Project 2 (Question 2)

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This problem calls for a program that can take in unusually large numbers and add them together with other large numbers. The int data type has a maximum value of 2147483647. Anything above this number will cause an overflow and for the program not to work correctly. The problem also asks for a maximum of 20 digits may be added at a time, with anything above 20 digits to be cancelled.

The way to solve this problem is by using arrays. Arrays can store long strings or characters that can then be converted into many numbers. By using this technique, we can add each individual number and create larger numbers than what the int data type can store. So, we make an array of type char for each large number that we want to add and convert the characters into numbers. Then we take the numbers, reverse them (because addition goes from right to left and array are read from left to right), add each element of the array to its corresponding element from the other array onto a third array, and reverse the third array to reveal the final result. For the most part, I am able to add large number as long as those large numbers don’t begin with two numbers that add to more than 9. I have spent hours and hours and hours trying my best to get the program to correctly add and carry those kinds of numbers together, but I just cannot get it right no matter what. Another problem is that I cannot find the length of the array ‘rsum’, which prevents me from printing out the entire number and prevents the program from printing more than 20 digits. This causes the program to never find a value above 21 digits long. I would greatly appreciate if you could look over my code and tell me where I went wrong (after grading it obviously).

Correct value:----------------------------------------------------------------------------------------------------------------------

A screenshot of a cell phone

Description automatically generated

Incorrect value:----------------------------------------------------------------------------------------------------------------------A screenshot of a cell phone

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