

/*C Program to implement Quick sort

Input : 1. Size of the Array

2. Array elements

Output : Sorted Array elements in ascending order

***/**

```
#include<stdio.h>
```

```
void quicksort(int [10],int,int);
```

```
int main(){
```

```
int x[20],n,i;
```

```
printf("Enter size of the array: ");
```

```
scanf("%d",&n);
```

```
printf("\n");
```

```
printf("Enter %d elements: ",n);
```

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

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

```
quicksort(x,0,n-1);
```

```
printf("\n");
```

```
printf("Sorted elements: ");
```

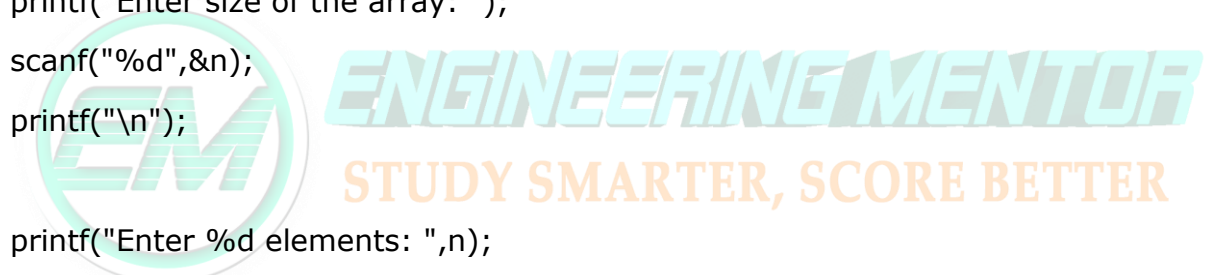
```
for(i=0;i<n;i++)
```

```
    printf(" %d",x[i]);
```

```
printf("\n");
```

```
return 0;
```

```
}
```



```
void quicksort(int x[10],int first,int last){
    int pivot,j,temp,i;

    if(first<last){
        pivot=first;
        i=first;
        j=last;

        while(i<j){
            while(x[i]<=x[pivot]&& i<last)
                i++;
            while(x[j]>x[pivot])
                j--;
            if(i<j){
                temp=x[i];
                x[i]=x[j];
                x[j]=temp;
            }
        }

        temp=x[pivot];
        x[pivot]=x[j];
        x[j]=temp;
        quicksort(x,first,j-1);
        quicksort(x,j+1,last);

    }
}
```

Sample Input and Output:

```
Enter size of the array: 8
Enter 8 elements: 5 2 9 6 3 1 4 7
Sorted elements: 1 2 3 4 5 6 7 9
Press any key to continue..._
```



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