

Business Case - Software Engineer

Attached you will find the *dataset.json* document, this will be used as your database for this assignment. Within this document is a list of entries which represent real products that we work with on a daily basis. The *SKU* field is the unique identifier of each product.

Your assignment will be to create a **RESTful API** using **Python 3** with endpoints that can fulfill the following tasks:

- Retrieve SKUs of the top 5 highest priced products.
- Update the price value of any given SKU with a 21% increase.
- Insert a brand new product with a matching schema to the already existing products.
- Delete any given product from the dataset.
- Retrieve the current timezone using the [WorldTimeAPI](http://worldtimeapi.org) (<http://worldtimeapi.org>) for any country available in the service.

Additionally your script must be able to perform the following tasks routinely with the listed CRON schedule:

- Print the SKU with the highest price. -> `* / 1 * * * 1-5`
- Print the SKU with the lowest price. -> `* / 3 8-10 * * *`
- Print the median price of all products. -> `* / 5 11-12 * * 1,3,5`

Some useful information:

- We recommend using [Flask](https://flask.palletsprojects.com) (<https://flask.palletsprojects.com>) to host the API, however it is up to you how the API is built, so long as clear instructions for hosting are provided.
- The API design and inputs are completely up to you, you may create as many endpoints as you feel is necessary to fulfill the tasks required.
- The API does not need to be hosted by you, so long as the provided Python script can host the API locally.
- All endpoints must be authenticated with an API key.
- For all tasks the API must use the data provided in the *dataset.json* file, however you may rearrange the data structure or storage method to how you see fit, so long as the data is stored in local data file(s).

Bonus points (optional)

Take the provided dataset and create a report or dashboard displaying some potentially useful information.

Note: This is purposely left vague to allow you to be creative and give you complete freedom in your analysis. You will be graded on your approach and thought process.

For any questions don't hesitate to contact me directly at isaac.evans@helloprint.com.