

Assignment 2 Response File

Part 1 Problem 2 - Large Sum

Input 1	Input 2	Output
1	1	2
20	95	115
2529382928	438283832	2967666760
9999999999	1	10000000000
9223372036854775808	9223372036854775808	18446744073709551616
9223372036854775808	486127654835486515383218192	486127664058858552237994000
1486515347865138654821865	348621896435183186	1486515696487035090005051

- My program can successfully add integers larger than stored in their native data type, which the seven different test cases demonstrate
 - *Test 1:* Program is able to complete rudimentary 1 digit addition; the two inputs are not larger than stored in native data type
 - *Test 2:* Program is able to complete simple 2 digit addition with “carry-digit” (ish, $2+9 = 11$)
 - *Test 3:* Program is able to complete addition with integers larger than stored in native data type
 - *Test 4 and 5:* Program is able to complete addition with integers larger than stored in native data type AND requiring carries that increase total number of elements in array by 1
 - *Test 6:* Program is able to complete addition with integers larger than stored in native data type, requiring carries, and having input 2 being larger than input 1
 - *Test 7:* Program is able to complete addition with all above featured nuances and complexities
- I specifically used a char array called ‘sum,’ which enables this
 - Either int/char array would work (which regular hold 8 bits)