

CIS 366 Introduction to .NET Development using C# (Spring 2019)

Assignment 2

Requirement

This assignment is to design a windows application to calculate the body mass index (BMI). In this assignment, you will use Visual Studio 2015 and write C# code for the following functionalities:

1. Build a user interface that looks like. It allows users to input their weight in lbs and height in feet and inches. Create a result label to show the result message.

The screenshot shows a Windows application window titled "BMI Calculator". The window has a standard Windows title bar with minimize, maximize, and close buttons. The main content area is light gray and contains the following elements:

- A label "Weight" followed by a text input box and the unit "lbs.".
- A label "Height" followed by a text input box, the unit "ft.", another text input box, and the unit "in.".
- A button labeled "Calculate BMI" centered below the input fields.

2. When the button is clicked, calculate the BMI based on the following rules:
 - a. Convert the weight in lbs to kilograms (1 lb = 0.45 kg).
 - b. Convert the height in feet and inch to inch (1 foot = 12 inches), and convert inch to meter (1 inch = 0.025 meter).
 - c. BMI is weight in kilograms divided by squared height in meter.

You have multiple ways of doing this, but I ask you the follow requirements:

- d. Define constants KG_PER_LBS and METER_PER_INCH in the fields.
- e. Use one of the math function to calculate the squared term of height in meter.

3. After you calculate the BMI, out a message to a result label as shown in the example. Use string concatenation methods and the following specific methods when necessary:
 - a. Use one of the specification of `ToString()` to keep three decimal points of original BMI.
 - b. Use one of the math function to round up the BMI to an integer.
4. Have an exception handling mechanism for potential invalid inputs, catch the exception by showing message to the user.

Submission

Zip your ENTIRE project folder and name your zipped file to (yourlastname)_a2. Submit your zipped file to the Blackboard dropbox as an attachment.