Inlämningsuppgift 3

1.

def is\_sorted(my\_list):

count = 1

if len(my\_list) < 2:

return True

else:

for i in range(len(my\_list)-1):

if my\_list[i+1] >= my\_list[i]:

count += 1

if len(my\_list) == count:

return True

return False

print(is\_sorted([1,4,23,101,2912]))

True

print(is\_sorted([]))

True

print(is\_sorted([-1]))

True

print(is\_sorted([2,4,1]))

False

2.

Write a function that inserts an element x in an *sorted* list my\_list in such a way that the result is also a sorted list. If given a non-sorted list, the function should raise a ValueError.

def insert\_in\_sorted(x,my\_list):

# here be code

**Algorithm idea:**

1. Use is\_sorted to test if my\_list is sorted. If it is not, raise a ValueError.
2. Iterate over all indices i < len(my\_list) until you find an element my\_list[i] such that my\_list[i] > x, and insert x in the list just before that element.
3. If there is no my\_list[i] larger than x, insert x at the end of the list.

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