Report – Assignment 4

Assumptions:

1. For first day, any type of meal is possible, fasting or Low-Calorie or High-Calorie.

Input Format:

- 1. First line contains only 1 integer value 'n', indicating the number of days.
- 2. Following n lines contains 3 values per line, indicating the calorie consumption of doing fasting, healthy low-calorie and unhealthy high-calorie meals respectively.

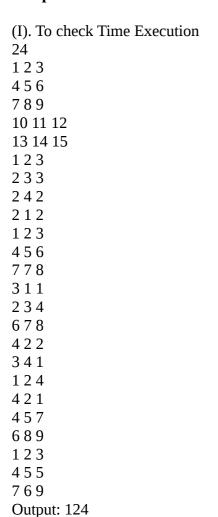
Logic for Dynamic Programming:

1. Optimal Subproblem: For each day, maximum calorie intake is calculated by observing the maximum calorie intake till the previous day.

Each subproblem will have max values for taking the type of food consumed on that day.

2. Constructing the solution: If we iterate over n-days, the maximum value (over the three types) on the n-th day would be the calories consumed.

Sample TestCase:



(II). Any random combination in calorie chart. Input: 4 123 456 789 10 11 12 Output: 27 Bonus: 28 (III). Only one day Ìnput: 1 123 Output: 3 (IV). Input: 4 10 250 550 15 240 490 10 350 400 12 200 595 Output: 1395

Bonus: 1735