5 Diagonal Matrix.

1. Let A[1 …. n] be an array of n real numbers. A pair (A[i], A[j ]) is said to be an inversion if these numbers are out of order, i.e., i < j but A[i]>A[j ]. Write a program to count the number of inversions in an array.

#include <iostream>

using namespace std;

int main() {

int n;

cout << "Enter number of elements: ";

cin >> n;

double A[n];

cout << "Enter " << n << " real numbers: ";

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

cin >> A[i];

}

int inversionCount = 0;

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

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

if (A[i] > A[j]) {

inversionCount++;

}

}

}

cout << "Number of inversions: " << inversionCount << endl;

return 0;

}

OUTPUT :

