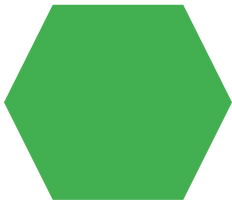




Digital Portfolio

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PROJECT TITLE



Body Mass Index (BMI)



AGENDA

1. Problem Statement
2. Project Overview
3. End Users
4. Tools and Technologies
5. Portfolio design and Layout
6. Features and Functionality
7. Results and Screenshots
8. Conclusion
9. Github Link



PROBLEM STATEMENT

problem statement for calculating BMI.

Create a program to calculate the Body Mass Index (BMI) of an individual given their weight and height.
The program should categorize the BMI into underweight, normal weight, overweight, or obese based on the following categories:

-
- *Normal weight:* BMI = 18.5-24.9
- *Overweight:* BMI = 25-29.9
- *Obese:* BMI \geq 30

*



Key features :

1. *BMI Calculation:* Calculate the BMI using the formula: $BMI = \text{weight} / \text{height}^2$
2. *BMI Categorization:* Categorize the BMI into underweight, normal weight, overweight, or obese based on the standard BMI categories
3. *User Input:* Allow users to input their weight and height
4. *Output:* Display the calculated BMI and corresponding category

Target Audience :

1. *Individuals:* Anyone interested in tracking their BMI and health
2. *Healthcare Professionals:* Healthcare professionals can use the BMI calculator as a tool for patient assessments



Potential Extensions:

1. *Graphical Representation:* Display a graphical representation of the BMI categories
2. *Health Tips:* Provide health tips and recommendations based on the BMI category
3. *Data Storage:* Store user data and track changes in BMI over time
4. *Multi-Language Support:* Support multiple languages for a wider audience

Technical Requirements:

1. *Programming Language:* Choose a programming language such as Python, Java, or JavaScript
2. *User Interface:* Design a user-friendly interface to input weight and height
3. *Calculation:* Implement the BMI calculation formula
4. *Categorization:* Implement the BMI categorization logic



Benefits:

1. *Easy to Use:* Simple and easy to use interface
2. *Accurate Calculation:* Accurate BMI calculation and categorization
3. *Health Awareness:* Raises awareness about healthy weight ranges and BMI categories



Coding :

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <title>BMI Calculator</title>
    <style>
      body {
        margin: 0;
        height: 100vh;
        display: flex;
        justify-content: center;
        align-items: center;
        background: linear-gradient(135deg, #56ab2f, #a8e063);
        font-family: Arial, sans-serif;
      }
      .container {
        background: white;
        padding: 25px;
        border-radius: 12px;
        box-shadow: 0 8px 20px rgba(0,0,0,0.3);
        width: 350px;
        text-align: center;
      }
      h1 {
        margin-bottom: 20px;
        color: #2e7d32;
      }
    </style>
  </head>
  <body>
    <div class="container">
      <h1>BMI Calculator</h1>
    </div>
  </body>
</html>
```




```
    }  
    input {  
      width: 80%;  
      padding: 10px;  
      margin: 8px 0;  
      border-radius: 6px;  
      border: 1px solid #ccc;  
      font-size: 1rem;  
    }
```

```
    button {  
      padding: 10px 20px;  
      border: none;  
      border-radius: 6px;  
      background: #4caf50;  
      color: white;  
      font-size: 1rem;  
      cursor: pointer;  
    }
```

```
    button:hover {  
      background: #388e3c;  
    }
```

```
    #result {  
      margin-top: 15px;  
      font-size: 1.2rem;  
      font-weight: bold;  
    }
```

```
  </style>
```

```
</head>
```

```
<body>
```



```
<div class="container">
  <h1>🏥 BMI Calculator</h1>
  <input type="number" id="weight" placeholder="Enter weight (kg)">
  <input type="number" id="height" placeholder="Enter height (cm)">
  <br>
  <button onclick="calculateBMI()">Calculate</button>
  <div id="result"></div>
</div>

<script>
  function calculateBMI() {
    const weight = document.getElementById("weight").value;
    const height = document.getElementById("height").value / 100; // convert cm to
    meters
    const result = document.getElementById("result");

    if (weight === "" || height === "" || height <= 0) {
      result.textContent = "⚠️ Please enter valid values!";
      result.style.color = "red";
      return;
    }
  }
}
```



