Lab 5 – Debugging and Health Data Calculator

Introduction to Computer Science I

# Names of Lab Group Members:

## Activity

Directions: For each programming exercise, provide your C++ source code and screenshot of your program output.

### Part I - Debugging

There are **three** bugs in **carPaymentCalculator.cpp**. The description of the purpose of the program is in **carPaymentCalculator.pdf**. Find the three bugs using the techniques discussed in lecture. For each bug, explain your troubleshooting strategy and the nature of the bug.

|  |  |  |
| --- | --- | --- |
| What is the bug? (Include line of original code containing the bug) | How did you find the bug? | How did you fix the bug? |
|  |  |  |
|  |  |  |
|  |  |  |

### Part II – Health Data Calculator

The following program calculates a user's age in days based on the user's age in years:

**Figure 2.19.1: Health data: Age in days.**

|  |  |
| --- | --- |
| **int** main() {  **int** userAgeYears;  **int** userAgeDays;    cout << "Enter your age in years: ";  cin >> userAgeYears;  userAgeDays = userAgeYears \* 365;    cout << "You are " << userAgeDays << " days old." << endl;    **return** 0;  } | Enter your age in years: 19  You are 6935 days old. |

Add the following functionalities to the program:

* Calculate the user's age in minutes and seconds.
* Estimate the approximate number of times the user's heart has beaten in his/her lifetime using an average heart rate of 72 beats per minutes.
* Calculate one other health-related statistic of your choice. Try searching the Internet to determine how to calculate that data, and create a program to perform that calculation. The program can ask the user to enter any information needed to perform the calculation.