

# Body Mass Index

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**Abstract:** *The main purpose of this project, BMI (Body Mass Index) is a measure of body fat based on height and weight that applied to adult and women. BMI is the Body Mass Index, a measure of body fat based on height and weight applied to adults and women. Body Mass Index is a simple calculation using person's height and weight. The formula is  $BMI = \frac{kg}{m^2}$  where kg is person's weight in kilogram and  $m^2$  is height in meter squares. A BMI of less than 18.6 means a person is underweight. A BMI is between 18.6 and 24.9 is normal. A BMI is more than 24.9 is overweight. The major goal is to keep one's health in good shape. The BMI App provides us with all of the necessary information, such as health recommendations and advice on what to eat and what to avoid.*

**Keywords:** HTML, CSS, JavaScript

## I. INTRODUCTION

### 1.1. HTML

HTML is stands for **HyperText Markup Language** which can be used to create web pages and web applications. **HyperText**-Hypertext refers to "Text within Text." A text has a link within it, which is called hypertext. Whenever we click on a link, it will bring us to a new web page, we have clicked on a hypertext. Hypertext is a method to link two or more web pages together. **Markup language**-A markup language is used to apply layout and format conventions to a text document. It can change text into images, tables, links, etc. It makes text more interactive and dynamic.

### 1.2 CSS

CSS is a simple design language used to control the style of a web document. It is done in a simple and easy way. CSS stands for "**Cascading Style Sheet**". It is used to make web pages presentable. CSS handles the presentation part of a web page. With CSS, the color, the style of fonts, the spacing, usage of background images or colors, layout designs can be controlled. It is simple to maintain and loads page faster.

### 1.3 JAVASCRIPT

A **script** can be defined as a small piece of program which helps to add interactivity to website. A script can provide a pop-up alert box message, or provide a drop down menu. Event handlers, which are small functions can be written using any scripting language and then functions are used to trigger using HTML attributes. This script can be written with JavaScript or Vb Script. Only **JavaScript** and associated frameworks are being used now-a-days by most of the web developers. Using multiple `<script>` tags, you can include multiple script files. A default scripting language can be specified for all your *script* tags.

## II. RELATED WORKS

Body mass index has takes place for measuring the correct height and weight of the body. If not it shows the corrected height and weight of a body. Min Jiang; Guodong Guo; (2019)<sup>[1]</sup> To investigate the problems at different levels of difficulties, three feasibility problems, from easy to hard, are studied. More specifically, a framework is developed for analyzing body weight from human body images. Kevin D. Hall; (2010)<sup>[2]</sup> mathematical modeling of human metabolism was outlined together with the regulation of body weight and body composition. Mahdi Pedram; Seyed Iman Mirzadeh; Seyed Ali Rokni; Ramin Fallahzadeh; Diane Myung-Kyung Woodbridge; Sunghoon Ivan Lee; Hassan Ghasemzadeh et. al., (2021)<sup>[3]</sup> The results show that the accuracy of fluid type detection ranges from 74.93% to 94.98% while trying to detect the fluid of an unseen bottle. Our results for volume estimation show that the regression-based volume estimation supports a root-relative-squared-

error that ranges from 1.12% to 13.36%. Julie Barnett; Michelle Harricharan; Dave Fletcher; Becky Gilchrist; Jane Coughlan et. al.,(2014)<sup>[4]</sup> Findings show that the system has many positive design features, but which require further development in order for the system to be fully acceptable within dietetic practice and motivate patient engagement.

### III. EXISTING SYSTEM

The existing system is very time-consuming and complex to calculate. In patients who are very muscular, such as bodybuilders or professional athletes, the BMI may overestimate their body fat. Older patients who have lost of muscle mass due to aging may have their body fat percentage underestimated. While BMI might underestimate the risk for people with normal weight but high body fat, it can overestimate the risk for muscular, healthy people. BMI isn't perfect, however, and while it's beneficial in some circumstances, it has some major limitations if you're trying to use it to gauge your individual disease risk.

### IV. PROPOSED SYSTEM

The BMI Calculator Application is a software program that eliminates the need for more manual hours to calculate and locate the BMI for a specific person with a single click. This application incorporates both American and Indian standards. This application provides all of the information in both standards that is not available in any other application. BMI is calculated the same way for both adults and children. The calculation is based on the following formulas.

### V. IMPLEMENTATION

#### Modules

1. Input
2. Calculate
3. Result

#### 5.1 Input

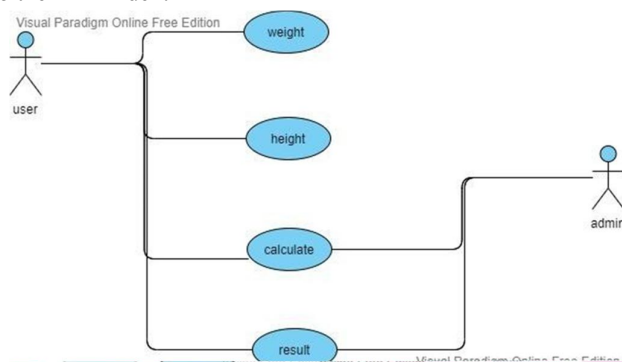
This is the main module of the program. The user enters his/her details in this module. The fields that the user can enter are the height and weight of the user. The input is taken in HTML form and the data is been passed to the function for the calculation of BMI.

#### 5.2 Calculate

In this module, the data from the form is taken and processed for the calculation of the desired BMI of the user. The BMI is calculated by using the height and weight of the user and also a specific range of values for the BMI is been used such as displaying whether the is over-weighted, underweighted, or fit.

#### 5.3 Result

The resulting module is used to display the final result of the data processed by the function. The module displays the BMI value of the user and also the BMI index.



**Fig 5.1 USE CASE DIAGRAM FOR THE ENTIRE MODULE**

## **VI. CONCLUSION**

The package was created in such a way that future changes are simple to implement. The following conclusions can be drawn from the project's progress. The efficiency of the entire system is improved by automating it. It has a user-friendly graphical user interface that outperforms the current system. It grants authorised users appropriate access based on their permissions. It effectively solves the problem of time complexity. It has never been easier to keep information up to date. The most notable features are system security, data security, and dependability. If necessary, the System has enough flexibility to be modified in the future.

## **VII. FUTURE WORK**

This application avoids manual work and the problems concerned with it. This application manages the BMI Calculator of the different sections of the female and male. I and my team member have worked hard in order to present an improved app better than the existing one regarding the information about the various activities. Still, we found out that the project can be done in a better way. We can add alter the message to her or him to eat and exercise.

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