#include <iostream>

using namespace std;

void Insert\_Sort(int[], int);

int main()

{

int T;

cout<<"Enter number of test cases:\n";

cin >> T;

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

{

int n;

cout<<"Enter size of the array:\n";

cin >> n;

int A[1000];

cout<<"Enter elements:\n";

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

{

cin >> A[j];

}

Insert\_Sort(A, n);

}

}

void Insert\_Sort(int A[], int n)

{

int temp;

int comp = 0, shift = 0;

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

{

temp = A[i];

int j = i - 1;

while (j >= 0 && A[j] > temp)

{

comp++;

A[j + 1] = A[j];

shift++;

j--;

}

A[j + 1] = temp;

shift++;

}

cout<<"Sorted array becomes";

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

cout << A[i] << " ";

cout << "\ncomparisons = " << comp << endl

<< "shifts = " << shift << endl;

}

