



**BSc. (Hons) Engineering in Electronics and  
Telecommunications Engineering**

**ECS2301-Software Engineering and Project  
Assignment 1- Problem Identification**

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# Ideal Body Weight Calculator

## **Background of the Problem**

- Weight maintenance is essential to numerous health issues related to lifestyle diseases like obesity, diabetes, heart disease, and joint-related problems. Most people do not understand what their ideal weight should be, as this differs with height or even gender and sometimes age.
- While there are general weight charts or BMI-based resources, they require manual computation or are not personalized, making it inconvenient for users to find the ideal weight range quickly. Additionally, a great number of people are deeply interested in research like this, especially when it involved personalized tools that satisfy simpler human uses while generating outcome-based insights for healthy living.
- The Ideal Weight Calculator helps fulfill this exact need in its simplest form: it makes it easy for users to derive their ideal weight in reference to height and gender using known medical formulas such as the Devine Formula. Such a tool can motivate individuals toward making informed decisions regarding health, dieting, and fitness goals.

## **Stakeholders Affected by the Problem**

1. Individuals(General users aiming to manage or monitor their weight)
  - Lack of awareness about their ideal weight leads to difficulty setting realistic fitness or health goals.
  - Risk of health problems due to underweight or overweight conditions.
2. Healthcare Professionals
  - Require tools to provide patients with accurate weight ranges and guidelines.
  - Need to educate patients on weight management in an engaging way.
  - Lack of simple digital tools for quick weight assessments during consultations.
3. Fitness and Wellness Industry
  - Clients often need to know their ideal weight to define fitness routines.
  - A customizable Ideal Weight Calculator could integrate into their offerings to enhance services.
4. Athletes
  - Sport-Specific Needs- Different sports have varying ideal weight requirements.
  - Ideal weight plays a critical role in athletic performance. Being underweight or overweight can reduce stamina, agility, and overall efficiency.
  - Maintaining an ideal weight helps reduce stress on joints and muscles, minimizing the risk of injuries during training or competitions.

## **Solution for Problem**

The proposed solution is to develop an **Ideal Weight Calculator**, a user friendly tool that helps individuals determine their healthy weight range based on their height, gender, and optional parameters like age. This tool addresses the lack of awareness and accessibility to calculate ideal weight, providing quick and accurate results.

