Programming Design Homework Assignment S4-5

Due: 2022/3/6 23:00

※Notice:

1. Please follow the rules for homework assignments announced on the course website.

2. The standard template library and unrelated macros are not permitted in this assignment.

There are two questions in this assignment, both are programming.

● Programming formats：(20%)

    1. The structure of your program (5%)

    2. Clear and readable code layout (5%)

    3. Clear comments for understanding your program (5%)

    4. The copyright and short description of each question (5%)

● Question 1：(40%)

Write a C++ program that requests the user to enter two integers. The program should then list, calculate and report the sum of all the prime numbers between and including the two integers. The user can enter either the smaller or larger integer first. For example, if the user enters 2 and 9, the program should report that the sum of all the prime numbers from 2 through 9 is 17. Do not build the prime numbers table in your program. The program should terminate when the user enters a negative number or non-numeric input.

● Question 2：(40%)

Write a C++ program to implement the Number Guessing Game. In the game, the computer chooses a random integer between 1 and 100, and the several players try to guess the number in as few attempts as possible. The program request the user to enter the number of player (up to five players) and their name first. The program should request to enter again when the user enters a negative number, larger than 5 or non-numeric input for number of player. When each time the player enters a guess, the computer responses whether the guess is right or the new integer range and shows the next player. Once the player guesses the number, the game is over.

For this question, student shall try to write the program twice with different loop (for loop, do-while loop and while loop) and name the folder "HWS4-5-Q2-1" and "HWS4-5-Q2-2". Also, a text file, named "HWS4-5-Q2.txt", is requested to write down which loop is more suitable for this question and why (in English or Chinese).