**PROGRAM FOR SHELL SORT:**

#include <iostream.h>

#include <conio.h>

#define MAX 10

class shellsort

{

int arr[MAX],n;

public:

void getdata();

void showdata();

void sortLogic();

};

void shellsort :: getdata()

{

cout<<"How many elements you require : ";

cin>>n;

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

cin>>arr[i];

}

void shellsort :: showdata()

{

cout<<"\n--Display--\n";

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

cout<<arr[i]<<" \n";

}

void shellsort :: sortLogic()

{

int i,j,temp,increment;

for(increment=n/2; increment>0; increment /= 2)

{

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

{

temp=arr[i];

for(j=i; j>=increment; j -= increment)

{

if(temp < arr[j-increment])

arr[j] = arr[j-increment];

else

break;

}

arr[j] = temp;

}

}

}

void main()

{

clrscr();

cout<<"\n\*\*\*\*\*Shell Sort\*\*\*\*\*\n";

shellsort obj;

obj.getdata();

obj.sortLogic();

obj.showdata();

getch();

}

**OUTPUT:**

\*\*\*\*\*Shell Sort\*\*\*\*\*

How many elements you require :

6

98

46

65

45

14

32

--Display--

14

32

45

46

65

98