function splitSwap(a, l, n):

if n <= 1:

return

splitSwap(a, l, n/2)

splitSwap(a, l+ n /2, n/2)

swapList(a, l, n)

function swapList(a, l, n):

for i = 0 to n/2:

tmp = a[l + i]

a[l + i] = a[l + n/2 + i]

a[l + n/2 + i] = tmp

Algo cost

T(n) = 2T(n/2) + n/2

T(n) = 2(2T(n/2) + n/4) + n/2 = 4T(n/4)+n

T(n) = 2(2(2T(n/8)+n/8)+n/4)+n/2 = 8 T(n/8)+3n/2

T(n) = 2^i T(n/2^i)+ in/2

n/2^i = 1

n=2^i

i=logn

T(n) = nT(1) + n/2logn => O(nlogn)

This algo changes the order of the elements in an array, using as a method the reorder of subarray.

For example if i have in input the array [1,2,3,4] I have as a return an array [3,4,1,2].