#include<iostream>

using namespace std;

//#define Size 10

int n;

template <class T>

class sort

{

int i,j;

T a[50];

public:

void insert()

{

cout<<"\nHow many elements are there?";

cin>>n;

cout<<"\nEnter the Numbers"<<endl;

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

cin>>a[i];

selection(a);

}

void selection(T a[])

{

T temp,exchange=0,cmp=0;

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

{

cout<<"\n--------------------After Pass"<<i+1<<"------------------------"<<endl;

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

{

cmp++;

if(a[j]<a[i])

{

exchange++;

temp=a[i];

a[i]=a[j];

a[j]=temp;

}

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

{

cout<<"\t"<<a[k];

}

cout<<"\n";

//cout<<"\nno of exchanges"<<exchange<<endl;

//cout<<"\nno of comparision"<<cmp<<endl;

}

}

cout<<"\n----------No of Exchange/no of Comparision----------\n Total no of exchanges => "<<exchange<<endl;

cout<<"\n Total no of comparision => "<<cmp<<endl<<"--------------------Dispaly of sorted list--------------------";

cout<<endl;

}

void display()

{

cout<<"\n The sorted List Is...\n";

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

cout<<"\t"<<a[i]<<endl;

}

};

int main()

{

cout<<"Integer value"<<endl;

sort<int> obj1;

obj1.insert();

obj1.display();

cout<<"Float value"<<endl;

sort<float> obj2;

obj2.insert();

obj2.display();

return 0;

}