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CS 161-400

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Assignment 3 Design

1.) Requirement.

Create a c++ program that will prompt the user to enter any number of integers. The program will then get and display the maximum and the minimum integer in those entries.

2.) Testing Plan.

Test	Description/Technique	Results
1		
2		
3		
4		

Psuedocode;

begin

Input: Integer

Initialize count variable

Initialize the entry counter

Prompt for the number of integers need

Loop

First iteration assigns the first entry to the min/max variable

Compare the entry to min/max variable

Assign entry to either variable if statement is true

Prompt for next entry

Display contents of min/max variable.

end

3.) Design

Step Wise Refinement

- Getting the maximum and minimum integer
- Get count of integers to be entered
- Display the integers entered
- Create loop operation that will compare and assign user input into the maximum or minimum variable
- Display the highest/maximum and the smallest/minimum integer.

Sub-problem

- Getting the maximum and minimum integer
 1. Declare variables that will hold use integer input
 2. Declare variables that will keep count of integers
 3. Declare variable that will hold the maximum and minimum integer
- Get count of integers to be entered
 1. Prompt user for the number of inputs
 2. Save input into the count variable
- Create loop operation that will compare and assign user input into the maximum or minimum variable
 1. Create a check digit to initialize the loop
 2. Prompt for input
 3. First loop iteraton will assign the input to the maximum/minimum variable
 4. Second and iterations after will compare each input to the values stored in the maximum/minimum variables
 5. Loop will stop if a -1 is entered
- Display the integers entered
- Display the highest/maximum and the smallest/minimum integer
 1. Display the contents of the maximum/minimum integer