**PROGRAM 1**

/\* **write a c program to sort an array of integers in ascending order and display the sorted array and number of passes performed for sorting.**\*/

#include <stdio.h>

#define MAXSIZE 10

void main()

{

int array[MAXSIZE];

int i, j, num, temp,c1=0,c2=0;

printf("Enter the value of num \n");

scanf("%d", &num);

printf("Enter the elements one by one \n");

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

{

scanf("%d", &array[i]);

}

printf("Input array is \n");

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

{

printf("%d\t", array[i]);

}

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

{

for (j = 0; j < (num - i - 1); j++)

{

if (array[j] > array[j + 1])

{

temp = array[j];

array[j] = array[j + 1];

array[j + 1] = temp;

c1++;

}

else

c2++;

}

}

printf("\nSorted array is...\n");

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

{

printf("%d\t", array[i]);

}

printf("\nTotal Number of passes is : %d\n",c1+c2);

printf("No of passes the values were swaped : %d\n",c1);

printf("No of passes the values were already sorted : %d\n",c2);

}