

What is an Algorithm:

An Algorithm is a procedure to accomplish a specific task, an idea behind any reasonable computer program

An algorithm is a procedure that takes any possible input instances and transforms it to desired output

Following is the example of Insertion sort.

Insertion sort is a method for sorting that starts with a single element and then incrementally inserts the remaining elements so that the list stays sorted

```
insertion_sort(item s[], int n)
{
    int i, j;
    for ( i =1; i < n; i++)
    {
        j= i;
        while ((j>0) && (s[j]<s[j-1]))
        {
            swap (&s[j], &s[j-1]);
            j=j-1;
        }
    }
}
```

```
def insertionSort(alist):
    for index in range(1,len(alist)):

        currentvalue = alist[index]
        position = index

        while position>0 and alist[position-1]>currentvalue:
            alist[position]=alist[position-1]
            position = position-1

        alist[position]=currentvalue
```

```
alist = [54,26,93,17,77,31,44,55,20]
insertionSort(alist)
```

```
print(alist)
```