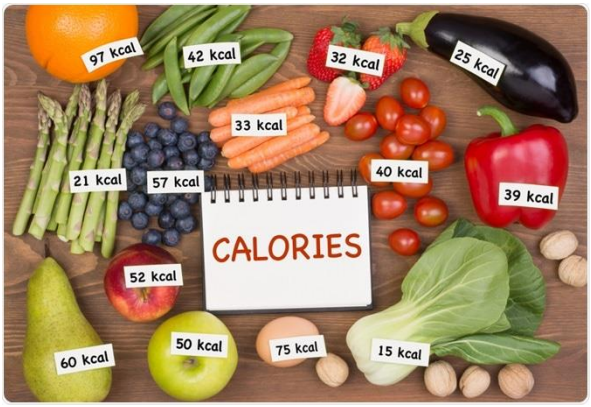

Group Members-

Piyush Kumar 20103336 B7

Sumit Singh 20103181 B7

Abhishek Kumar 20103193 B7

Joy Rattoo 20103183 B7

Healtifye_BASE

Synopsis

APS Project

PROBLEM STATEMENT

The human body needs calories to survive. Without energy, the cells in the body would die, the heart and lungs would stop, and the organs would not be able to carry out the basic processes needed for living.

But eating too many calories — and not burning enough of them off through activity — can lead to weight gain, many health problems.

Now, how to keep a check on the number of calories consumed while taking the required amount of protein for our diet?

We need to **maximize our protein intake**, which we will calculate via Lifestyle and the BMI of a person through the data punched in the program.

Then, we need to create a **list of items** from the list already present in the program. The list of items prepared will be the best-balanced diet plan as per our problem statement.

APPROACH

We need to make sure that a person is intaking meals per day and is well balanced in calorie to protein intake.

We find out **the best-balanced diet** for a customer, concerning our problem statement.

So, we need to maximize the person's protein intake keeping calorie intake constant or less.

Hence maximization problem comes under the optimization problem

Here we make use of **Dynamic Programming.**

More specifically Knapsack 1\0 Dynamic Programming, where we maximize protein**(profit)** while keeping calorie**(knapsack capacity)** less or equal.

We already have the list of food items with their calorie and protein content %. **(Items of knapsack)**