

quick\_sort.c - Code::Blocks 20.03

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<global>

binary\_search.c nonRecursiveBinarySearch.c quick\_sort.c

```
1 // BE20E05F062 AKASH SRIDHARAN
2 #include <stdio.h>
3 void quick_sort(int[],int,int);
4 int partition(int[],int,int);
5 int main()
6 {
7     int a[50],n,i;
8     printf("How many elements?");
9     scanf("%d",&n);
10    printf("\nEnter array elements:");
11
12    for(i=0;i<n;i++)
13        scanf("%d",&a[i]);
14
15    quick_sort(a,0,n-1);
16    printf("\nArray after sorting:");
17
18    for(i=0;i<n;i++)
19        printf("%d ",a[i]);
20    return 0;
21 }
22
23 void quick_sort(int a[],int l,int u)
24 {
25     int j;
26     if(l<u)
27     {
28         j=partition(a,l,u);
29         quick_sort(a,l,j-1);
30         quick_sort(a,j+1,u);
31     }
32 }
33
34 int partition(int a[],int l,int u)
35 {
36     int v,i,j,temp;
```

C:\Users\akash\Desktop\5th\_sem\_books&PPTs\DAA\DAA-lab-works\quick\_sort.exe

```
How many elements?5
Enter array elements:4
54
62
69
34

Array after sorting:4 34 54 62 69
Process returned 0 (0x0)   execution time : 46.114 s
Press any key to continue.
```

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<global> partition(int a[], int l, int u) : int

```
32 }
33
34 int partition(int a[], int l, int u)
35 {
36     int v, i, j, temp;
37     v = a[l];
38     i = l;
39     j = u + 1;
40
41     do
42     {
43         do
44             i++;
45
46         while (a[i] < v && i <= u);
47
48         do
49             j--;
50         while (v < a[j]);
51
52         if (i < j)
53         {
54             temp = a[i];
55             a[i] = a[j];
56             a[j] = temp;
57         }
58     } while (i < j);
59
60     a[l] = a[j];
61     a[j] = v;
62
63     return (j);
64 }
65
66
```

binary\_search.c x nonRecursiveBinarySearch.c x quick\_sort.c x

C/C++ Windows (CR+LF) WINDOWS-1252 Line 44, Col 17, Pos 657 Insert Read/Write defa...

C:\Users\akash\Desktop\5th\_sem\_books&PPTs\DAA\DAA-lab-works\quick\_sort.exe

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