BMI Calculator with Unit Conversion

Problem Statement

Create a BMI (Body Mass Index) Calculator program that allows users to input their height and weight in different units. The program should include a menu-driven interface for selecting units, a unit conversion function to convert inputs to standard units (kilograms and meters), and finally calculate the BMI. Additionally, the program should provide a health status based on the BMI value.

Requirements

Menu-Driven Input:

Display a menu for the user to select the unit for height (meters, centimeters, feet, inches) and weight (kilograms, pounds).

Allow the user to input their height and weight in the selected units.

Unit Conversion:

Write a function to convert height and weight to standard units (meters and kilograms).

Height conversions:

Centimeters to meters: Divide by 100.

Feet to meters: Multiply by 0.3048.

Inches to meters: Multiply by 0.0254.

Weight conversions:

Pounds to kilograms: Multiply by 0.453592.

BMI Calculation:

Use the formula:

$$BMI = \frac{weight\,(kg)}{height\,(m)^2}$$

Error Handling:

Handle invalid inputs (e.g., negative values, non-numeric inputs) gracefully and prompt the user to re-enter the data.

Sample Output:

Welcome to the BMI Calculator!

Select unit for height:
1. Meters
2. Centimeters
3. Feet
4. Inches
Enter your choice: 3

Enter your height in feet: 5.8

Select unit for weight:
1. Kilograms
2. Pounds
Enter your choice: 2

Enter your weight in pounds: 160

Your BMI is 23.73
Health Status: Normal weight

Do you want to calculate another BMI? (yes/no): no

Thank you for using the BMI Calculator!

Additional Features

- Allow the user to calculate BMI multiple times without restarting the program.
- Save the user's input (height, weight, BMI, health status) to a file (e.g., text file) for future reference.
- Add a feature to display a summary of all previous BMI calculations from the file.
- Add your creativity to upgrade this program.

You can create the program using Google Colab and upload it to GitHub.