Introduction to Computers and Programming

Homework 1

2023/09/12

1 Deadline

There is a week for you to do the homework. You must upload your homework via E3 before 2023/09/18 23:55. Please finish your homework as soon as possible. In addition, make sure that your code can execute at Visual Studio Community 2019.

2 Problems

2.1 Standard body weight

Body weight is one of the important indicators used to assess and measure an individual's health status. Both being overweight and underweight are detrimental to health and may not be aesthetically pleasing. Extensive statistical data on different body types suggest that standard body weight is a straightforward and ideal indicator of normal weight. It can be expressed using the relationship between height and weight.

The calculation of standard body weight varies depending on factors such as ethnicity and region. The World Health Organization calculates standard body weight using the following method:

For males: (Height in cm - 80) × 70% = Standard Body Weight

For females: (Height in cm - 70) × 60% = Standard Body Weight

Standard body weight ± 10% is considered a normal weight range.

To establish the normal weight range for both males and females, you need to calculate the upper and lower bounds, making the floating point to the first decimal place.

Input
The line contains one floating point, $H(100 \leq H \leq 200)$ ——the Height in cm.

Output
Output two sentences using the following format.
For men with a height of {H}cm, a body weight between {lower_bound}kg and {upper_bound}kg is considered a normal weight range.
For women with a height of {H}cm, a body weight between {lower_bound}kg and {upper_bound}kg is considered a normal weight range.
H is the input, lower_bound and upper_bound are standard body weight ± 10% respectively.

Example
Input
175.1

Output
For men with a height of 175.1cm, a body weight between 59.9kg and 73.2kg is considered a normal weight range.
For women with a height of 175.1cm, a body weight between 56.8kg and 69.4kg is considered a normal weight range.