Health Record

Last Updated: October 7, 2015

Question

Write an application that will display a patient's health record.

The application will ask for all necessary information from the user first (Please see the Sample Output section down below) and then after running some calculations off of the collected information it will display a summary of the patient's health record and terminate.

The application should calculate the following for a given patient:

- Age (Well, I guess this is obvious ☺)
- Max Heart Rate: The formula for this is given to you as 220 – Age
- BMI: The formula for BMI is given to you as (Weight in pounds * 703) / (Height in inches * Height in Inches) ***Please format the result of this calculation, so that the precision of the end result would be 2
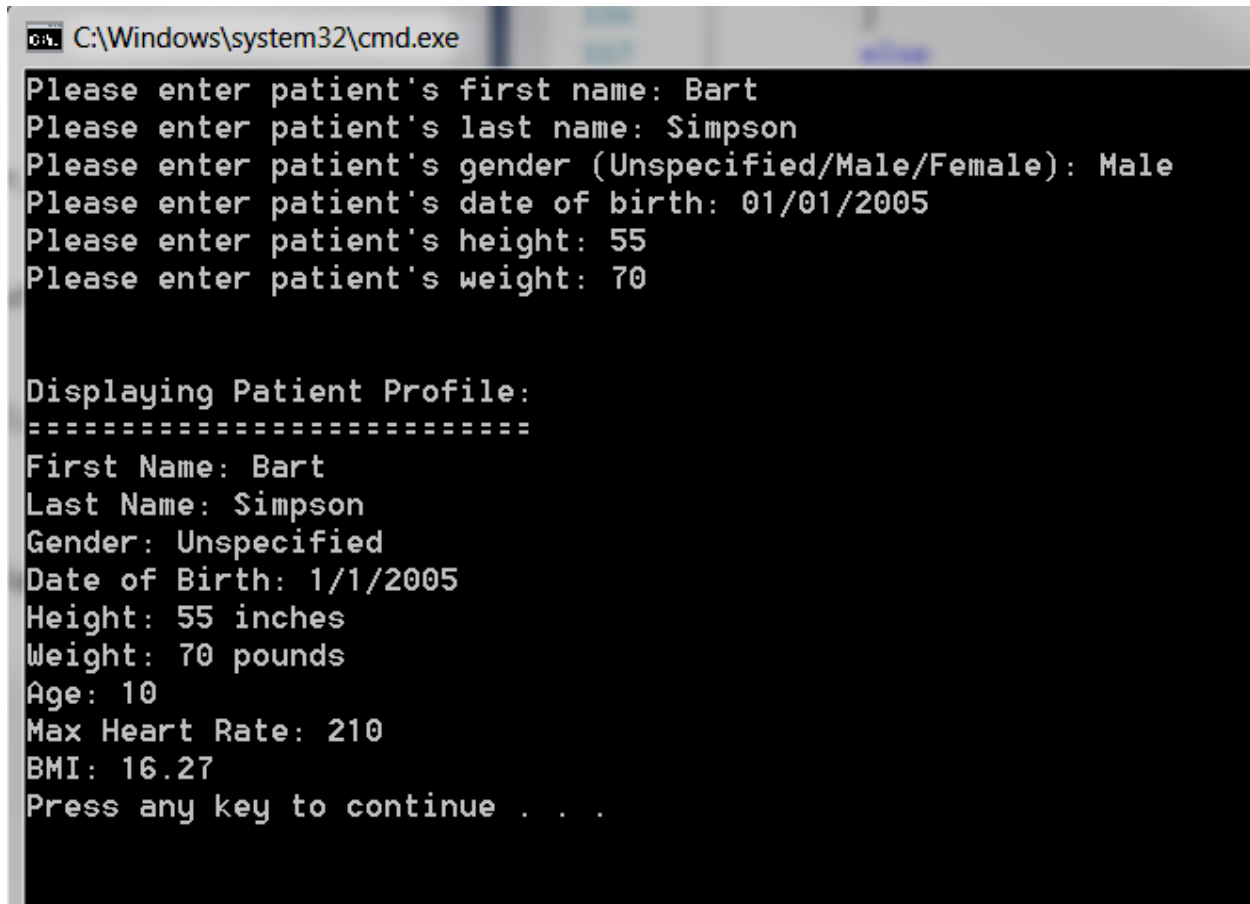
Additional Notes:

- You are supposed to design and do the implementation for this assignment
- As always, please do not change anything from the Unit Tests. All your implementation should go into other classes and you are not supposed to alter anything within the test project
- The solution will **not** build – This is on purpose. You need to make the necessary changes to make sure that the solution builds first, and then work your way through to the end solution by making sure that all the provided tests runs successfully
- You are supposed to provide all the implementation such as parsing user input and validation (Validation method signatures are defined within the HealthProfileHelper.cs class) – Tests are included for these, as well as screenshots in this assignment
- Make sure your application's output is the same with the ones that are posted in here

