

Flask (total: 7 marks)

The objective of this assignment is to fix the bugs and improve an existing Flask application. The Flask application is used by BCIT Outdoor Store, an "outdoor sports" retailer, with shops in various locations around Vancouver and its region.

The application has one API endpoint: `/api/store/STORE_NAME`. This endpoint returns a list of products available in the store `STORE_NAME`. Each product has a name and a quantity (= how many products are available in that particular store).

The inventory for each store is provided as a CSV file. The CSV files are located in the folder `data`. The name of the file is the location of the store, with the extension `.txt`. For instance, inventory for the shop in Langley will be in `data/langley.txt`. All locations are lowercase.

Part 1

The Flask application is provided to you. However, it is not functional as is, and it has issues that prevent the API from returning the correct information.

- **In the docstring of the API endpoint function**, explain what the issues are. Then, fix them in the code. (1.5 marks)
- Make sure you **make all necessary changes in the code** so that you can run the Flask app with `python app.py`. (0.5 mark)

Part 2

Make changes to the code so that requesting a location for which there is no inventory file returns a 404 HTTP status. For example, `/api/store/toronto` should return a page with a 404 status. (1 mark)

Part 3

Make changes to the code to add a new endpoint.

- This endpoint is available at the URL: `/api/product/PRODUCT_NAME` (for example, `/api/product/kayak`)
- It accepts HTTP `GET` requests.
- It returns JSON.
- If the product requested does not exist in any of the shops, return a page with HTTP status 404.

In the example files provided, the only shops with kayaks are in Langley (40 available) and Vancouver (1 available). The response for `/api/product/kayak` will then be:

```
{
  "product": "kayak",
  "available": 41,
  "stores": {
```

```
    "langley": 40,  
    "vancouver": 1  
  }  
}
```

Grading: 4 marks

Submit your Flask Python file (`app.py`). No other file is required.