

Practice 5 Repetition + List

Note: Use code given in box for next tasks

1. Write function for bubble sort using single loop with the help of another helper function name *rotate_larger_element_to_right*

2. Take two random lists of size 20. Apply sorting algorithms on these lists with respect to one of them, which means elements of both lists will change, however only one list will be sorted. See example of five elements lists:

23 37 18 28 39 31

22 15 48 37 45 12

After sorting on first list:

18 23 28 31 37 39

48 22 37 12 15 45

After sorting on second list:

31 37 23 28 39 18

12 15 22 37 45 48

3. Write a function to shuffle elements of the list for any given times. The idea is to generate two random numbers in the list range and swap elements at generated indexes. Print elements before and after shuffle?

4. Initialize a list with elements 2 to 100 (means 99 elements)

2 3 4 5 6 7 8 9 10 11 12 13 14 . . . 98

Apply following procedures on this list:

- Read first element that is 2 and replace every second element with -1
- Read next element that is 3 and replace every third element with -1
- Read next element which is not -1, that is 5, and replace every fifth element with -1
- Read next element which is not -1, that is 7, and replace every seventh element with -1

Carry out this procedure for all elements. At the end, print all elements which are not -1. The output will be prime numbers:

2 3 5 7 11 13 ...