Rizvi College of Engineering Data Structure Lab

***Department:*** Computer Engineering (Sem III)

***Class:*** *Second Year (S.E)*

***Subject:*** Data Structures Lab

***Expt. No.9***

***Title: Quick Sort***

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**CODE: -**

#include<stdio.h>

#include<stdlib.h>

#define max 10

int partition(int arr[max],int b,int e)

{

int pivot = arr[e],i,temp;

int pivot\_index = b;

for(i=b;i<e;i++)

{

if(arr[i]<=pivot)

{

temp=arr[i];

arr[i]=arr[pivot\_index];

arr[pivot\_index]=temp;

pivot\_index++;

}

}

temp=arr[pivot\_index];

arr[pivot\_index]=arr[e];

arr[e]=temp;

return pivot\_index;

}

void quicksort(int arr[max],int beg,int end)

{

int index;

if(beg<end)

{

index = partition(arr,beg,end);

quicksort(arr,beg,index-1);

quicksort(arr,index+1,end);

}

}

int main(void)

{

int n,i,a[max];

printf("Enter the number of elements for the array: ");

scanf("%d",&n);

printf("Enter the elements for the array:\n");

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

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

printf("Unsorted Array:\n");

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

printf("%d\n",a[i]);

quicksort(a,0,n-1);

printf("Sorted Array:\n");

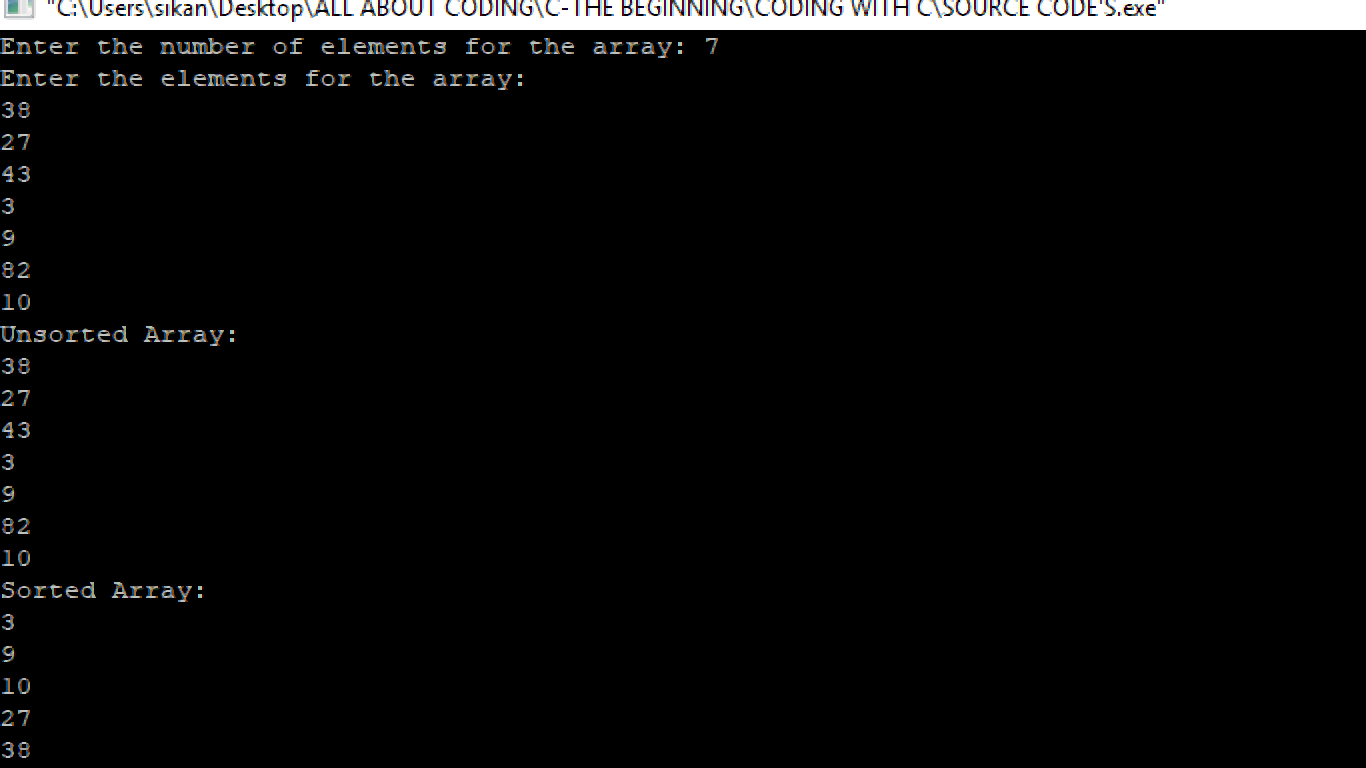
for(i=0;i<n;i++)

