Project Statement: Waste Management Tracker

The Waste Management Tracker is a tool designed to help users monitor and manage waste generation over time. This application allows users to log various types of waste — including plastic, food, paper, metal, and glass — by entering the amount of waste in kilograms for each category. The program keeps a running total of each waste type, providing a comprehensive weekly summary of waste produced.

Objective:

The main goal of the Waste Management Tracker is to raise awareness of waste production habits and encourage users to adopt more sustainable practices. By tracking waste over time, users can identify patterns, set reduction goals, and work towards minimizing their environmental impact.

User Guide:

(i) Add Waste: Users can select the type of waste and specify the amount (in kilograms) for entry.

(ii)Show Summary: The tracker displays the cumulative waste amounts for each category.

(iii)Exit: Users can terminate the program while ensuring data is saved for future sessions.

This tracker serves as a simple, yet effective tool for individuals, families, or small organizations aiming to track and reduce their waste footprint over time.

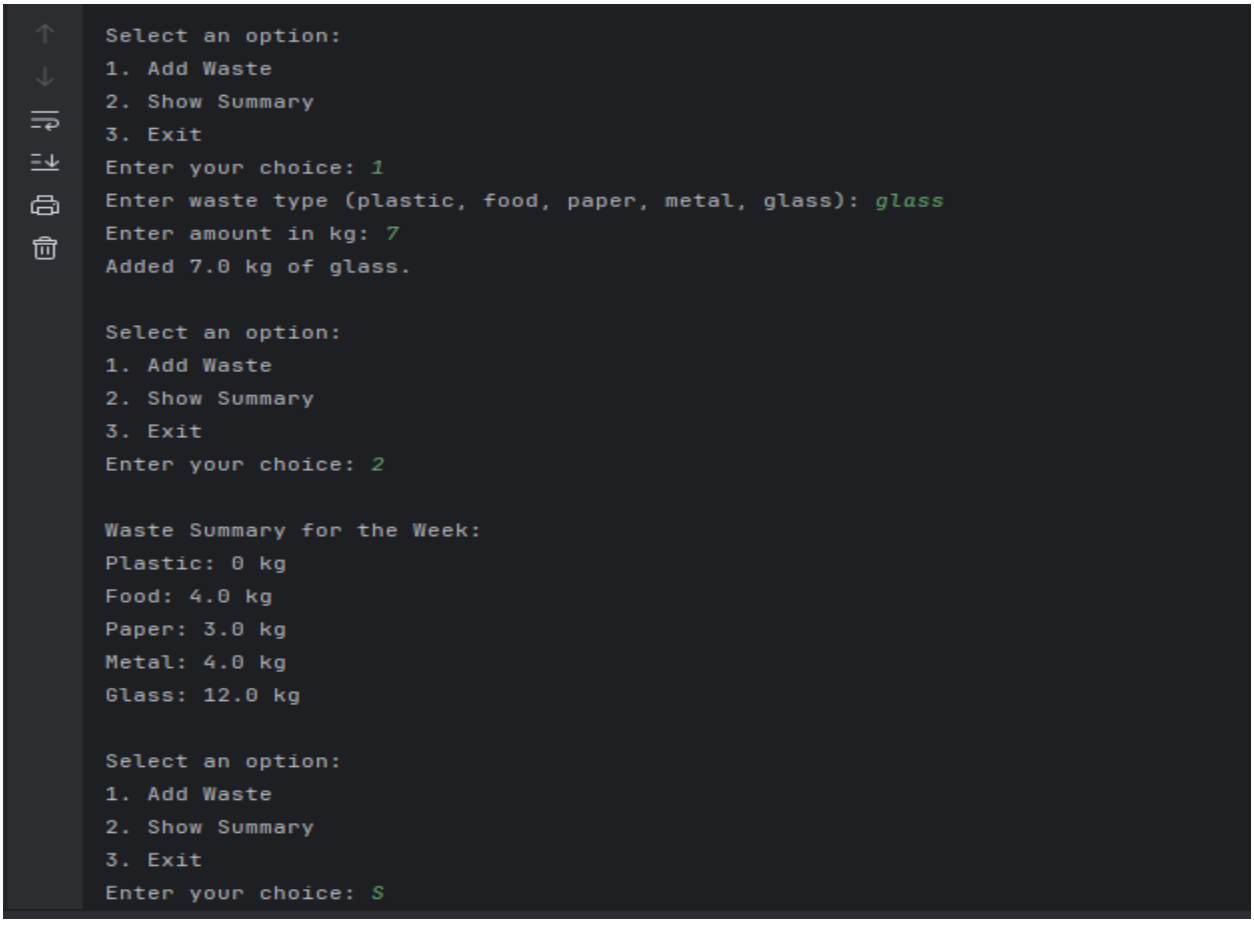
Here the python code of Waste Management Tracker:

```
import json
file_name = "waste_data.json"

def load_waste_data():
    try:
        with open(file_name, "r") as file:
            return json.load(file)
    except FileNotFoundError:
        return {"plastic": 0, "food": 0, "paper": 0, "metal": 0, "glass": 0}
```

```
def save_waste_data():
    with open(file_name, "w") as file:
        json.dump(waste_data, file)

waste_data = load_waste_data()

def add_waste(waste_type, amount):
    if waste_type in waste_data:
        waste_data[waste_type] += amount
        save_waste_data()  # Save after adding waste
        print(f"Added {amount} kg of {waste_type}.")
    else:
        print("Invalid waste type. Please choose from:", ", ".join(waste_data.keys()))

def show_summary():
    print("\nWaste Summary for the Week:")
    for waste_type, amount in waste_data.items():
        print(f"{waste_type.capitalize()}: {amount} kg")

print("Welcome to the Waste Management Tracker!")
while True:
    print("\nSelect an option:")
    print("1. Add Waste")
    print("2. Show Summary")
    print("3. Exit")

    choice = input("Enter your choice: ")

    if choice == "1":
        waste_type = input("Enter waste type (plastic, food, paper, metal, glass): ").lower()
        amount = float(input("Enter amount in kg: "))
        add_waste(waste_type, amount)

    elif choice == "2":
        show_summary()

    elif choice == "3":
        print("Thank you for using the Waste Management Tracker!")
        break
```

```
else:
    print("Invalid choice. Please enter 1, 2, or 3.")
```

Output of Waste Management Tracker



```
Select an option:
1. Add Waste
2. Show Summary
3. Exit
Enter your choice: 1
Enter waste type (plastic, food, paper, metal, glass): glass
Enter amount in kg: 7
Added 7.0 kg of glass.

Select an option:
1. Add Waste
2. Show Summary
3. Exit
Enter your choice: 2

Waste Summary for the Week:
Plastic: 0 kg
Food: 4.0 kg
Paper: 3.0 kg
Metal: 4.0 kg
Glass: 12.0 kg

Select an option:
1. Add Waste
2. Show Summary
3. Exit
Enter your choice: S
```