

ATILIM UNIVERSITY
Department of Computer Engineering
CMPE312- Visual Programming
2020-2021 FALL
Lab Work- I

Assigned: December 23, 2020

Deadline: January 2, 2021 23:59- Saturday

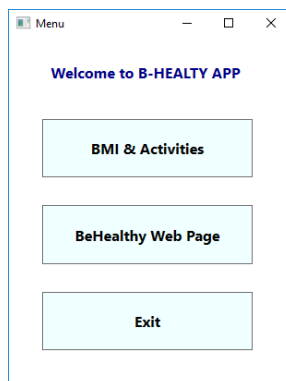
Create a WPF Application in C# for a sample health app computing BMI (Body Mass Index) and keeps track of the physical activities of a user and displays message about their health status. Consider the following questions which describe the design and functionality of the UI.

Q1. (30 pts- Creating GUI- design of multiple documents and menus) Create the WPF form below including Multiple Documents: Main Window (menu) and two other windows (designs are shown in the next page).

Q2. (20 pts- Multiple Pages) Your application should navigate between these three pages (windows) using button events.

- For instance, if “BMI & Activities” button clicked in the main Menu, Window 1 will be opened, and main window will be hidden.
- Similarly, if “BeHealthy Web Page” button clicked in the main Menu, Window 2 will be opened, and main window will be hidden.
- When exit button is clicked, the application will be closed.

Main Window

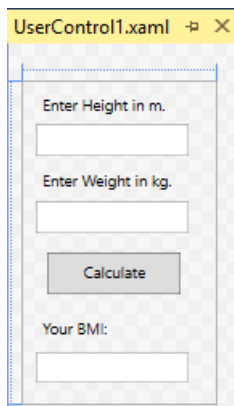


There are three buttons and a label on the main window.

Window: Title is Menu, height is 400 and width is 300.

Buttons: Font size is 16, font weight is bold. Change the background color as “Azure”

Q3. (30 pts- Produce new GUI components & handling events) Add a custom UserControl for calculating the BMI of user.



There are three labels, three textboxes and a button.

When “Calculate” button is clicked:

- BMI is calculated using the formula:

$$BMI = \text{weight (in kg)} / \text{height (in m.)}^2$$

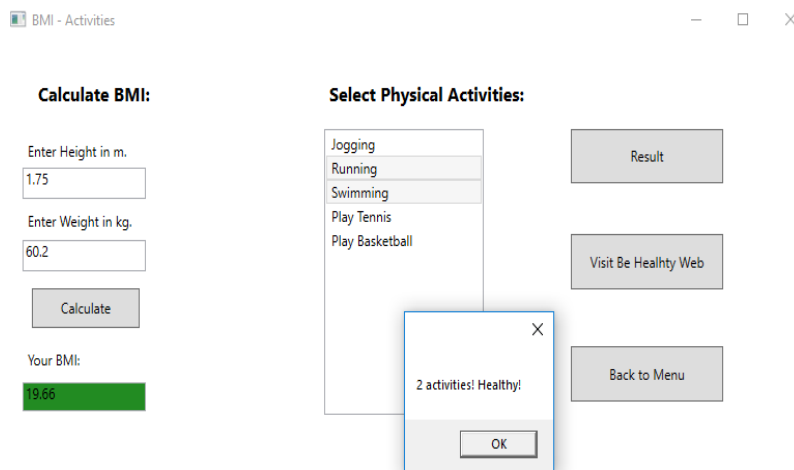
Result will be written in the third textbox. Based on the result, change the background color of textbox. If BMI is in the range of 18.5-25 background should be green, otherwise red.

Hint: After completing design, build your solution.

Window 1: Create the following UI. The first component of the GUI (on the left side) is the UserControl created in the previous step. Then in the physical activities part a list box and 3 buttons are placed.

Using listbox a user can select the daily activities that they perform.

Hint: A user can select more than one item. In XAML part you should add a new property: `SelectionMode="Multiple"` to enable multiple selection.



Button Events:

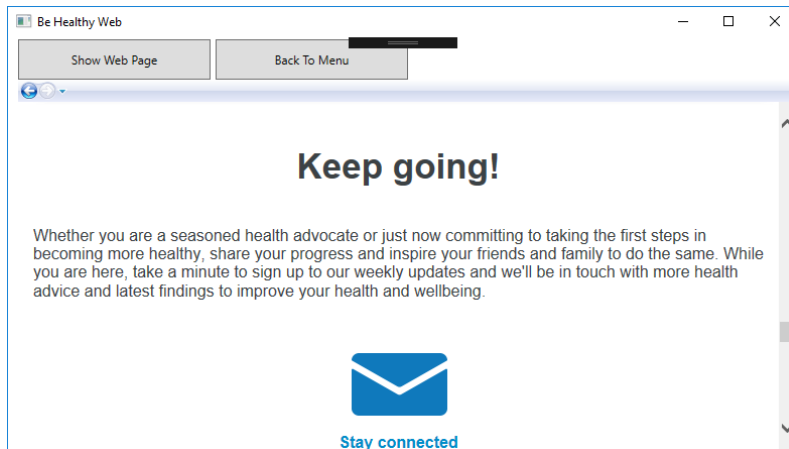
“Result” Button:

Displays if the user is healthy or not by checking the number of activities. If the user selects at least two activities, it will give a message as shown in a MessageBox. Otherwise, display “Not Enough Activity!”

“Visit Be Healthy Web” Button:

Show Window 2. Hide the current.

Window 2: In this window, there are two buttons and a frame to display a web page by using navigation. Use the Uri: <https://www.who.int/behealthy>

**Button Events:**

“Show Web Page” Button:

Navigate to the given Uri.

“Back to Menu” Button:

Show MainWindow. Hide the current.

Q4. (20 pts- Working Code) Your ability to create simple visual applications, evaluation of general design and working code.

NOTES:

- You should submit your project files (yourname_surname_HW1.rar) using the submission link on Moodle until **deadline: January 2, 2021 23:59- Saturday.**
(About Late Submissions: 1-day late submission will cost you -20 points, 2-day late submission -40 points and if the latency is longer than two days your work will not be graded.)
- This is an individual work. Group work is not allowed. Do not share your solution with others.
- You should use indentation and comments in your code.
- Students who either cheat, attempt to cheat or provide a help to other(s) in cheating, get 0 (zero) grade.
- Your .cs codes will be checked by special software for code similarity. If the code similarity between any two or more submissions is higher than %90, we will also examine and compare these codes by eye. If we convince that the similarity between two codes is not merely a coincidence, all involved will get 0 from this examination. Also, based on the regulations, a disciplinary action will be taken.