Homework #3

A picture containing light

Description automatically generated

# 

*ECE 330 – Heart-Rate Calculator Report*

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Course: Software Design

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# **Heart\_RateCalculator.cpp**

**Text

Description automatically generated with low confidence**

Figure 1. Heart-Rate Calcultor .cpp file

**A picture containing text

Description automatically generated**

Figure 2. Heart-Rate Calcultor .cpp file

**Text

Description automatically generated**

Figure 3. Heart-Rate Calcultor .cpp file

# **Heart\_RateCalculator.hpp**

**Text

Description automatically generated**

Figure 4. Heart\_RateCalculator.hpp Header File

# **Graphical user interface, text, application, email Description automatically generatedMain.cpp**

Figure 5. Heart-RateCalculator Main.cpp Routine

# **Output**

Text, letter

Description automatically generated

Figure 6. Heart\_RateCalculator Output

# **Conclusion**

I struggled a good time to create the class and all its methods. Especially with calculating the age and then finding the maximum and target heart rates. This was because the assignment asks to have the function getAge() ask the user for the present date, but whenever I would do everything inside of this function I was not able to get the return value and use it in the other methods. Whenever I needed the age and called this function then used it to get the heart rates, of course the function will ask the user again and again the present date. So, I decided to give it the parameters and prompt the user for the present date in main, then use those values of currentDay, currentMonth, and currentYear as the parameters to the function. In this way whenever I called the function getAge() inside of getMaximumHeartRate() and getTargetHeartRate(), it used those values to calculate the age but avoided asking the user again for the present date. I forgot at the beginning how to set some of the setters and getters, especially for the string type values, but I referenced the c++ documentation and was able to fix it.

I have uploaded the Makefile, main.cpp, heart\_calculator.cpp where the methods are declared, and heart\_calculator.hpp with the functions’ prototypes and their parameters as well as where I defined the class, and finally the HeartCalculator\_Output.txt file with the output results.