

BMI Calculator Console App

Classes:

1. BMI Calculator (`BMICalculator`):

- Responsible for calculating BMI based on height and weight inputs.
- Utilizes generics to handle different numeric types for height and weight.
- Uses a stack to store previous BMI calculations. (bonus)

Input and Output:

• Input:

- Height (in meters or feet/inches)
- Weight (in kilograms or pounds)

• Output:

- BMI value (numeric)
- BMI category (e.g., Underweight, Normal weight, Overweight, Obesity)
- Display previous BMI calculations using a stack.

Example Workflow:

1. User Interaction:

- Console prompts for height and weight inputs.
- User enters height and weight values.

2. BMI Calculation:

- The `BMICalculator` class calculates BMI based on the formula:

$$BMI = \frac{Weight}{Height^2}$$

- Adjust calculations for different units (metric or imperial).

3. Output Display:

- Display calculated BMI.
- Display BMI category based on predefined ranges (e.g., underweight, normal weight, etc.).
- Store the calculated BMI in a stack.
- Provide an option to view previous BMI calculations stored in the stack.

BMI Categories and Ranges

- **Underweight:** BMI less than 18.5
- **Normal weight:** BMI from 18.5 to 24.9
- **Overweight:** BMI from 25 to 29.9
- **Obesity:** BMI 30 or greater

GenericArithmeticCalculator

Create a generic class `Calculator<T>` that supports basic arithmetic operations (`Add`, `Subtract`, `Multiply`, `Divide`) using delegates. Implement the class to work with numeric types (`int`, `double`, etc.).

Requirements:

1. Generic Class `Calculator<T>`:

- Use a generic type parameter `T` constrained to numeric types (where `T : struct, IComparable, IFormattable, IConvertible, IComparable<T>, IEquatable<T>`).
- Include delegate types for operations (`Func<T, T, T>` for addition, subtraction, multiplication, and division).

2. Methods:

- Implement methods `Add`, `Subtract`, `Multiply`, and `Divide` using delegates.
- Each method should take two parameters of type `T` and return the result of the respective operation.