Problem decomposition / Program analysis using loops and mini-algorithms

Input any 8 numbers (they may be positive, negative or equal to zero). Output the highest positive number, the sum of all the numbers, and finally the value of the first number entered.

**Input**

|  |  |  |
| --- | --- | --- |
| *variableName* | *type* | *where* |
| number | float | User – screen - loop |

**Constants**

Not applicable

**Output**

|  |  |  |
| --- | --- | --- |
| *variableName* | *format* | *where* |
| highPositiveNumber | Number 1dp | Sprite – on screen |
| sum | Number 1dp | Sprite – on screen |
| firstNumber | Number 1dp | Sprite – on screen |

**Calculations**

If number positive

Code for highest value

Code for sum of numbers

Set up flag to get first number

**TestData**

|  |  |  |  |
| --- | --- | --- | --- |
| number | highPositiveNumber | sum | firstNumber |
| 5,10,23,0,-6, 124,34,10 | 124 | 200 | 5 |
| -12, 0, -6, -9, -123, -7, 0, -5.6 | No positive number entered | -162.6 | -12 |
|  |  |  |  |

**Processing #** *how to scaffold your solution with versions of algorithm*

**Sprites**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Input Sprite | | | | |
| *Costume* | bear | | *Name* | teddy |
| *Thread1* | | | | |
| *Event signal* | | *Event handling* | | |
| Green flag clicked | | Version1  #  For counter from 1 to 8  Ask user for number  Version 2  #*Set up loop to input the data from the user*  #*add code for highest positive number*  Flag 🡨 0  *For counter from 1 to 8*  *Ask user for number*  If number >0  If flag = 0  highPositiveNumber 🡨 number  flag 🡨 1  if number > highPositiveNumber  highPositiveNumber 🡨 number  display highPositiveNumber  Version 3  #*Set up loop to input the data from the user*  #*add code for highest positive number*  #*add code for sum of numbers*  Sum 🡨 0  Flag 🡨 0  *For counter from 1 to 8*  *Ask user for number*  Sum 🡨 sum + number  If number >0  If flag = 0  highPositiveNumber 🡨 number  flag 🡨 1  if number > highPositiveNumber  highPositiveNumber 🡨 number  display highPositiveNumber  display sum  Version 4  #*Set up loop to input the data from the user*  #*add code for highest positive number*  Flag 🡨 0  #*add code for sum of numbers*  Sum 🡨 0  *#add code for first number*  Flag2 🡨 0  *For counter from 1 to 8*  *Ask user for number*  Sum 🡨 sum + number  If number >0  If flag = 0  highPositiveNumber 🡨 number  flag 🡨 1  if number > highPositiveNumber  highPositiveNumber 🡨 number  if flag2 = 0  firstNumber 🡨 number  flag2 🡨1  display highPositiveNumber  display sum  display firstNumber | | |
|  | |  | | |