**PROGRAM:**

#include<iostream>

using namespace std;

float a[100];

int size;

class sort

{

public:

int accept();

int insertion\_sort();

int display();

void top\_five();

};

int sort::accept()

{

cout<<"\nenter the total number of second year students\n";

cin>>size;

cout<<"\nenter the percentage of students\n";

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

{

cin>>a[i];

}

}

int sort::insertion\_sort()

{

int i,j;

float element;

cout<<"\nINSERTION SORT\n";

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

{

element=a[i];

j=i;

while((j>0) && (a[j-1]>element))

{

a[j]=a[j-1];

j=j-1;

}

a[j]=element;

}

}

int sort::display()

{

cout<<"\nthe percentage of students in ascending order are \n";

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

cout<<a[i]<<endl;

}

void sort::top\_five()

{

cout<<"\nTHE TOP FIVE STUDENTS OF FIRST YEAR ARE\n";

int i,j;

float top[5];

for(i=0,j=size-1;i<5;i++,j--)

{

top[i]=a[j];

}

for(i=0;i<5;i++)

cout<<top[i]<<endl;

}

int main()

{

int ch;

char c;

sort obj;

obj.accept();

do

{

cout<<"\npress 1 for insertion sort\npress 2 to display top five students\n";

cin>>ch;

switch(ch)

{

case 1: obj.insertion\_sort();obj.display();break;

case 2: obj.top\_five();break;

default:cout<<"\ninvalid choice...try again..\n";

}

cout<<"\ndo you want to try again?(y/n)\n";

cin>>c;

}while(c=='y' || c=='Y');

return 0;

}

**OUTPUT:**

enter the total number of second year students

10

enter the percentage of students

66

76.6

49

90

89

100

65.5

44

87

78

press 1 for insertion sort

press 2 to display top five students

1

INSERTION SORT

the percentage of students in ascending order are

44

49

65.5

66

76.6

78

87

89

90

100

do you want to try again?(y/n)

y

press 1 for insertion sort

press 2 to display top five students

2

THE TOP FIVE STUDENTS OF FIRST YEAR ARE

100

90

89

87

78

do you want to try again?(y/n)

n