```
const bmi = (weight / (height * height)).toFixed(2);  
    let category = "";
```

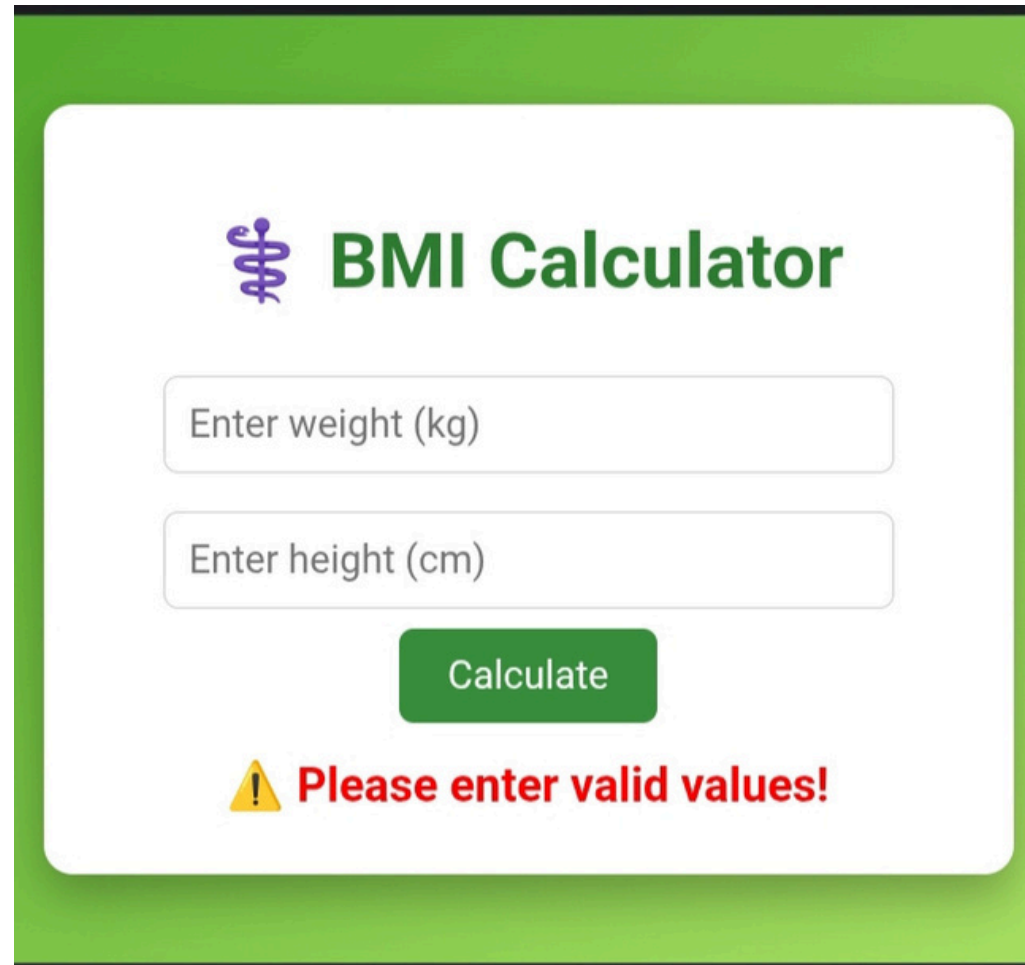
```
    if (bmi < 18.5) category = "Underweight 😞";  
    else if (bmi < 24.9) category = "Normal ✅";  
    else if (bmi < 29.9) category = "Overweight ⚠️";  
    else category = "Obese 🚨";
```

```
result.textContent = `Your BMI: ${bmi} → ${category}`;  
    result.style.color = "#2e7d32";  
    }  
</script>  
  
