



Group: A2-G2



# HEALTH AND NUTRITION ANALYSIS



Project Leader:

**Yasin Polok**

<https://github.com/polok-uap/Health-and-Nutrition-Analysis/>

Project Member:

**Mostofa Kafur Hossain Alvee**

<https://github.com/Alvee-Hossain/Health-and-Nutrition-Analysis-webpage->

# MOTIVATION

By developing a health and nutrition analysis software engineering project, we can help people make healthier choices and improve their overall quality of life. With features such as food diary tracking, nutritional analysis, and personalized meal planning, users can gain insights into their dietary habits and identify areas where they can make positive changes.



## Problem Statement

---

For a human being a healthy life leads to happiness. Every human should be healthy and fit. A person who is not healthy will suffer from many diseases and can face some mental issues also. Our “Health and Nutrition Analysis” software will help a person to find out how many amount of nutritious elements are in their food. It will also help a person to know about his physical health lacking and suggest that person with a necessary food diet.

## Objectives

Health and nutrition are essential for every human being. If a human is not in good health then it will affect him with mental issues like sadness and depression etc. Many people are not openly concerned about their health and they don't want to inform others. Our goal is to develop a web application where a person will anonymously observe his health lacking and get suggestions based on that. On the web page one can also find out the nutrition's amount of a food item.



# EFFECT ON SOCIETY

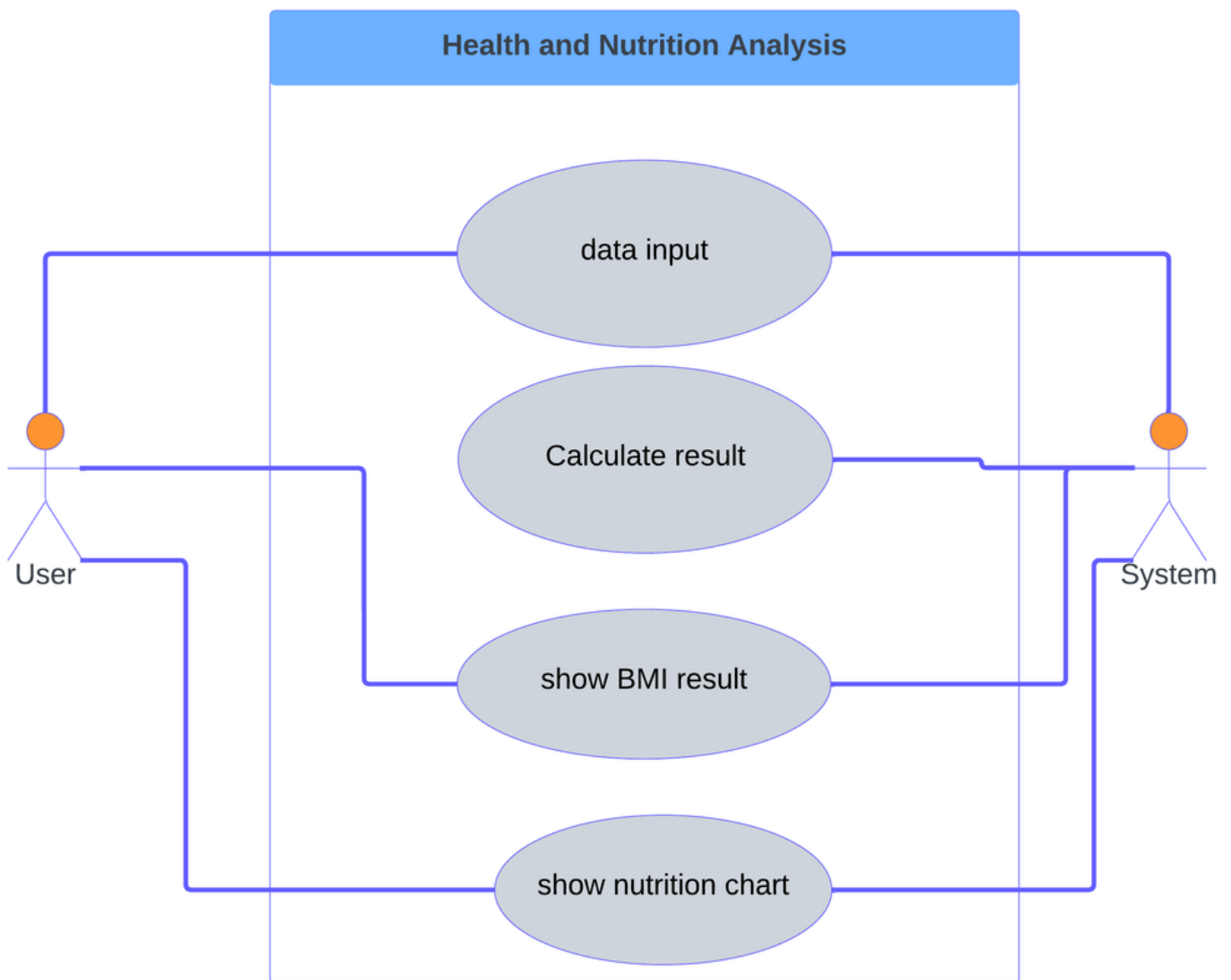
The way society views and approaches health and nutrition can have a significant impact on individuals and communities. Societal attitudes towards food and physical activity can shape individuals' choices and habits, and can also influence policy and access to resources. The percentage of people not having a fit healthy body is increasing day by day. Many people are not happy with the body they have and want to change themselves to the better version of themselves. Overall, the impact of society on health and nutrition is complex and multifaceted, and addressing these issues requires a holistic approach that takes into account a variety of social and economic factors. In this application people will be aware about their health and nutrition by calculating their proper diet plan. They can also check the BMI (body mass index) from our system. It could be more helpful for people to maintain their health and nutrition.

