

COUNTING SORT:

1 0 2 1 0 1 1 5 6 7 5 4 2 2 0 0 1

$n = 17$

0-7

$k = 7 \rightarrow$  maximum value

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2	1	1	0	2	5	4	0	2	5	7	7	9	2	0	1	?	?

key

Initialize count array with 0.

count array taken

count array =  $k+1$

	0	1	2	3	4	5	6	7	8	9
count	3	3	4	0	1	1	0	2	1	2

'2' repeated for 4 times.

Update count array:

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
3	6	10	10	11	12	12	14	15	17										

→ positions  
of  
elements  
not index  
of original  
sorted array

For placing the elements in array decrement the  
positions - 1.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	0	0	1	1	1	2	2	2	2	4	5	7	7	8	9	9