Refresher module Assignment

Total : 100 points

Task 1 (50 points):

Basmango has started an online startup. His startup connects Mango Farms with customers.
Each customer has a mango requirement that they need to satisfy. To do so, they have to travel to the mango farms.
Each mango farm also limits the number of mangos a customer can take, so a customer might need to travel to multiple farms to satisfy their requirement.
The customer will go to the first closest mango farm and get mangos. If their requirement is still not complete, they will go to the second closest mango farm (w.r.t their original position), and so on.
Some customers have been blacklisted by Basmango's startup. These customers are not allowed to get mangos from farms.
Basmango has tasked you with finding the routes for each customer.
They have provided you all the data you need to complete this task through a REST API at this website.
You must make GET requests to get this information.

Implement the functions in the functions.py file.

The output should look like:
<Customer1 name > : <First closest Farm name> > <Second closest Farm name> > <Third closest Farm name>
<Customer2 name > : <First closest Farm name> > <Second closest Farm name> > <Third closest Farm name>
And so on

Eg :
Basmango : farm1 > farm2 > farm3
PK : farm3 > farm20 > farm32

If the customer is blacklisted, the output should look like:
Basmango : Blacklisted

Additional notes:
You do not need to find the optimal route, simply find the closest mango shops the customer needs to go to , to complete their mango requirement.
Use euclidean distance while trying to find the closest stops.
Use a set for checking whether a customer is blacklisted (for performance)

Task 2 (bonus) (25 points):

Basmango is amazed that you solved this problem, however he does not know Python and cannot run your python file!
Write the output from Task 1 to a file named routes.txt through the write operation.

Implement the bonus component in functions.py for the print_routes() function.

Task 3 (bonus) (25 points):

Basmango had a great idea! He wants to start a mango pickling business. He heard that you can pickle objects in python. Considering your expertise, he has tasked you with pickling mangos.

Complete the functions in the pickles.py file.

Additional notes:

1. You must make a get request again to get the list of mango farms.
2. Additional information is given the function docstring.

You must submit a .zip file containing the three python files, functions.py, main.py and pickles.py
No .csv, .txt or pickle files must be present in the final submission.

Zip file format : Firstname_Lastname.zip

Submit the zip file on google classroom.