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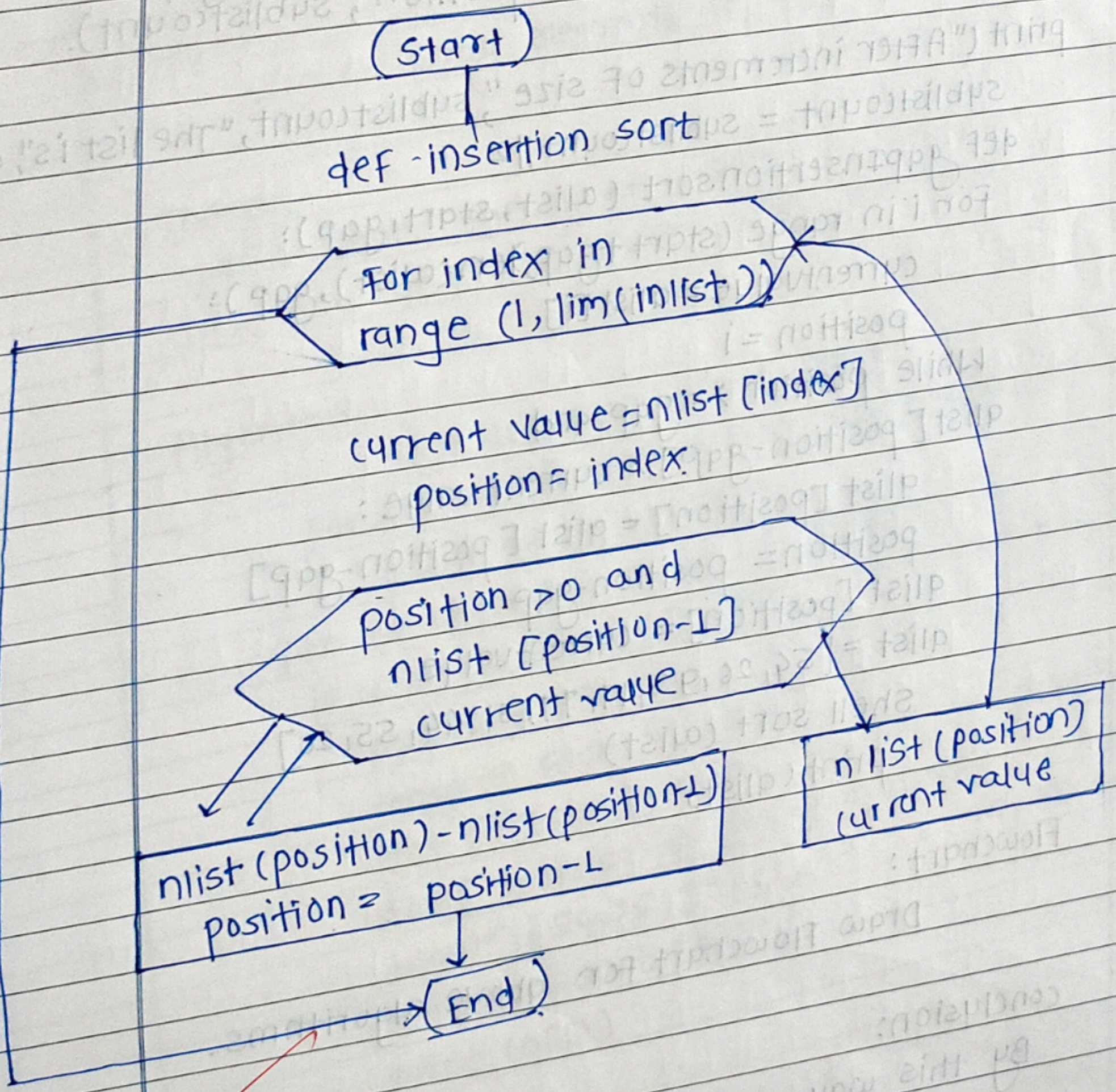
Flowchart :-



```
For start position in range (sublistcount):gap.
  Insertion sort (alist, start position, sublistcount).

print ("After increments of size ", sublistcount, "The list is", alist)
    sublistcount = sublistcount//2
def gapInsertionsort (alist, start, gap):
  for i in range (start+gap, len(alist), gap):
      currentvalue = alist[i]
      position = i
  while position >= gap and
alist[position-gap] > currentvalue:
      alist[position] = alist[position-gap]
      position= position-gap
    alist[position] = currentvalue
    alist = [54, 26, 93, 17, 77, 31, 44, 55, 20]
      Shell sort (alist)
      print (alist)
```

Flowchart:

Draw flowchart for above algorithms.

conclusion:

By this way, we can sort percentage of students in array using insertion or sort and shell sort.

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Input:
size of array elements of array.

Theory:
Write short theory of sorting - Explain insertion and shell sort with example.

Algorithm:

```
def selection sort (alist):
For Fill slot in range (len (alist)-1, 0, -1):
    position of Max=0
    For location in range (1, Fillslot + 1):
        if alist [location] > alist [position of Matrix]:
            position of Max = location
    temp = alist [fillslot]
    alist [fillslot] = alist [position of Max]
    alist [ position of Max] = temp.
alist = [54, 26, 93, 17, 77, 31, 44, 55, 20]
selection sort (alist)
print (alist)

def shell sort (alist):
sublistcount = len (alist)//2
While sublistcount > 0:
```