Exercise 2 User Stories

1. As a user, I want to be able to add a list of integers so that I can calculate the sum of two or more numbers.
   a. Given the numbers 3, 4, and 1, when I use the add function, then the result will be 8.
   b. Given the numbers 5 and -3, when I use the add function, then the result will be 2.
   c. Given the number 3, when I use the add function, then the result will be 3.
   d. Given the sum of the numbers exceeds the maximum integer value, when I use the add function, then an error will be displayed to the user.
   e. Given an illegal value such as a string or decimal, when I use the add function, then an error will be displayed to the user.
2. As a user, I want to be able to subtract a list of integers so that I can calculate the difference of two or more numbers
   a. Given the numbers 10, 3, and 1, when I use the subtract function, then the result will be 6.
   b. Given the numbers 10, 7, and 3, when I use the subtract function, then the result will be 0.
   c. Given the numbers 10, 5, and 7, when I use the subtract function, then the result will be -2
   d. Given the numbers 10 and -5, when I use the subtract function, then the result will be 15..
   e. Given the number 3, when I use the subtract function, the result will be 3.
   f. Given the difference of the numbers is less than the minimum integer value, when I use the subtract function, then an error will be displayed to the user.
   g. Given an illegal value such as a string or decimal, when I use the subtract function, then an error will be displayed to the user.
3. As a user, I want to be able to multiply a list of integers so that I can calculate the product of two or more numbers
   a. Given the numbers 1, 2, and 3, when I use the multiply function, then the result will be 6.
   b. Given the numbers 2 and -7, when I use the multiply function, then the result will be -14.
   c. Given the numbers 10, 5, and 0, when I use the multiply function, then the result will be 0.
   d. Given the number 5, when I use the multiply function, then the result is 5.
   e. Given the product of the numbers exceeds the maximum integer value, when I use the product function, then an error will be displayed to the user.
   f. Given an illegal value such as a string or decimal, when I use the multiple function, then an error will be displayed to the user.

4. As a user, I want to be able to divide a list of integers so that i can calculate the quotient of two or more numbers
   a. Given the numbers 30, 3, and 2, when I use the divide function, then the result will be 5.
   b. Given the numbers 10 and 0, when I use the divide function, then a warning will be displayed to the user that numbers cannot be divided by zero.
   c. Given the numbers 20 and 3, when I use the divide function, then the result will be 6.
   d. Given the numbers 14 and -7, when I use the multiply function, then the result will be -2.
   e. Given the number 10, when I use the divide function, then the result will be 10.
   f. Given an illegal value such as a string or decimal, when I use the divide function, then an error will be displayed to the user.
5. As a user, I want to be able to display the computation history with corresponding results, so that I can review my previous commands.
   a. Given the previous computations, when I use the display history function, then the computation history will be displayed.
   b. Given no previous computations, when I use the display history function, then nothing is displayed
6. As a user, I want to be able to clear the history, so that previous commands are no longer saved.
   a. Given that previous computations were made, when I clear the history, then if the history is displayed, nothing should be shown..
   b. Given that no previous computations were not made, when I clear the history, then if the history is displayed, nothing should be shown.
7. As a user, I want to be able to use a previous result in another computation, so that I can perform multiple subsequent operations. For example, !3 might mean substitute the third result from the history.
   a. Given that a previous result is 5, when I reference previous result and add 2 to it, then the result should be 7
   b. Given that a previous result is 10, when I reference previous result and divide by 2, then the result should be 5
   c. Given that a previous result is 5, when I reference previous result and subtract 2 from it, then the result should be 3
   d. Given that a previous result is 5, when I reference previous result and multiply it by 2, then the result should be 10.
   e. Given that a previous result is 5, when I reference previous result and square it, then the result should be 25
8. As a user, I want to be able to square a number, so that I can find the product of a number and itself..
   a. Given the number 5, when I use the square function, then the result is 25
   b. Given the number -5, when I use the square function, then the result is 25
   c. Given the number 0, when I use the square function, then the result is 0

d. Given the square of the numbers exceeds the maximum integer value, when I use the square function, then an error will be displayed to the user.
e. Given an illegal value such as a string or decimal, when I use the square function, then an error will be displayed to the user.