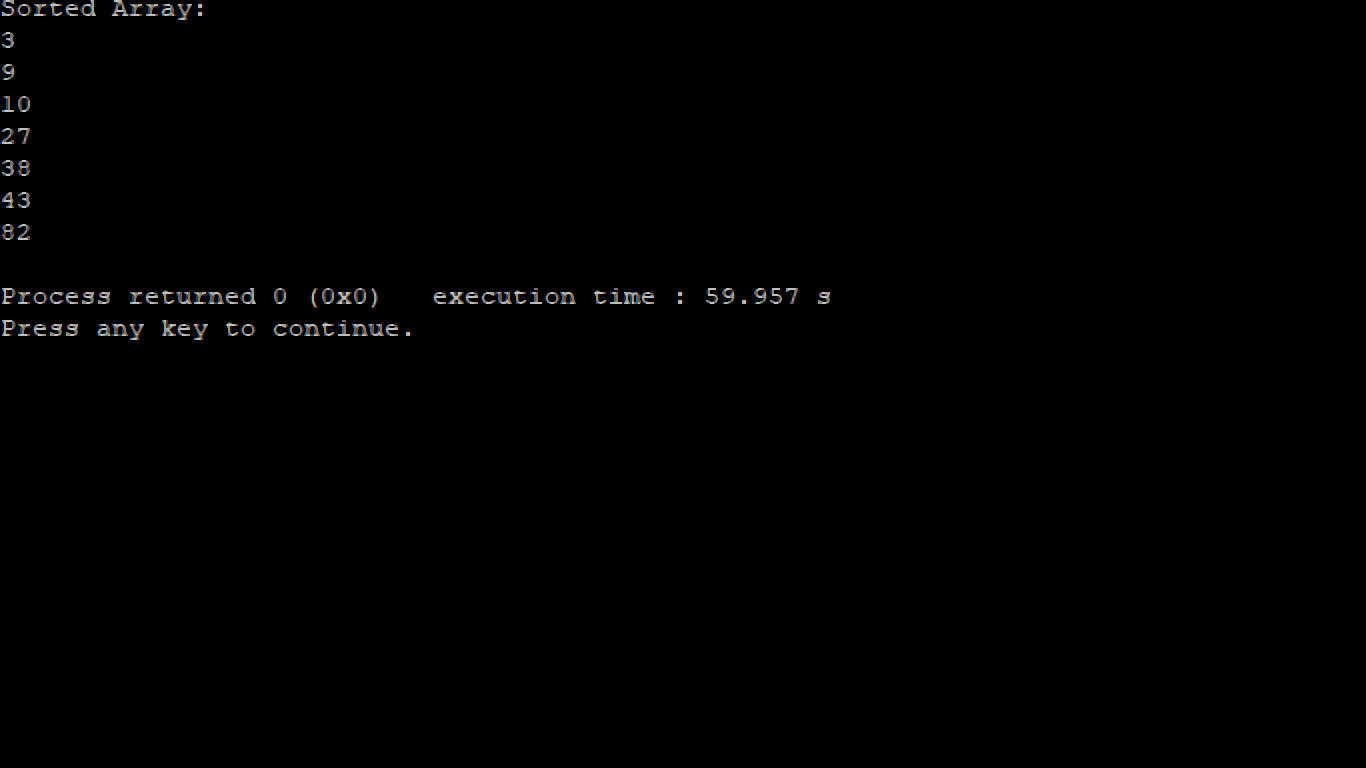
printf("%d\n",a[i]);

return 0;

}

**OUTPUT: -**

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