

Web Engineering Lab

Lab 07**Marks 100****Instructions**

Work on this lab individually.

You are **NOT** allowed to use the internet, or mobile phone.

You are **NOT** allowed to borrow anything from your peer student.

What you have to do

Program the following tasks. The name of your files will be according to the task given in this lab.

Task 1**[50]**

Create a webpage that allows the user to input their weight and height, calculates their BMI, and displays the result along with the BMI category. The task should include input validation, error handling, and dynamic output display.

Requirements:**1. HTML Form:**

Create a form with:

- An input field for the user's weight (in kilograms).
- An input field for the user's height (in feet).
- A button to submit the form.

2. Validation:

- Ensure the input fields are not empty.
- Validate that the inputs are positive numbers.

3. Computation:

- convert feet to meters using the formula:

$$\text{meters} = \text{feet} \times 0.3048$$

- Use the BMI formula:

$$BMI = \frac{\text{weight}}{\text{height}^2}$$

- Categorize the BMI:
 - **Underweight:** BMI < 18.5
 - **Normal weight:** 18.5 ≤ BMI < 24.9
 - **Overweight:** 25 ≤ BMI < 29.9
 - **Obesity:** BMI ≥ 30

4. Dynamic Output:

- Display the BMI result and category below the form.
- Show error messages for invalid inputs.

Example Output:

- **Weight:** 70, **Height:** 1.75
- **Output:** "Your BMI is **22.86**. Category: Normal weight."

Task 2**[50]**

Develop a simple temperature converter with two separate pages:

- One page converts Celsius to Fahrenheit.
- The second page converts Fahrenheit to Celsius.

Allow navigation between the pages.

Requirements:**1. Create Two HTML Pages:**

- **c_to_f.html**: For converting Celsius to Fahrenheit.
- **f_to_c.html**: For converting Fahrenheit to Celsius.

2. Add Navigation:

- Add an <a> tag at the top of each page to navigate between the two pages.

3. Form Setup:

- Each page should have an input field for the temperature, a button to calculate the conversion, and an output section.

4. JavaScript Logic:

- Write separate JavaScript code for each page to perform the conversion and display the result.

5. Validation:

- Ensure the input is a valid number and display an error message for invalid inputs.

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