</body>  
</html>
```



Out put :

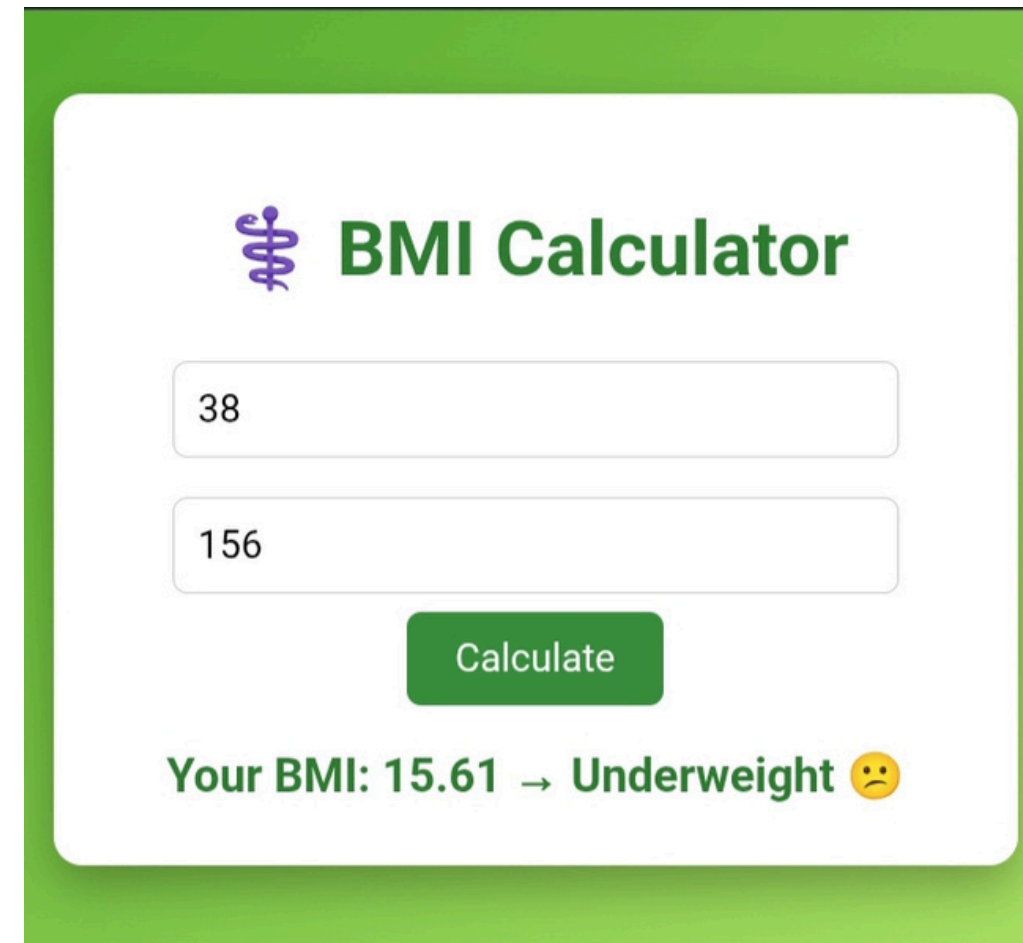
1.



The image shows a web form titled "BMI Calculator" with a medical symbol icon. It contains two input fields: "Enter weight (kg)" and "Enter height (cm)". Below the fields is a green "Calculate" button. At the bottom, there is a red warning message: "⚠ Please enter valid values!".

Before for the page

2.



The image shows the same "BMI Calculator" form after execution. The "Enter weight (kg)" field now contains the value "38" and the "Enter height (cm)" field contains "156". The green "Calculate" button is still present. Below the button, the result is displayed: "Your BMI: 15.61 → Underweight 😞".

After to the page result execute



WHO ARE THE END USERS?

The end-users of a BMI calculator are:

1. ***Individuals tracking their health***: People who want to monitor their weight status and potential health risks.
2. ***Healthcare professionals***: Doctors, nurses, and other medical professionals who use BMI as a tool to assess patients' weight status.
3. ***Fitness enthusiasts***: Individuals who track their fitness progress and want to monitor changes in their body composition.
4. ***Patients with weight-related health issues***: People with conditions like diabetes, cardiovascular disease, or obesity who need to track their BMI.

These end-users can benefit from a BMI calculator by:

- ***Assessing their weight status***
- ***Identifying potential health risks***
- ***Monitoring progress*** over time
- ***Making informed decisions*** about their health and wellness

The BMI calculator can be used in various settings, including:

- **Clinical settings**: Healthcare professionals can use BMI calculators to assess patients' weight status.
- **Personal health tracking**: Individuals can use BMI calculators to track their own weight status and progress.
