**Algorithm of Bubble sort:**

For( i=1 to n-1)

For (j=1 to n-i)

If (a[j]>a[j+1])then

Swap(a[j], a[j+1])

End if

End for

Stop

**Program of bubble sort**

#include<iostream>

using namespace std;

int main()

{

int a[50],n,i,j,temp;

cout<<"Enter the size of array: ";

cin>>n;

cout<<"Enter the array elements: ";

for(i=0;i<n;++i)

cin>>a[i];

for(i=1;i<n;++i)

{

for(j=0;j<(n-i);++j)

if(a[j]>a[j+1])

{

temp=a[j];

a[j]=a[j+1];

a[j+1]=temp;

}

}

cout<<"Array after bubble sort:";

for(i=0;i<n;++i)

cout<<" "<<a[i];

return 0;

}

**Program of bubble sort using recursion:**

#include <iostream>

using namespace std;

void BubbleSort (int arr[], int n)

{

int i, j;

for (i = 0; i < n; ++i)

{

for (j = 0; j < n-i-1; ++j)

{

if (arr[j] > arr[j+1])

{

arr[j] = arr[j]+arr[j+1];

arr[j+1] = arr[j]-arr[j + 1];

arr[j] = arr[j]-arr[j + 1];

}

}

}

}

int main()

{

int n, i;

cout<<"\nEnter the number of data element to be sorted: ";

cin>>n;

int arr[n];

for(i = 0; i < n; i++)

{

cout<<"Enter element "<<i+1<<": ";

cin>>arr[i];

}

BubbleSort(arr, n);

cout<<"\nSorted Data ";

for (i = 0; i < n; i++)

cout<<"->"<<arr[i];

return 0;

}