

# Developer

Please develop a small REST service for retrieving all possible matches of a prefix in a dictionary. The service will provide 2 endpoints:

1. GET /dictionary?prefix=PREFIX

Will retrieve all possible matches of a prefix in a dictionary.

Example:

```
curl --request GET '<https://127.0.0.1:PORT/dictionary?prefix=AAH'>
will return:
[
    "AAH",
    "AAHED",
    "AAHING",
    "AAHS"
]
```

2. GET /statistics

The service will keep statistics on handling the dictionary endpoint, the stats are collected for a single process/instance.

\* The statistics doesn't have to be persistent.

\* The endpoint Will retrieve a json object of the statistics of the service instance.

averageRequestHandleTimeMs - The average time in ms it took the service to handle the requests.

requestHandledCount - How many requests did the service handled.

wordCount - How many words are in the dictionary.

Examples:

```
curl --request GET '<https://127.0.0.1:PORT/statistics'>
will return:
{
    "averageRequestHandleTimeMs": 0.123,
    "requestHandledCount": 8,
    "wordCount": 204833
}
```

3. Update dictionary

```
POST /update_dictionary
Will receive a file with a list of words and will update the
dictionary accordingly.

* No need to update the dictionary for all processes
* It's ok if the update will not be persistent (the service will
lose the update after restart).
* Feel free to choose any file format that will be reasonable and
easy to use.
```

### Scope and Concerns

- You are free (and encouraged) to use any web resources, boilerplate code and 3rd party libraries you want.
- The amount of time invested should not be more than 2-3 hours.
- The solution must work and could be easily run on any machine under reasonable run times.
- The goal of the assignment is to present a code that will pass a Code Review, the code should be clean and readable.
- Please document the steps to run your code, assume we never developed in your chosen language or platform.
- Please document your engineering decisions \ assumptions.
- Please use backend development best practices.
- The autocomplete algorithm implementation should be naive and basic.
- The dictionary will be supplied by us, the word count is 204,833 and that is the scale you should expect.
- The service should be developed in any language you can see fit.
- You can deliver the solution in any format easy for you (zip file \ git repo \ etc).

Good luck, feel free to contact us with any question or concerns you have.



dictionary.txt