we first sort array A,it takes O(n log n)

for each value i in A[1] ,A[2],A[3] ..... to A[n] ,it takes O(n)

binary seach to find the first A[j] that smaller than S - A[i]   A[j]!=A[i] , if finded, remove A[i] and A[j] and move to A[i+1]（if j = i+1，i+1 now equals to i+2 since j is already removed），count plus one

it takes O(log n)

after that we got the number of pairs .

so totally it takes O(n log n) + O(n)\*O(log n)  = O(n log n)