe what was the assumption.

Deliverables

Please send us all the source code in PHP along with a README.md document with:

- Any instructions required to run and test your solution
- Justifications of any technical decisions made (e.g. use of a framework/components)
- What would be your next steps if you had more time

If you don't complete the task, that's OK, but please make sure to take a few extra minutes and describe what you would do next in the README file.

Time Limit

The task is designed to be short and simple, therefore the advised time to be spent is 2 hours. Optimised solutions are appreciated but clear and correct solutions are valued far more!

Task Description

Given the provided API endpoint containing product availabilities, please write a CLI PHP script that retrieves the `product_ids`, possible starting times of the products that are available to be booked given a period of time, and the requested number of travellers.

Please note that for a product to be considered available, it needs to start and finish between the requested time range and have enough places available to accommodate all requested travellers.

The script should accept 4 command line arguments:

- API Endpoint - The full url to the api endpoint (provided below)
- Start time - the start of the time period requested in the following format: "Y-m-d\\TH:i"
e.g. 2017-11-23T19:30.
- End time - the end of the time period in the same format as the `start_datetime`
- Number of travelers - an integer between 1 and 30.

The API endpoint is available here: <http://www.mocky.io/v2/58ff37f2110000070cf5ff16>

The endpoint returns a list of availability items with the following data fields:

- product_id - integer between 0 and 2^16.
- activity_duration_in_minutes - integer between 0 and 1440.
- activity_start_datetime - datetime string in the "Y-m-d\\TH:i" format .
- places_available - integer between 0 and 99.

The output of your script should consist of a JSON formatted list of available products containing the product_id, relevant start times available for the requested interval, and number of participants. The list of available products should be sorted ascending by their product_id while the available_starttimes within a product should be sorted in chronological order.

Below you can find an output example describing the schema of the expected output.

Call example:

```
php solution.php http://www.mocky.io/v2/58ff37f2110000070cf5ff16  
2017-11-20T09:30 2017-11-23T19:30 3
```

Output example:

```
[  
  {  
    "product_id": 1,  
    "available_starttimes": [  
      "2017-11-20T09:30",  
      "2017-11-20T10:30"  
    ]  
  },  
  {  
    "product_id": 3,  
    "available_starttimes": [  
      "2017-11-20T09:30"  
    ]  
  }  
]
```

If there is no matching products please output the empty object. E.g.

```
[]
```