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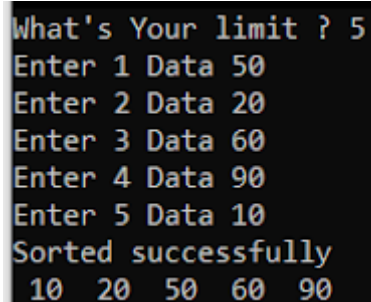
HOME

September 24, 2021

WRITE A C PROGRAM USING QUICK SORT(PARTITION EXCHANGE SORT) METHOD

—

```
1.  #include<stdio.h>
2.  #define true 1
3.  #define false 0
4.
5.  void quick(int a[],int lb,int ub);
6.  int lb,ub;
7.  int main(){
8.          int a[100],i,n;
9.
10.         printf("What's Your limit? ");
11.         scanf("%d",&n);
12.         for(i=1;i<=n;i++){
13.                 printf("Enter %d Data ",i);
14.                 scanf("%d",&a[i]);
15.         }
16.         lb=1;
17.         ub=n;
18.         quick(&a[0],lb,ub);
19.         printf("Sorted successfully\n");
20.         for(i=1;i<=n;i++){
21.                 printf("%d ",a[i]);
22.         }
23.         return 0;
24. }
25. void quick(int *a,int lb,int ub){
26.         int pivot,i,j,flag,temp;
27.         flag=true;
28.         if(lb<ub){
```

```
29.              i=lb;
30.              j=ub+1;
31.              pivot=a[lb];
32.              while(flag){
33.                  i=i+1;
34.              while(a[i]<pivot){
35.                  i++;
36.                  j--;
37.              }
38.              while(a[j]>pivot){
39.                  j--;
40.              }
41.              if(i<j){
42.                  temp=a[i];
43.                  a[i]=a[j];
44.                  a[j]=temp;
45.              }
46.              else{
47.                  flag=false;
48.                  temp=a[lb];
49.                  a[lb]=a[j];
50.                  a[j]=temp;
51.                  quick(a,lb,j-1);
52.                  quick(a,j+1,ub);
53.              }
54.          }
55.      }
56. }
```

OUTPUT

```
What's Your limit ? 5
Enter 1 Data 50
Enter 2 Data 20
Enter 3 Data 60
Enter 4 Data 90
Enter 5 Data 10
Sorted successfully
 10  20  50  60  90
```

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Labels: write a c program using quick sort