

## SHELL SORT :

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// C++ implementation of Shell Sort
#include<iostream>
using namespace std;
void ShellSort(int arr[], int n)
{
    for(int gap=n/2;gap>0;gap /= 2)
    {
        for(int j = gap;j<n;j+=1)
        {
            int temp = arr[j];
            int i=0;

            for(i=j;(i>=gap)&&(arr[i-gap]>temp);i-
=gap)
            {
                arr[i] = arr[i-gap];
            }
            arr[i] = temp;
        }
    }
}

int main()
{
    int n;
    cout<<"Enter the size of the array: "<<endl;
    cin>>n;
    int arr1[n],arr2[n];

    cout<<"Enter "<<n<<" integers in any order"<<endl;
    for(int i=0;i<n;i++)
    {
        cin>>arr1[i];
        arr2[i]=arr1[i];
    }

    cout<<endl<<"Before Sorting: "<<endl;
    for(int i=0;i<n;i++)
    {
        cout<<arr1[i]<<" ";
    }

    cout<<endl<<endl<<"SHELL SORT "<<endl;

    ShellSort(arr1, n); // SHELL SORT CALLED HERE

    cout<<endl<<"After Sorting: "<<endl;
    for(int i=0;i<n;i++)
    {
        cout<<arr1[i]<<" ";
    }
}
```

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    return 0;  
}
```