Hackathon mock 1 1487

Title: E-Waste Management System with Recycling Center Suggestion

Objective:

The project aims to create a simple and effective system for managing e-waste items, tracking their recycling status, and suggesting appropriate recycling centers. The system will help users log new e-waste items, mark items as recycled, generate detailed reports on recycling status, and provide recommendations for recycling centers based on the item type.

Key Features:

1. Item Logging:
   - Users can log new e-waste items into one of three categories: Small Electronics, Large Appliances, and Batteries.
   - Each item is recorded with a name and its recycling status (initially set to "Not Dropped Off").

2. Recycling Status Tracking:
   - Users can update the status of items to "Dropped Off," moving them from the "Not Dropped Off" list to the "Recycled" list.
   - Recycled items are tracked separately from items that are yet to be recycled.

3. Reporting:
   - Generates detailed reports showing:
     - The number of items in each category that are yet to be recycled.
     - The number of items that have already been recycled.
     - A table-like structure listing each item by name, with counts of how many are yet to be recycled and how many are recycled.

4. Recycling Center Suggestions:
   - The system queries a local API to suggest recycling centers based on the type of e-waste item.
   - Provides users with a list of suggested centers where they can dispose of their e-waste.

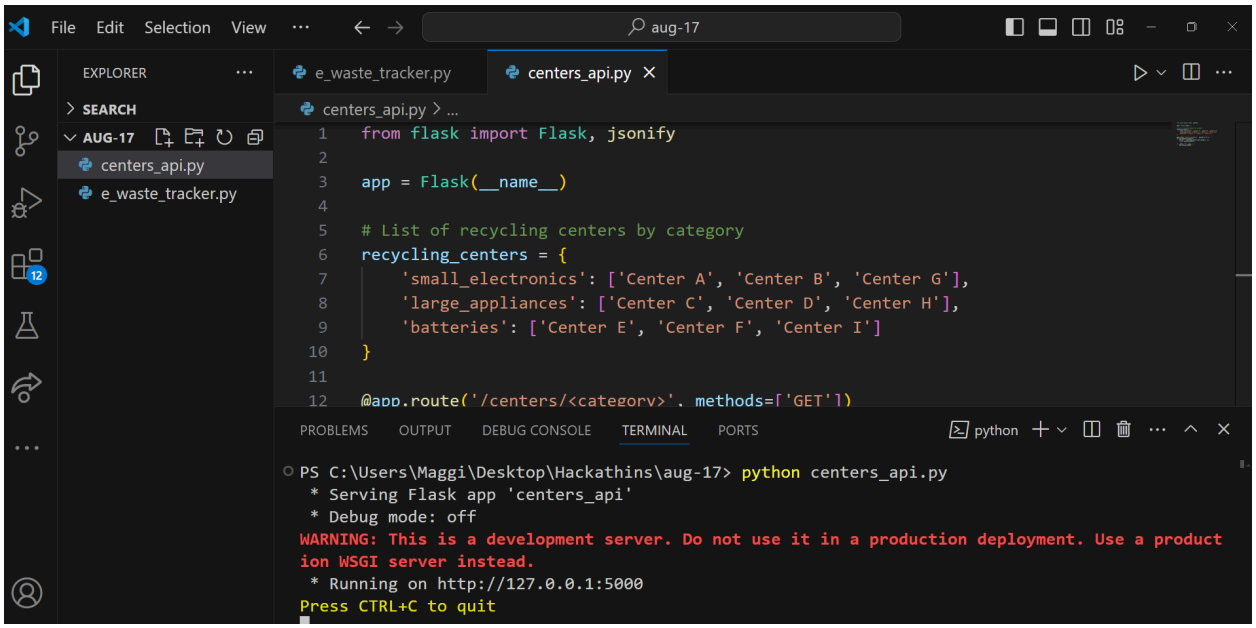
Technologies Used:
- **Python**: For the core functionality and data management.
- **Flask**: To serve the recycling center API.

Implementation Steps:
1. Develop core Python functionality for logging items, tracking recycling status, and generating reports.
2. Create a Flask API to provide recycling center suggestions.

