

Assignment 3 – Project Plan

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Understanding: Project 3a asks for an input of a user defined amount of integer inputs, so variable that takes inputs must be flexible. Then, the input values (however many are given) are used to calculate min and max values. New concepts include variable number of inputs and calculating minimums and maximums. A variable number of inputs can be achieved through a loop where j is equal to the initial input defined by the number of integer inputs the user would like to define. From this point, min and max values can be calculated with a pre-defined function or we can write our own function to compare values and determine the smallest/largest.

Testing Plan:

Test Description	Expected Result
Initial user input changes over several values of integers.	Code handles all positive integers greater than or equal to 1.
Initial user input is not an integer.	An error is given as int is expected value.
User does not finish entering expected number of inputs.	Timeout may eventually occur, but will likely just wait for user input.
User enters non-integer value as input.	An error is given as int is expected value.
A float or double is entered.	Error is thrown as int is expected value.
MaxMin function not called during main	The min/max calculations will not occur. If these results are called, an error may be thrown.
Array of numInts not fed to MaxMin function	The MaxMin function will not calculate min or max.

Design: General Concept—User Input (# of Integers) → User input (integers, loop until == # of Integers)
→ Determine min, max values.

Pseudocode:

Get value (numInts) from user: how many numbers do you want to enter?

for loop until j = numInts

 get value from user (this will repeat until loop is done, collecting the appropriate # of values)

Return results for user

getMaxMin()

 for each num in numInts

 if value > max

 max = value

 else if value < min

 min = value

return max, min