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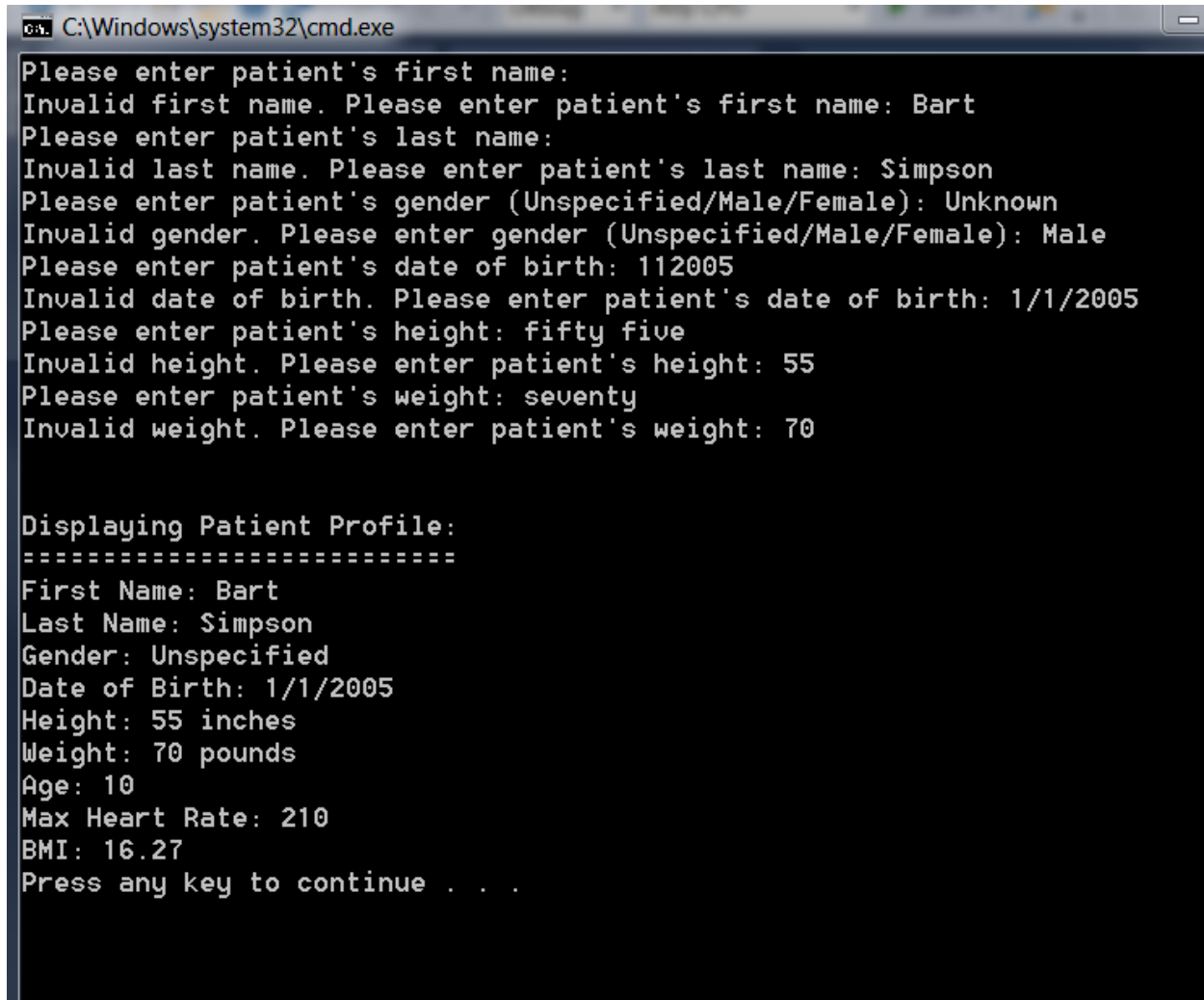**Sample Output**

[Success Case]

```
C:\Windows\system32\cmd.exe

Please enter patient's first name: Bart
Please enter patient's last name: Simpson
Please enter patient's gender (Unspecified/Male/Female): Male
Please enter patient's date of birth: 01/01/2005
Please enter patient's height: 55
Please enter patient's weight: 70


Displaying Patient Profile:
============================
First Name: Bart
Last Name: Simpson
Gender: Unspecified
Date of Birth: 1/1/2005
Height: 55 inches
Weight: 70 pounds
Age: 10
Max Heart Rate: 210
BMI: 16.27
Press any key to continue . . .
```

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[Failure Case]

```
C:\Windows\system32\cmd.exe

Please enter patient's first name:
Invalid first name. Please enter patient's first name: Bart
Please enter patient's last name:
Invalid last name. Please enter patient's last name: Simpson
Please enter patient's gender (Unspecified/Male/Female): Unknown
Invalid gender. Please enter gender (Unspecified/Male/Female): Male
Please enter patient's date of birth: 112005
Invalid date of birth. Please enter patient's date of birth: 1/1/2005
Please enter patient's height: fifty five
Invalid height. Please enter patient's height: 55
Please enter patient's weight: seventy
Invalid weight. Please enter patient's weight: 70


Displaying Patient Profile:
===========================
First Name: Bart
Last Name: Simpson
Gender: Unspecified
Date of Birth: 1/1/2005
Height: 55 inches
Weight: 70 pounds
Age: 10
Max Heart Rate: 210
BMI: 16.27
Press any key to continue . . .
```

Note – Your print statements should exactly match. Please pay attention to the sample output window above for the text and format that is expected from your output.

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Developer Notes
- After you get a copy of the solution files via github, please do not change anything that is provided to you! This includes all method signatures, unit tests, and anything that is provided to you in code
- Please pay attention to the deadlines. Your commit timestamp should not be later than the hard deadline
- Before committing your changes please make sure
    - Your solution files build and run fine
    - All the provided tests pass (you will not receive any credit for failing tests) – Please do **NOT** modify the unit tests by any means
    - ~~StyleCop does not give you any warnings (20% penalty)~~ A lot of folks reported issues with StyleCop, so we will come up with a manual code guideline doc soon
    - If any other document files other than the code files are required, then please make sure you included these as well
- Once you committed your changes, please test it one last time to make sure everything is ok
- Please send the github link to the location of your solution to me and to your TA

Deadlines
- For this assignment deadline is **10/15/2015 @ 4pm** and hard-deadline is **10/20/2015 @ 4pm.** Unfortunately assignments sent over after this deadline will not receive any credit