#. Sorting

Sorting is to arrange the list in an ascending or ~~descen~~ descending order. There are too techniques that can be used to sort the list :-

i) Bubble Sort
ii) Insertion Sort

i) <u>Bubble Sort</u> → It is one of the simplest sorting techniques, where it traverse the whole list by comparing it its adjacent element, sorting them and swapping the element until the whole element is sorted.

<u>Algorithm for Bubble Sort :-</u>

1) START
2) Read the array element & store it into the list.
3) Store the length in the variable n.
4) for i = 0 to n-1, repeat step 5 & 6
5) for j = 0 to n-1-i, repeat step 4.
6) if a [j] > a [j+1], then swap the elements

7) Display the sorted list.
8) END.

Code :—

```
def bubblesort ():
    l = [42,29,74,11,65,58]
    n = len(l)
    print("Original list ", l)
    print
    for i in range (n-1):
        for j in range (n-1-i):
            if l[j] > l[j+1]:
                l[j], l[j+1] = l[j+1], l[j]
    print("After sorting ", l)
bubble sort ()
```