Ex (2)

Part (I) Say n items have weights W_i's $i = 1$ to n & Bin capacity = B.

Step (1) first arrange the items according to their increasing order of their weights.

Step (2) Now take the left most item from list in step (1) and put that in a bin 1. Cross that item from that list to represent it is fitted in a bin.

Step (3) Now again take the left most uncrossed item from arranged list and try to fit that in left most bin possible i.e if it can be fitted in bin 1 then fit else fit it in Bin 2. (fitting means the sum of weights of items in a bin should not be more than B)
Again cross item in arranged list.

Step (4) In general if at any stage we take a item then we should check, all those Bins which have items, from left to right. And fit that if possible.

part (2) take items having size 3, 8, 9, 5, 4, 6, 9, 4, 10

and let Bin size as 20.

(a)

new array in decreasing order

10, 9, 9, 8, 6, 5, 4, 4, 2

10+9	9+8	6+5+4+4	4

→ by FFD we are getting 4 as no. of bins

But clearly if we arrange in following way,

10+9	4+4+4+8	9+6+5

→ no. of bins = 3.

Hence FFD is not giving optimal no. of bin for this example