

4.03 Assignment Instructions

Instructions: Write a program to calculate your heart rate target zone.

1. Create a new project called 4.03 Heart Rate Target Zone in your Mod04 Assignments folder.
2. Create a class called TargetZone in the newly created project folder.
3. Before beginning the assignment, make sure that you can accurately [measure your pulse](#).
4. Then learn about the [Karvonen Formula](#) for determining your target heart rate.
5. Ask the user to enter their age, resting heart rate, and heart rate after exercising.
6. Calculate the heart rate target zone, using the Karvonen Formula. The following values are needed:
 - Resting Heart Rate (RHR): your pulse at rest
 - Maximum Heart Rate (MHR): $206.9 - (0.67 * \text{your age})$
 - Heart Rate Reserve (HRR): Maximum Heart Rate - Resting Heart Rate
 - Lower end of the training zone at 65 percent: $(\text{Heart Rate Reserve} * 0.65) + \text{Resting Heart Rate}$
 - Upper end of the training zone at 85 percent: $(\text{Heart Rate Reserve} * 0.85) + \text{Resting Heart Rate}$
7. Display the upper and lower limits of the heart rate target zone.
8. Display whether or not the exercise heart rate falls between the upper and lower limits of the target zone. You may need to use more than one **if** statement.
9. Once the program runs correctly, if you are medically able, perform a few minutes of light exercise and enter your own resting and exercising heart rate and determine your personal target heart rate zone.



Expected Output: When your program runs correctly, you should see output similar to the following screen shot.

A screenshot of a terminal window titled 'BlueJ: Terminal Window'. The window has a light blue header bar with standard window controls. Below the header is a tab labeled 'Options'. The main area of the terminal displays the following text:

```
Determine Your Target Heart Rate Zone for Cardiovascular Exercise (65% - 85%)

Enter your age: 23
Enter your resting heart rate: 65
Enter your heart rate after exercising: 130

Your heart rate target zone is between 147 and 172
After just exercising, your heart rate is BELOW your target zone.
```