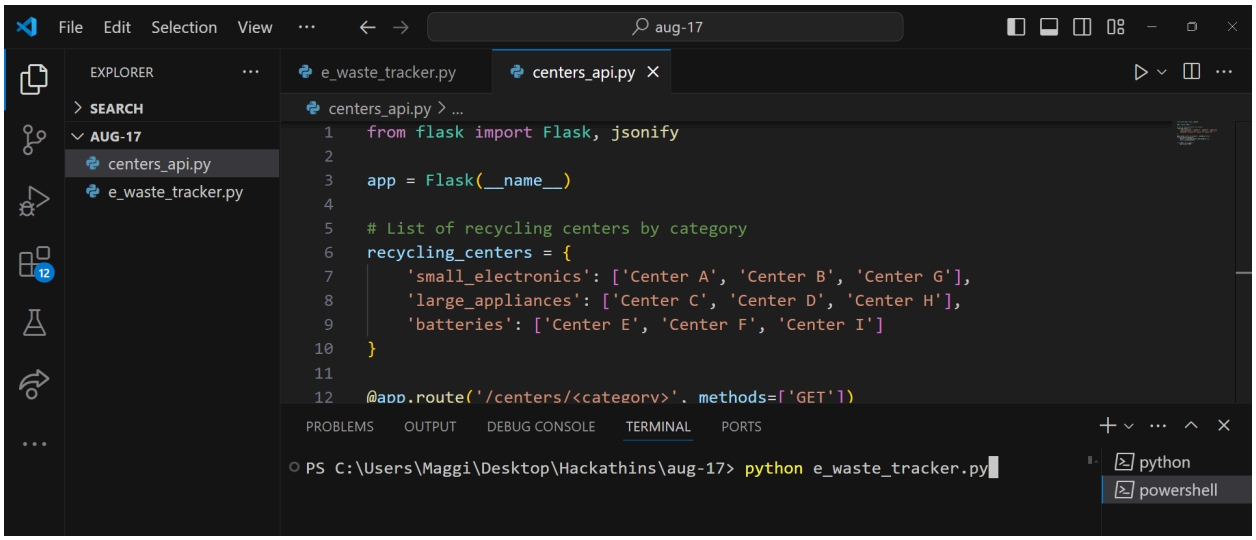
This system is designed to be user-friendly and efficient, helping to streamline e-waste management and promote environmentally responsible disposal practices.

Steps to follow to get it running:

