K.R. Mangalam University

School of Engineering & Technology

Course Code: ETCCPP102

Course Name: PROGRAMMING FOR PROBLEM SOLVING USING PYTHON

Course: B.Tech. CSE (Specialization in AI & ML)

Semester: 1

Assignment- Calorie Tracker

Domain : AI/ML

Aim : AI researcher or AI developer

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Section: 'B'

Calorie Tracker – Python Project Report

1. Introduction

Healthy living and balanced nutrition are becoming increasingly important in today's hectic lifestyle. Many individuals struggle to maintain a consistent record of what they eat throughout the day, which often leads to unintentional overeating or malnutrition. The Calorie Tracker project was developed to help users easily log their meal names, record calorie intake for each meal, analyze their daily average consumption, compare it with a recommended limit, and store their daily report for future reference.

This Python-based tool is designed for beginners learning fundamental programming concepts such as functions, loops, lists, conditionals, user input handling, and file operations. The project demonstrates how core Python concepts can be combined to solve a real-world problem—monitoring daily calorie intake—in a simple, user-friendly command-line program.

2. Objective of the Project

The primary objective of the Calorie Tracker is to provide users with a convenient way to track their meals and monitor calorie consumption. The program aims to:

• Allow users to enter multiple meals and their respective calorie values.

• Calculate and display the total calorie intake for the day.

• Compute the average calories consumed per meal.

• Compare the total calorie intake with a recommended or user-defined daily calorie limit.

• Provide the option to save the entire daily report into a text file for future reference.

3. Features of the Calorie Tracker Program

3.1 User-Friendly Input System

The program begins by greeting the user and asking how many meals they want to record. For each meal, the user enters the meal name along with its calorie value. Both inputs are stored in lists called Meal and Calories.

3.2 Validation Through a Reusable Function

The function do_you_want_permission() asks yes/no questions and validates responses, ensuring stability and preventing invalid inputs.

3.3 Calculation of Average Calories

The calc_avg_calorie() function computes the average calories consumed per meal and rounds it to two decimals.

3.4 Daily Limit Comparison

The program uses a default limit of 3000 calories but allows customization. It alerts the user if their intake exceeds the limit.

3.5 Structured Display of Meal Report

The program prints a formatted table showing meal names, calories per meal, total calories, and average calories.

3.6 Saving Daily Reports

The program can save the report into a text file, allowing users to maintain long-term logs.

4. Code Explanation

The program is divided into three main parts:

• Functions for validation and average calculation.

• The main logic for collecting and processing meal data.

• The report-saving section using file handling.

5. Learning Outcomes

Key Python concepts learned include:

• Input handling

• Loops and iteration

• Functions and modular design

• Lists and data storage

• Conditionals

• File handling

• User interaction design

6. Conclusion

The Calorie Tracker Python project is a practical tool for monitoring daily calorie intake. It successfully records meals, calculates totals, checks limits, and stores logs. The program demonstrates clear understanding of Python fundamentals and practical application. With future enhancements, it could be expanded into a GUI or data visualization tool, but even in its current form, it serves as an excellent beginner-level project.

CODE OUTPUT AND SCREENSHOTS

CODE THAT I USED TO MAKE THE DAILY CALORIE TRACKER

```python
print("----- Calorie Tracker -----")

# Student details
name = input("Enter your name: ")
roll = input("Enter your roll number: ")

print("\nEnter details for 3 meals:\n")

# Meal 1
meal1 = input("Meal 1 name: ")
cal1 = float(input("Calories in Meal 1: "))

# Meal 2
meal2 = input("Meal 2 name: ")
cal2 = float(input("Calories in Meal 2: "))

# Meal 3
meal3 = input("Meal 3 name: ")
cal3 = float(input("Calories in Meal 3: "))

# Calculations
total = cal1 + cal2 + cal3
average = total / 3

# Output
print("\n----- Daily Calorie Report -----")
print("Name:", name)
print("Roll Number:", roll)
print("-------------------------------")
print(meal1, ":", cal1)
print(meal2, ":", cal2)
print(meal3, ":", cal3)
print("-------------------------------")
print("Total Calories =", total)
print("Average Calories per meal =", average)
```

After running the code we can add the name of the student and roll number in my case as my name is Prachi Manwal I first added my name and roll number

```
----- Calorie Tracker -----
Enter your name:  Prachi manval
```

```
----- Calorie Tracker -----
Enter your name:  Prachi manval
Enter your roll number:  2501730365
```

Then it will ask about the number of meals which is normally 3 so now I can add meal name and after that total calories it had

```
Enter details for 3 meals:

Meal 1 name:  ↑↓ for history. Search history with c-↑/c-↓
```

Added my 1st meal that had during breakfast as well as the calories

```
Meal 1 name:  Rajma Chawal
Calories in Meal 1:  400
```

Will do the same for my other 2 meals

```
Enter details for 3 meals:

Meal 1 name:  Rajma Chawal
Calories in Meal 1:  400
Meal 2 name:  Icecream
Calories in Meal 2:  200
Meal 3 name:  Mutton biryani
Calories in Meal 3:  700
```

Now after adding all my meals as well as the calories after running the programme it will show me the name roll no total meals I had what I had total calories and average calorie in 1 meal

```
----- Calorie Tracker -----
Enter your name:  Prachi manval
Enter your roll number:  2501730365

Enter details for 3 meals:

Meal 1 name:  Rajma Chawal
Calories in Meal 1:  400
Meal 2 name:  Icecream
Calories in Meal 2:  200
Meal 3 name:  Mutton biryani
Calories in Meal 3:  700

----- Daily Calorie Report -----
Name: Prachi manval
Roll Number: 2501730365
------------------------------
Rajma Chawal : 400.0
Icecream : 200.0
Mutton biryani : 700.0
------------------------------
Total Calories = 1300.0
Average Calories per meal = 433.3333333333333
```