Sorting:

Sorting is the process of arranging data into meaningful order so that you can analyse it more effectively…

Bubble sort:

Bubble sort is a sorting algorithm used to sort list items in ascending order by comparing two adjacent values, if the first value is higher than second value, the first value takes the second value position, while second value takes the first value position.

Algorithm:

* Choose Create a list by taking n number of inputs from user.
* Choose the 0th index value in the list and compare it with nearest element (next index value).
* If the value in 0th index is greater than 1st index value then swaps the values, else keep it as it is.
* Now we sorted two elements and the remaining elements are treated as unsorted.
* Repeat this process until all elements are get sorted. After sorting all elements, print the sorted list.

PROGRAM:

Class bubble sort ():

def bubblesort(self,list1): for j in range(len(list1)):

for i in range(len(list1)-1-j): if list1[i]>list1[i+1]:

list1[i],list1[i+1]=list1[i+1],list1[i] print(list1) else:

print(list1)

print("sorted list:",list1) list1=[]

num=int(input("how many number you want to insert:"))

print("enter values:") for k in range(num):

list1.append(int(input())) print("unsorted list;",list1)

b= bubblesort()

b.bubblesort(list1)

Output:

how many number you want to insert: 5

2

4

3

5

1

Unsorted list: [2,4,3,5,1]

[2,4,3,5,1]

[2,3,4,5,1]

[2,3,4,5,1]

[2,3,4,1,5]

[2,3,4,1,5]

[2,3,4,1,5]

[2,3,1,4,5]

[2,3,1,4,5]

[2,1,3,4,5]

[1,2,3,4,5]

Sorted list: (1,2,3,4,5)

Real time explanation:

The bubble sort algorithm is one of the most straight forward sorting algorithms. Its name comes from the way the algorithm works; with every new pass, the largest element in the list “bubble up” towards its correct position.

SELECTION SORT:

Selection sort is a simple sorting algorithm…The smallest element is selected from the unsorted array and swapped with the leftmost element, and that element becomes a part of the sorted array. This process continues moving unsorted array boundary by one element to the right.