Hw2: Health Records

How many points: 60 points

Due Date: Friday, February 19, 2021

**2 bonus points if submitted by February 15.**

To earn bonus points, you need to submit the homework on time and produce the correct output.

**What to submit**: submit to blackboard

1. Your C# project code including the source code that is ready to run in the visual studio. **55 points**
2. Screen capture of running the code. A minimum of 5 screen captures with a variety of scenarios and the output file**. 5 points**

Name your submission as hw2YourLastNameYourFirstName

**The assignment details:**

Write a C# windows application to track patients information and calculate the BMI and the health status of patients at a doctor office. The code must meet the following requirements:

1. Use classes to store patient information, where each patient information is stored as an object.
2. Patient information is read from a file into an array or an array list
3. Add at least two more attributes to the following attributes about each patient:

class client

{

//data

private string fname;

private string lname;

private string gender;

private double height;

private double weight;

private int birthYear;

private int birthMonth; //randomly generated

private int birthDay;

private double bmi;

private string healthStatus;

….

}

1. Perform at least one validation of input entered by the user or file inputs. E.g.: check the validity of the value for birthYear to be valid
2. Use a consistent upper or lower case for attributes such as gender being “M” or “F” or have a combo box (or other controls) to select the value from a list.
3. Use a random number generator to generate one needed value for the code. For example, randomly generate the birthMonth as a value between 1 and 12
4. Add set and get methods as needed.
5. Code at least two constructors to demonstrate your understanding of constructor overloading
6. Use the keyword "this" in at least one occasion
7. Perform I/O to and from various controls on the monitor
8. Use colors, fonts and other attributes to display a nice user interface on the form.
9. Calculate the value of BMI (see below) and health status as one of the following:

|  |  |
| --- | --- |
| Health Status | |
| **BMI Value** | **The Health Status of the person** |
| Less than 18.5 | Underweight |
| Equal to or greater than 18.5 but less than 25 | Normal |
| Equal to or greater than 25 but less than 30 | Overweight |
| Equal to or greater than 30 | Obesse |

Given the weight and height of a person, the following console statement prints the BMI:

Console.WriteLine("BMI: " + (weight / Math.Pow(height, 2)) \* 703);

A partial sample form may look like the one below before adding colors, fonts...and other beautifying features: 