Chapter 5 Program Documentation

Ashton Hellwig

February 10, 2018

Contents

1	Problem Analysis	2
	1.1 Data	2
	1.2 Desired Output	2
2	Algorithm	3
3	User Documentation	4
	3.1 Build	4
	3.1.1 Within Visual Studio	
	3.1.2 Bundled Release	
	3.2 With g++	
A	Appendix A	5
\mathbf{L}^{i}	ist of Figures	
	1 main.cpp output	2
	2 Chapter 5 Program Algorithm	3

1 Problem Analysis

The problem states:

Write a program that uses while loops to perform the following:

- 1. Prompt the user to input two integers: firstNum and secondNum (firstNum must be less than secondNum).
- 2. Output all odd numbers between firstNum and secondNum.
- 3. Output the sum of all even numbers between firstNum and secondNum.
- 4. Output the numbers and their squares between 1 and 10.
- 5. Output the sum of the square of the odd numbers between first Num and second Num. $\,$
- 6. Output all uppercase letters.

1.1 Data

Available data includes:

- 1. There are two variables: firstNum and secondNum
- 2. firstNum must always be less than secondNum

1.2 Desired Output

Figure 1: main.cpp output

- 1 Odd numbers between firstNum and secondNum:
- 2 Sum of even numbers between firstNum and secondNum:
- 3 firstNum =
- 4 firstNumSquares between 1 and 10:
- 5 secondNum =
- 6 secondNumSquares between 1 and 10:
- 7 The sum of the square of the odd numbers between firstNum and secondNum =
- 8 All uppercase letters used were:

M2C5P 2 A. Hellwig

2 Algorithm

Below is the algorithm for the program.

Figure 2: Chapter 5 Program Algorithm

 \triangleright -Variables-

 $firstNum \leftarrow \\ secondNum \leftarrow$

Needs user inputNeeds user inputPrompt Lines

TOOUTPUT "Please enter the values for first Num" $firstNum \leftarrow input$ ToOutput "Please enter the values for second Num" $secondNum \leftarrow input$

M2C5P 3 A. Hellwig

3 User Documentation

3.1 Build

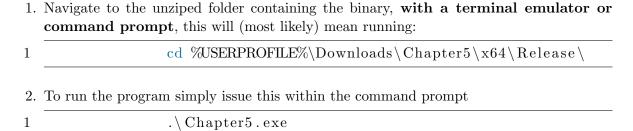
The following are instructions with two use cases:

- Within Visual Studio 2017
- Bundled Release
- with GNU G++

3.1.1 Within Visual Studio

Simply load Chapter5.sln in Microsoft Visual Studio and build/run the release version. If you require debugging information, switch the configuration to debug.

3.1.2 Bundled Release



Of course if preferred, you may also navigate to the release folder in file explorer and double click the executable (Chapter4.exe)

3.2 With g++

If you prefer to use an open source debugger and compiler then I assume the following:

- 1. You have installed MinGW and it is in your \$PATH
- 2. You have installed the MSYS Tools and they are in your \$PATH

M2C5P 4 A. Hellwig

A Appendix A