Demostack (Junior) - Home Assignment:

You are requested to create a small service which will help car agencies to manage their inventory.
For that you are requested to implement the following functionality:
Note: implement APIs based on REST API guidelines

1. Purchase a car – with the following parameters:

car manufacture (string) - Toyota, Ford, Audi…
car manufacture price (integer) – 1000, 500000, 100000…
car manufacture year (integer) – 1980, 1995, 2013…
car id (integer) – a unique integer value (you can assume it's unique)

Car purchase endpoint -> /api/purchase_car
The response status will be 200, the response doesn't need to contain any data.

2. Sell a car – with the following parameters:

car id (string) – The id of the car which was sold (As part of the URL – "Path Parameter")
car selling price (integer) -> The selling price which was paid for the car

Car sell endpoint -> /api/sell_car/<car_id>
The response status will be 200, the response doesn't need to contain any data.

3. Get all cars on the inventory (No parameters):

Return a sorted list (by purchase date) of all the cars which are currently found in the inventory (Excluding the cars we sold). Each car should include its metadata which was accepted at section 1.

Get all cars endpoint -> /api/all_cars
The response status will be 200, the response returns the list as described above.

4. Get results (No parameters):

Get total profit (or loss) endpoint -> /api/results
The response status will be 200, the response should be the total profit or loss (integer).
The total profit or loss since the service was up.

Example:

Car	Purchase price	Selling price	Total Profit
Car 1	100	1000	900
Car 2	20	40	20
Car 3	500	550	50
Car 4	400	500	100
			Value to return: 1070

Implementation Guide:

1. No need to make any input validation, you may assume the input is valid.
2. No need to use any persistent DB, if the service shuts off – the data is **not** expected to be saved (Hence, you can use python built-in types)
3. Use Python 3
4. You **may** (or choose any other IDE) download Python IDE -> https://www.jetbrains.com/help/pycharm/configuring-python-interpreter.html

   Configuring the interpreter ->

   https://www.jetbrains.com/help/pycharm/configuring-python-interpreter.html
5. Read about REST API
6. Your solution should include requirements.txt file that includes all required PIP packages
7. For implementing the service, please use a web framework called Flask
8. Don't try to make anything sophisticated, the logic should be simple.

Each of the links above may have other alternatives, if the links supplied do not cover well enough the information you need for implementing the assignment, please use Google/YouTube for more information (which is widely available)

Bonus: Adding 4-5 unit-tests will add a big bonus.
Please send your code files to avi@demostack.com