## REQUIREMENT ANALYSIS

- **Basic Requirement:**
  - Data input from user.
  - Users have to provide data to get BMI results and have the health beneficial results.
- **Identify Functional Requirement:**
  - Manipulate user data and get feedback on nutrition charts.
  - Automatically Generate the BMI percentage for a preferable diet plan.
  - Provide a user-friendly interface for inputting the user data to proceed the nutrition result.
  - Automatically generate the diet plan based on user input.
  - Allow users to download the PDF version of the nutrition chart.
- **Technical Requirement:**
  - The **Agile** design process will be used because we will need to develop the project part by part. We will develop a part, test it and then go on to the next part.

# METHODOLOGY

## Use Case Diagram






# SOFTWARE PROCESS MODEL: (AGILE)

---

Here is an overview of how the Agile model can be used in this software product development:

1. First we will need to calculate the BMI calculator where we will take information from the user and calculate BMI.
2. Secondly we will take that BMI result and the user's information and then show the user how he/she will get the perfect health or BMI score by suggesting him/her to make a change in weight or diet plan.
3. Lastly, for the recipe-nutrition calculator part we will take the information and calculate the amount of various nutritions in that recipe.

## PROJECT DEVELOPING RESOURCES:

- Model:
    - Agile
  - Design pattern:
    - MVT (model-view-template)
  - Framework:
    - Python-Django
  - API:
    - Django Rest API
- 

## How Ks are addressed through the project:

Ks	Attribute	How Ks are addressed through the project
K2	mathematics	In our project we will need to calculate BMI after collecting information from the user.
K3	engineering fundamentals	To solve the problems we need basic Computer Science knowledge
K5	engineering design	Would need the necessary ER diagram to make the database design and might need other designing methods too.
K6	engineering practice	Need to use any python IDE to code the project.
K8	research literature	Gathered knowledge from different websites and youtube links

## How Ks are addressed through the project:

Ps	Attribute	How Ps are addressed through the project
P1	depth of knowledge required	For the project, we need to learn data analysis, django framework, python, html, css.
P6	extend of stakeholders	Anyone can be a member of our website. It has no age restrictions.

## How As are addressed through the project:

As	Attribute	How As are addressed through the project
A1	Range of resources	Involve the use of diverse resources (and for this purpose resources include people, money, equipment, materials, information and technologies)
A4	Consequences for society and the environment	Have significant consequences in a range of contexts, characterized by difficulty of prediction and mitigation.

