Insertion Sort

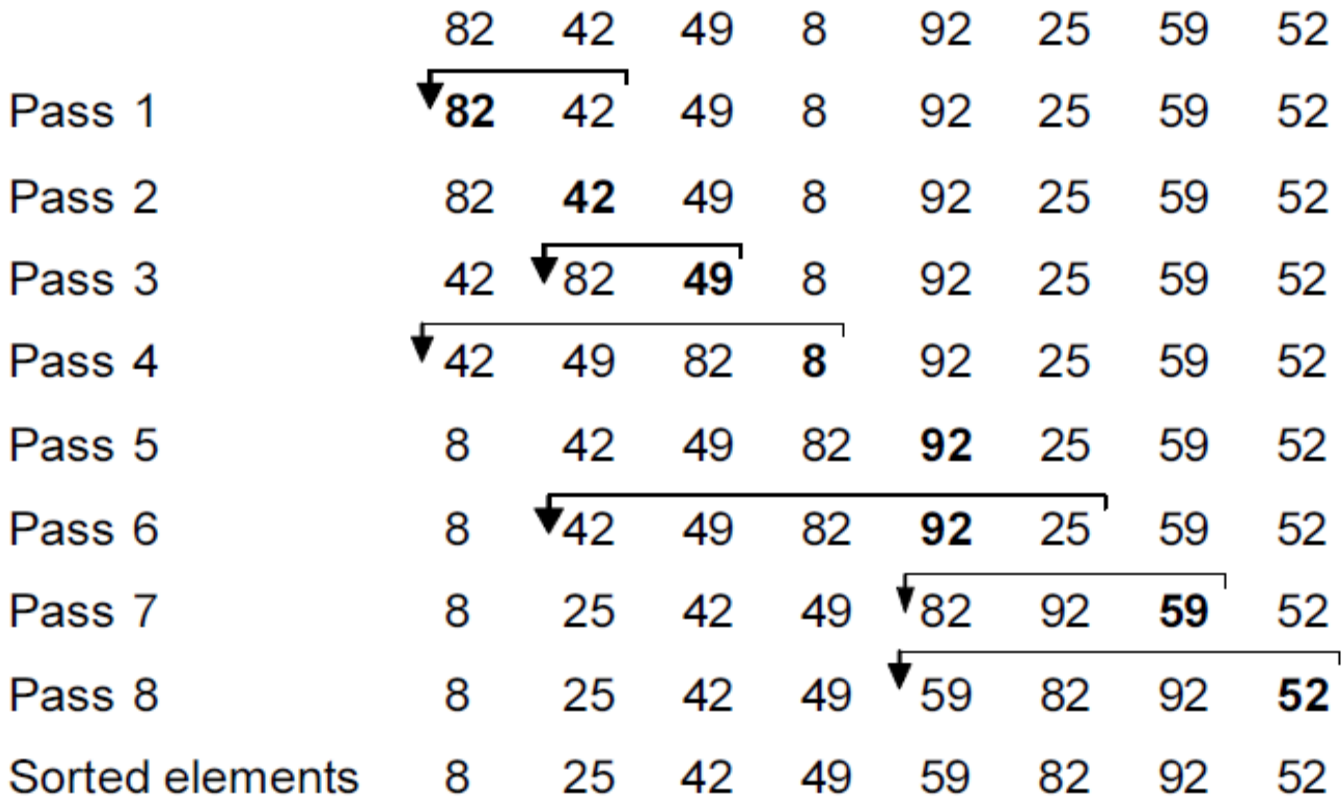
Insertion sort is a simple sorting algorithm that is relatively efficient for small lists and mostly-sorted lists, and often is used as part of more sophisticated algorithms. It works by taking elements from the list one by one and inserting them in their correct position into a new sorted list. In arrays, the new list and the remaining elements can share the array's space, but insertion is expensive, requiring shifting all following elements over by one.

Example

Let us take an example of the following elements

82 42 49 8 92 25 59 52

Here apply the insertion sort algorithm to sort the elements.



Example	Output

def insertion_sort(list):
  for i in range(1,len(list)):
  key = list[i]
  j = i
  while j>0 and list[j-1]>key:
  list[j]=list[j-1]
  j = j-1
 	
  list[j]=key
 	
list = [82,42,49,8,92,25,59,52]
insertion_sort(list)
print(list)
	8, 25, 42, 49, 52, 59, 82, 92