

INSERTION SORT – "IN PLACE": AN EXAMPLE

L = [53, 26, 76, 30, 14, 91, 68, 42]

i = 1

Insert L[1] into its correct position in L between indices 0 and 1 inclusive and then add 1 to i:
53 moves to the right, 26 is inserted back into the list

L = [26, 53, 76, 30, 14, 91, 68, 42]

i = 2

Insert L[2] into its correct position in L between indices 0 and 2 inclusive and then add 1 to i:
76 is already in the correct place

L = [26, 53, 76, 30, 14, 91, 68, 42]

i = 3

Insert L[3] into its correct position in L between indices 0 and 3 inclusive and then add 1 to i:
76 moves to the right, then 53 moves to the right, now 30 is inserted back into the list

L = [26, 30, 53, 76, 14, 91, 68, 42]

i = 4

Insert L[4] into its correct position in L between indices 0 and 4 inclusive and then add 1 to i:
76 moves to the right, then 53 moves to the right, then 30 moves to the right, then 26 moves to the right, now 14 is inserted back into the list

L = [14, 26, 30, 53, 76, 91, 68, 42]

i = 5

Insert L[5] into its correct position in L between indices 0 and 5 inclusive and then add 1 to i:
91 is already in its correct position

L = [14, 26, 30, 53, 76, 91, 68, 42]

i = 6

Insert L[6] into its correct position in L between indices 0 and 6 inclusive and then add 1 to i:
91 moves to the right, 76 moves to the right, now 68 is inserted back into the list

L = [14, 26, 30, 53, 68, 76, 91, 42]

i = 7

Insert L[7] into its correct position in L between indices 0 and 7 inclusive and then add 1 to i:
91 moves to the right, then 76 moves to the right, then 68 moves to the right, then 53 moves to the right, then 42 is inserted back into the list

L = [14, 26, 30, 42, 53, 68, 76, 91]

i = 8