CAB201 Programming Principles

Third 10% Assignment
Weighting 10%

Due date: Monday 14th September 2105

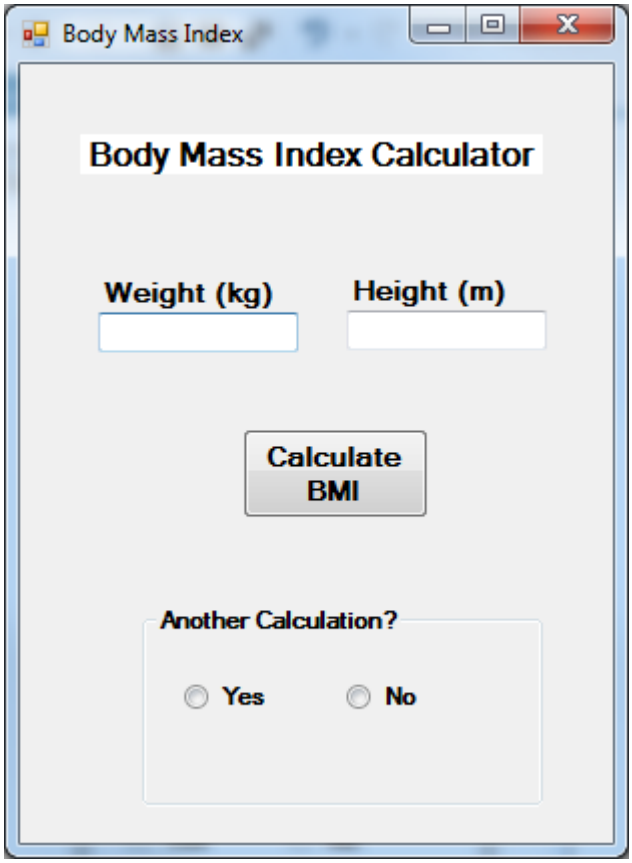
Specification

Body Mass Index is a heuristic measure of body fat based on height and weight that applies to adult men and women. It was devised by Adolphe Quetelet between 1835 and 1850's and is still in use today to assess how much an individual's body weight departs from the norm for a person of that height. It is not an actual measure of the amount of body fat of an individual.

Body Mass Index (BMI)is a simple measurement for the assessment of lifestyle risk. A person's weight (kg) is divided by the square of the person's height (m). For example, a person whose weight is 81kg and whose height is 1.75m has a BMI of 26.45(rounded to 2 decimal places).

You are to implement a Body Mass Index calculator with a GUI interface, see screenshot below. You are required to use **Windows Forms,** rather than other GUI technologies such as WPF, XNA, web pages etc. Also to keep this program relatively simple, do not use advanced techniques such as MVC or layered architectures. (If you do not know what these acronyms mean, that's fine, just ignore them.)

You are also required to develop your GUI layout that is similar to the screenshot below. You are not expected to have the locations and size of each control correct to the last pixel.

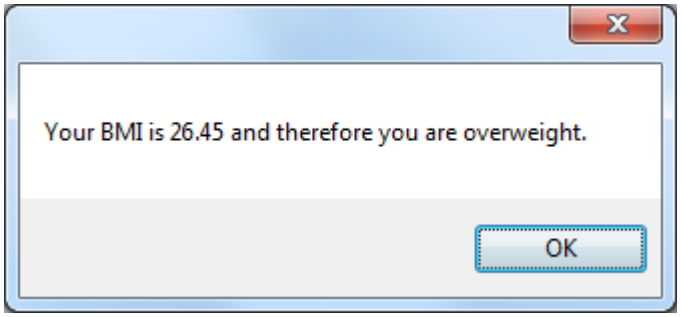


Additional details

A person's weight is to be greater than or equal to 45kg and the minimum height is 1.20m. There is no upper limit on a person's weight, but the maximum height is 2.70m

The BMI index will be displayed within a MessageBox along with a simple statement of the person's weight in terms of the BMI weight category according to the following table.

BMI:	**Weight Category**
< 18.5	Underweight
18.5 – 24.99	Healthy bodyweight
25 – 29.99	Overweight
> =30	Obese



Some additional details regarding the GUI and its interactions are described in the document, **GUI Notes for BMI Calculator.docx;** do not waste time looking for icon and background images for your form. There are no marks for having a "good-looking" form.

Be sure to read the **GUI Notes** before starting this assignment.

Assignment Requirements

Though in lectures we stress that it is good programming principle to place the GUI interactions and the program logic into separate classes for this assignment all methods can be in the **Form1** class.

You should attempt to place any program logic into separate methods which are called from event handlers or other methods in your program.

Any method which is not either the form's constructor or an event handler needs to have a method comment. Yu will need a number of global class variables as well as named constants and/or enumerated values.

Electronic Submission

You will submit your assignment via the link in the Assessment folder on Blackboard (Bb) before 11:50pm on 14th September, 2015. Many people have discovered that from around 11:55pm onwards Bb marks the submission as **Late**.

Detailed information on the assignment submission is available on Bb in the document, **Third Assignment Submission Details.docx**

It is recommended that you upload your file to Bb from a lab at QUT. Inability to access Bb from home is not a sufficient reason for submitting the assignment late or requesting an extension.

Final Comments

Do not leave this assignment until the weekend before the start of week 9 as you will be unlikely to get answers to any issues from the tutors or myself in time to complete the assignment. Relying upon other students via Facebook is not recommended.

Whatever you do, do not share your code with a friend or develop the actual code in collaboration with another person; the assignment is to be your own work. If you are found to have engaged in Academic Misconduct, you will receive 0 for this assignment item and it will be reported as a major case of Academic Misconduct which will remain on your student record forever.

Enjoy the challenge of this assignment!