- **Fitness and wellness programs**: Fitness enthusiasts and athletes can use BMI calculators to monitor their body composition and track progress.

By providing an easy-to-use and accessible way to calculate BMI, these calculators can empower individuals to take control of their health and make informed decisions about their well-being.

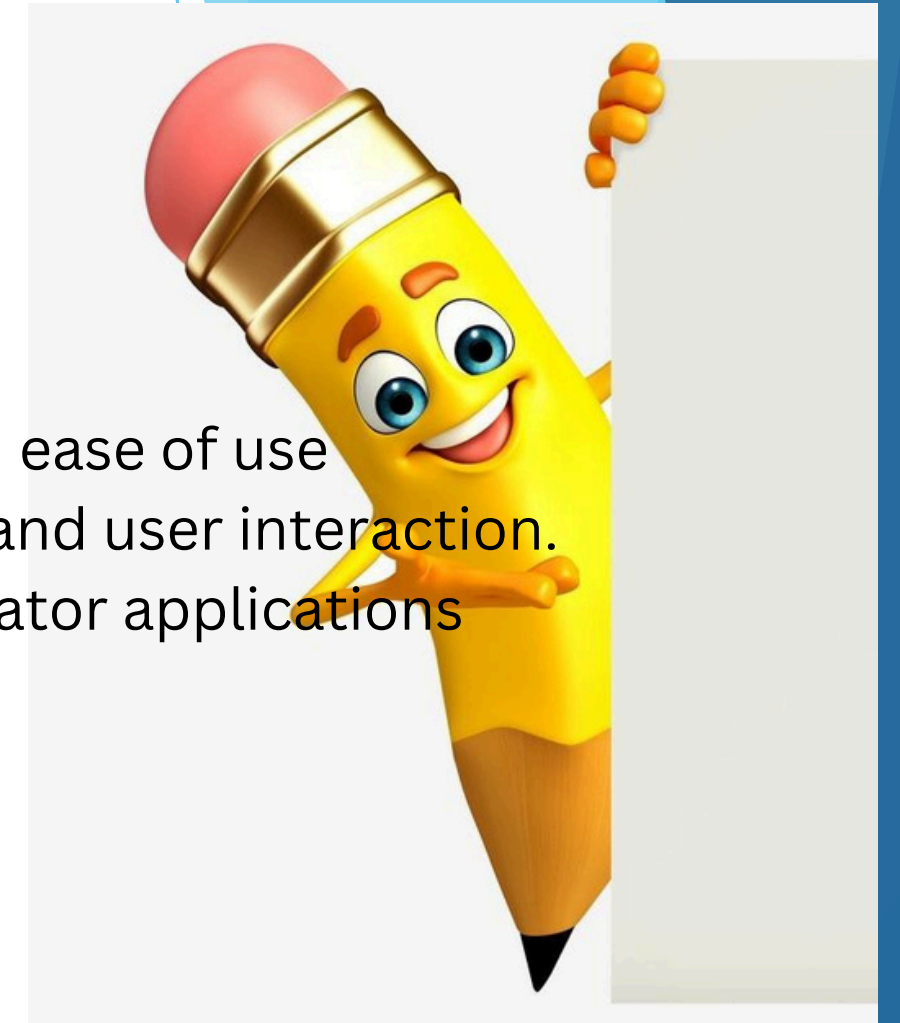
Tool and techniques

Programming language :

1. *Python*: A popular language for developing BMI calculators due to its simplicity and ease of use
2. *JavaScript*: Can be used for web-based BMI calculators, allowing for dynamic calculations and user interaction.
3. *Java*: A versatile language that can be used for developing desktop or mobile BMI calculator applications

Development framework

1. *Flask* (Python): A lightweight framework for building web applications, including BMI calculators.
2. *React* (JavaScript): A popular library for building user interfaces, suitable for web-based BMI calculators.
3. *Android Studio* (Java/Kotlin): For developing mobile BMI calculator apps for Android devices.



Database :

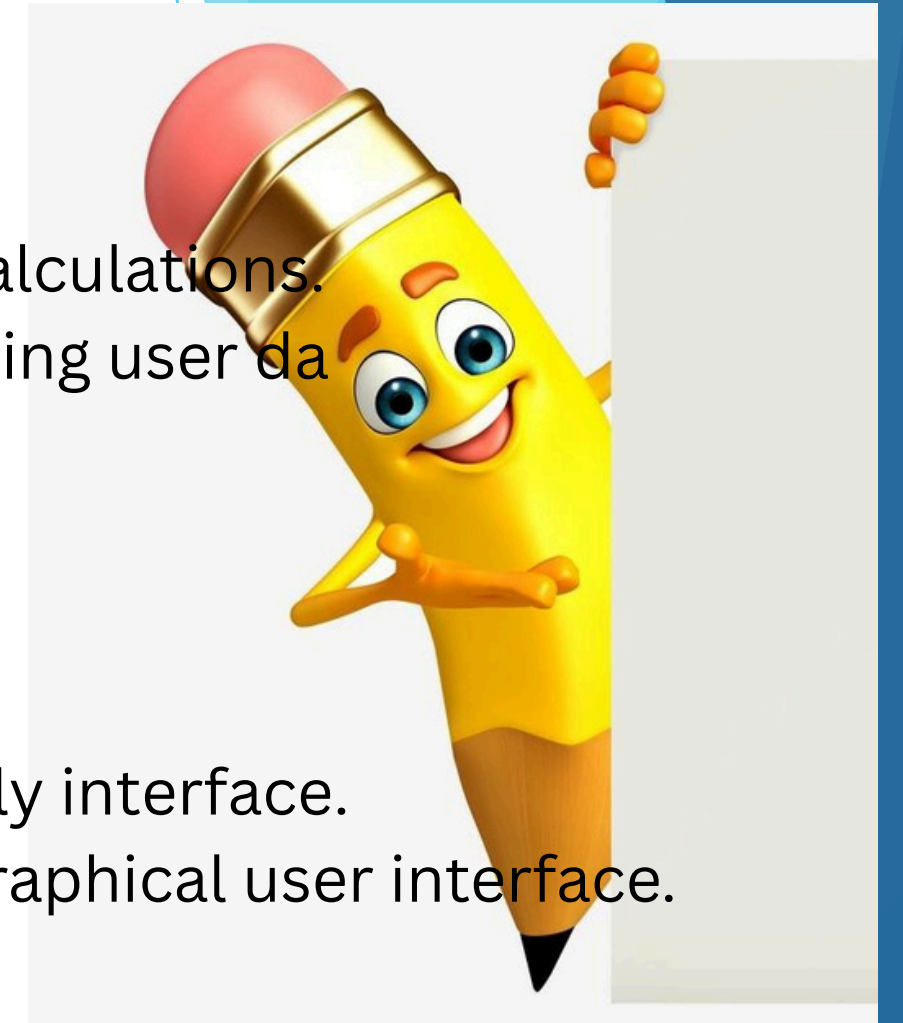
1. *SQLite*: A lightweight database that can be used to store user data and BMI calculations.
2. *MySQL*: A popular relational database that can be used for storing and managing user data.

User interface :

1. *HTML/CSS*: For building web-based BMI calculators, allowing for a user-friendly interface.
2. *GUI libraries* (e.g., Tkinter, PyQt): For building desktop BMI calculator applications with a graphical user interface.

Calculation formula

1. *BMI formula*: $\text{weight (in kg)} / \text{height (in meters)}^2$



POTFOLIO DESIGN AND LAYOUT

For a simple and short portfolio design:

Key element

1. **Clean layout**: Easy to navigate and visually appealing.
2. **High-quality images**: Showcase your work with clear and concise visuals.
3. **Brief descriptions**: Provide context and information about each project.

Best practice

