a) Program A
1) <1st> is always going to end with 'S'.
2) p1 is always either equal or greater than p2. Because p1 increments every time while p2 increments only in a special condition.
3) Whenever the current element (index of p1's value) of <1st> is 'C', it swaps with the last 'S' element. Therefore 'S' element makes it to the end of the array by being swapped whenever there is a 'C' in front of it.