

First, set char array a, b, and c. because the question demands us that the hexadecimal string maximum should be 64 bits, so I set char array have 17 slots. One for null. For c I set the slots be 18 because one extra place for the results that is overflow. Second, I use "strtoull" to make "a and b" turn from string to "unsigned long long" and record it with "m, n". This will also turn the numbers from hexadecimal to decimal. If both the "m and n" are both zero, then stop the program. Third, UNIT64_MAX mean the biggest number for 64 bits. So if UNIT64_MAX minus m still smaller than n it mean it has overflow. Fourth, use sprintf to turn "ans" to hexadecimal and store the result in c. Write an if so that if "ans" is overflow add a extra 1 in the front of it. Fifth, I use "strlen" to know how many digits a,b,c have. Use function max that I wrote to determine which one has the most digits. Use this knowledge to make sure every numbers line up when it print out. Sixth, print overflow when the result is overflowed.

Because second question demand hexadecimal string maximum should be 32 bits. So I write that char array a and b will have 9 slots and c will 17. Use strtoul to turn "a" and "b" to unsigned long. Because ans is unsigned long long, so in I make m become unsigned long long too to complete the calculation. The rest is the same with the last program.