Get the flask server running on your computer

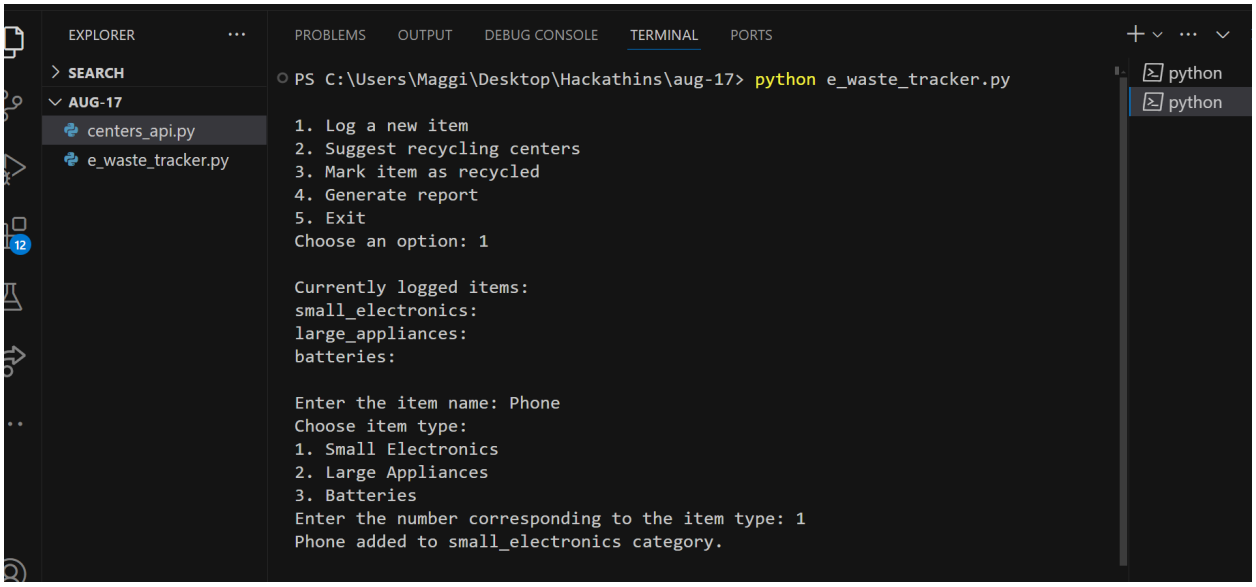


After the flask server is up and running

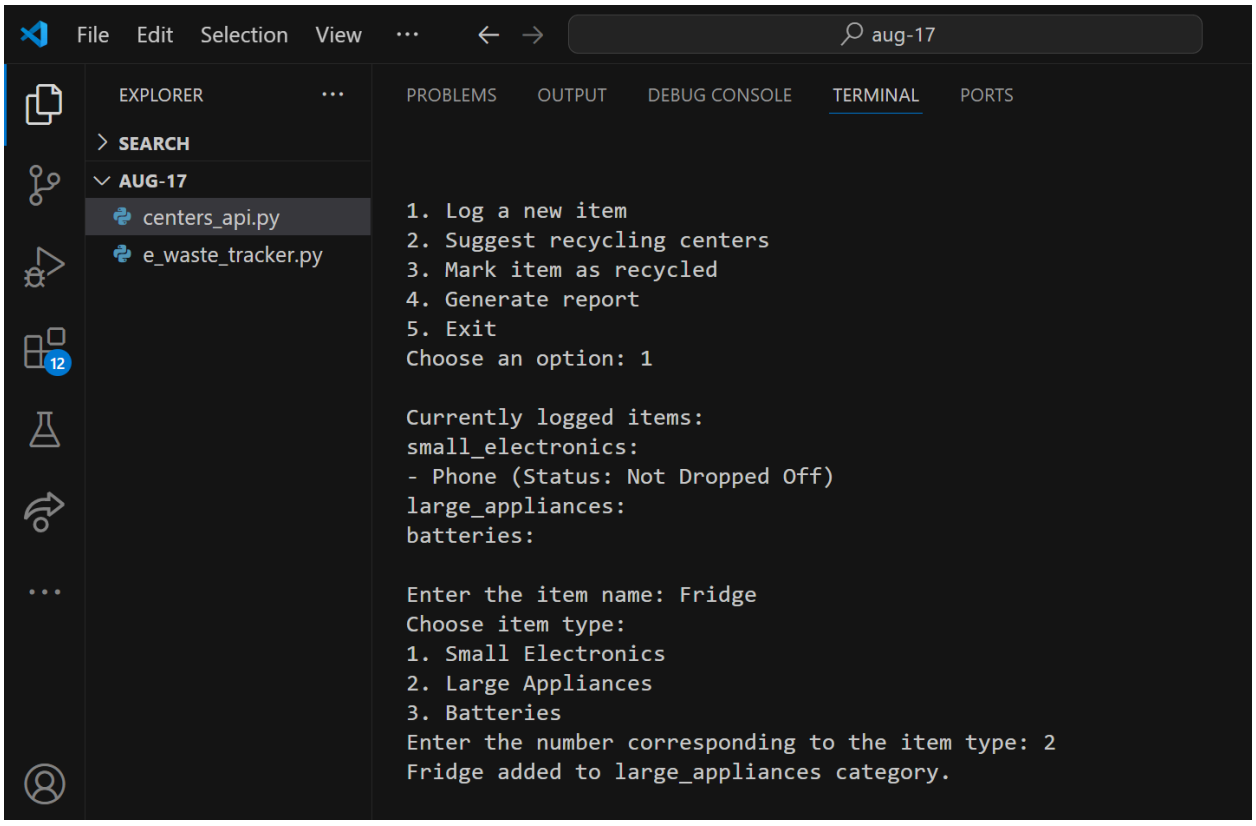


Screenshots in console for each functionality

Logging
–Small electronics



–Large electronics



–batteries

```
1. Log a new item
2. Suggest recycling centers
3. Mark item as recycled
4. Generate report
5. Exit
Choose an option: 1

Currently logged items:
small_electronics:
- Phone (Status: Not Dropped Off)
large_appliances:
- Fridge (Status: Not Dropped Off)
batteries:

Enter the item name: lithium
Choose item type:
1. Small Electronics
2. Large Appliances
3. Batteries
Enter the number corresponding to the item type: 3
lithium added to batteries category.
```

Now i will add some more in the same manner and ask for the report
After asking for the report

```
1. Log a new item
2. Suggest recycling centers
3. Mark item as recycled
4. Generate report
5. Exit
Choose an option: 4

Report:

Small_electronics:
Item Name           Count (Not Recycled) Count (Recycled)
-------------------------------------------------
Phone               1                    0
Tab                 1                    0

Large_appliances:
Item Name           Count (Not Recycled) Count (Recycled)
-------------------------------------------------
Fridge              1                    0
AC                  1                    0

Batteries:
Item Name           Count (Not Recycled) Count (Recycled)
-------------------------------------------------
lithium             1                    0
Duracell            1                    0

1. Log a new item
```

