/\*

Write C++ program to store first year percentage of students in array. Write function for sorting array of floating point numbers in ascending order using

a) Selection Sort

b) Bubble sort and

\*/

#include<iostream>

using namespace std;

void in(float marks[20],int n)

{

int i,j;

float temp;

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

{

temp=marks[i];

for(j=i-1;j>=0 && marks[j]>temp;j--)

marks[j+1]=marks[j];

marks[j+1]=temp;

}

cout<<"\nTop five scores are ::";

for(i=n-1;i>=n-5;i--)

cout<<"\t"<<marks[i];

}

void shell(float marks[20],int n)

{

int i,j,step;

float temp;

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

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

{

temp=marks[i];

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

if(temp<marks[j-step])

marks[j]=marks[j-step];

else

break;

marks[j]=temp;

}

cout<<"\nTop five scores are::";

for(i=n-1;i>=n-5;i--)

cout<<"\t"<<marks[i];

}

int main()

{

float marks[20];

int i,n,ch;

cout<<"\nEnter the total no.of students::";

cin>>n;

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

{

cout<<"\nEnter the percenatge marks for second year student"<<i+1<<"::";

cin>>marks[i];

}

while(ch!=3)

{

cout<<"\n1.Insertion Sort 2. Shell Sort 3. Exit";

cout<<"\nEnter your choice::";

cin>>ch;

switch(ch)

{

case 1:

in(marks,n);

break;

case 2:

shell(marks,n);

break;

}

}

return 0;

}

/\*

OUTPUT :

Enter the total no.of students::4

Enter the percenatge marks for second year student1::60

Enter the percenatge marks for second year student2::55

Enter the percenatge marks for second year student3::77

Enter the percenatge marks for second year student4::76

1.Insertion Sort 2. Shell Sort 3. Exit

Enter your choice::1

Top five scores are :: 77 76 60 55 0

1.Insertion Sort 2. Shell Sort 3. Exit

Enter your choice::2

Top five scores are:: 77 76 60 55 0

1.Insertion Sort 2. Shell Sort 3. Exit

Enter your choice::

\*/