1. **Keep it concise**: Focus on showcasing your best work.
2. **Use a consistent design**: Ensure a cohesive look throughout your portfolio.
3. **Make it easy to navigate**: Use clear headings and links to help visitors find what they're looking for.

Goals

1. **Showcase your work**: Highlight your skills and accomplishments.
2. **Tell your story**: Share your experiences and perspectives.
3. **Make a strong impression**: Create a lasting impact on visitors.

FEATURES AND FUNCTIONALITY

Core features

1. ***BMI Calculation***: Calculate BMI based on weight and height.
2. ***BMI Categorization***: Categorize BMI into underweight, normal weight, overweight, or obese.
3. ***User Input***: Allow users to input weight and height.

Simple functionality

1. ***Calculate BMI***: Calculate BMI based on user input.
2. ***Display Result***: Display the calculated BMI and corresponding category.

This simple approach focuses on providing a straightforward and easy-to-use BMI calculator that provides accurate calculations and categorization.

RESULTS AND SCREENSHOTS



Let's calculate BMI:

BMI Calculation


- *Weight:* 36 kg

- *Height:* 156 cm (1.56 m)

- *BMI:* $36 / (1.56)^2 = 36 / 2.4336 = 14.8$

Under weight 😞

A screenshot of a BMI Calculator interface. It has a green border and a white background. At the top, there is a purple medical symbol and the text "BMI Calculator". Below this, there are two input fields: the first contains "38" and the second contains "156". A green "Calculate" button is positioned below the input fields. At the bottom, it displays "Your BMI: 15.61 → Underweight 😞".

 **BMI Calculator**

38

156

Calculate

Your BMI: 15.61 → Underweight 😞

CONCLUSION



Your BMI indicates that you are underweight, specifically in the *Severe Thinness* category. It's essential to consult a healthcare professional for personalized guidance on achieving a healthy weight and improving overall well-being.





Thank you