NOw i going to ask for suggestion for recycle centers

```
1. Log a new item
2. Suggest recycling centers
3. Mark item as recycled
4. Generate report
5. Exit
Choose an option: 2
Choose item type:
1. Small Electronics
2. Large Appliances
3. Batteries
Enter the number corresponding to the item type: 1
Suggested recycling centers for small_electronics: ['Center A', 'Center B', 'Center G']

1. Log a new item
2. Suggest recycling centers
3. Mark item as recycled
4. Generate report
5. Exit
Choose an option: 2
Choose item type:
1. Small Electronics
2. Large Appliances
3. Batteries
Enter the number corresponding to the item type: 2
Suggested recycling centers for large_appliances: ['Center C', 'Center D', 'Center H']

1. Log a new item
2. Suggest recycling centers
3. Mark item as recycled
4. Generate report
5. Exit
Choose an option: 2
Choose item type:
1. Small Electronics
2. Large Appliances
3. Batteries
Enter the number corresponding to the item type: 3
Suggested recycling centers for batteries: ['Center E', 'Center F', 'Center I']

1. Log a new item
2. Suggest recycling centers
3. Mark item as recycled
4. Generate report
5. Exit
Choose an option:
```

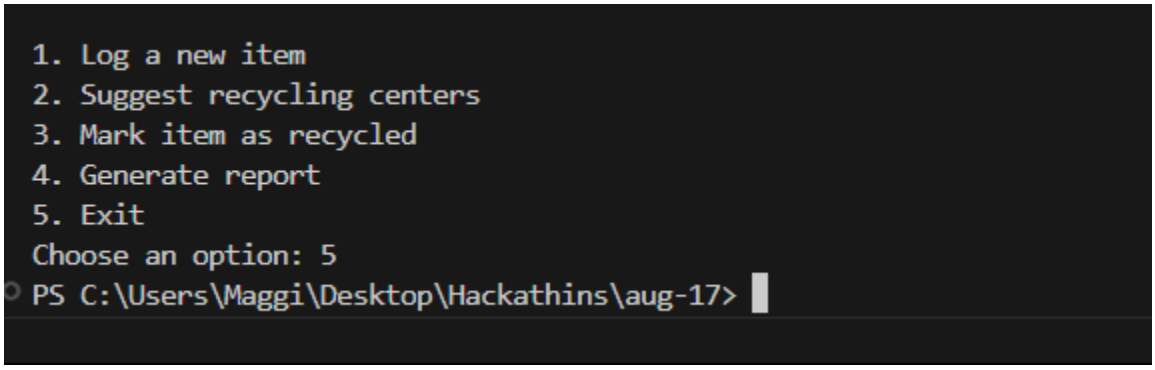
Here it will call the centers_api.py

Now lets update some status for not recycled to recycled and then ask for report

```
Choose an option: 3
Choose item type:
1. Small Electronics
2. Large Appliances
3. Batteries
Enter the number corresponding to the item type: 1
Enter the item name: Phone
Phone has been marked as Dropped Off.

1. Log a new item
2. Suggest recycling centers
3. Mark item as recycled
4. Generate report
5. Exit
Choose an option: 3
Choose item type:
1. Small Electronics
2. Large Appliances
3. Batteries
Enter the number corresponding to the item type: 3
Enter the item name: Duracell
Duracell has been marked as Dropped Off.

1. Log a new item
2. Suggest recycling centers
3. Mark item as recycled
4. Generate report
5. Exit
Choose an option: 4

Report:

Small_electronics:
Item Name           Count (Not Recycled) Count (Recycled)
-------------------------------------------------
Tab                 1                    0
Phone               0                    1

Large_appliances:
Item Name           Count (Not Recycled) Count (Recycled)
-------------------------------------------------
Fridge              1                    0
AC                  1                    0

Batteries:
```

```
Batteries:
Item Name             Count (Not Recycled) Count (Recycled)
-----------------------------------------------------
lithium               1                    0
Duracell              0                    1

1. Log a new item
2. Suggest recycling centers
3. Mark item as recycled
4. Generate report
5. Exit
Choose an option:
```

Last is exit functionality


1. Log a new item
2. Suggest recycling centers
3. Mark item as recycled
4. Generate report
5. Exit
Choose an option: 5
PS C:\Users\Maggi\Desktop\Hackathins\aug-17>