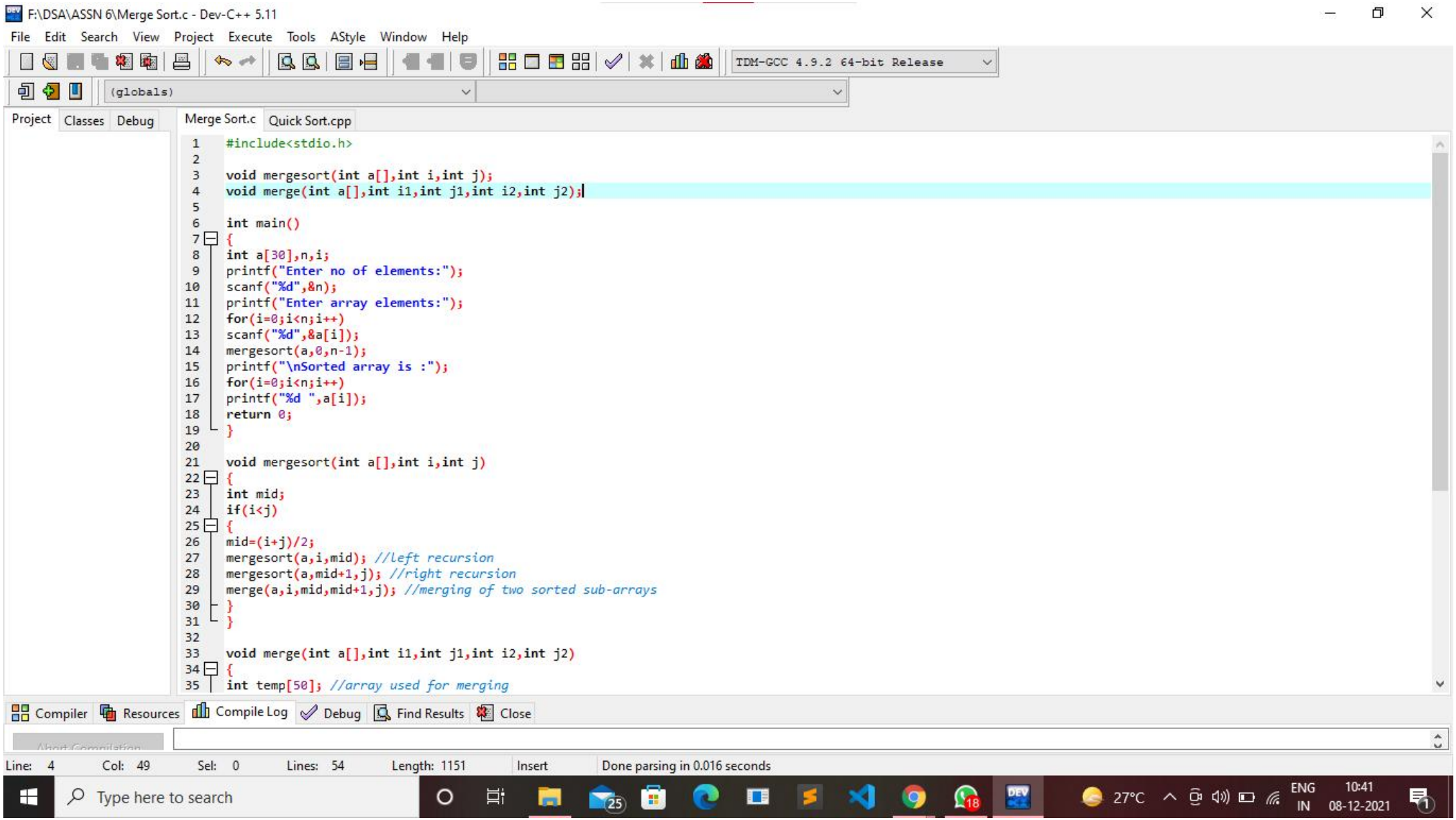

F:\DSA\ASSN 6\Merge Sort.c - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 64-bit Release
(globals)
Project Classes Debug
Merge Sort.c Quick Sort.cpp
#include<stdio.h>
void mergesort(int a[],int i,int j);
void merge(int a[],int i1,int j1,int i2,int j2);
int main()
{
int a[30],n,i;
printf("Enter no of elements:");
scanf("%d",&n);
printf("Enter array elements:");
for(i=0;i<n;i++)
scanf("%d",&a[i]);
mergesort(a,0,n-1);
printf("\nSorted array is :");
for(i=0;i<n;i++)
printf("%d ",a[i]);
return 0;
}
void mergesort(int a[],int i,int j)
{
int mid;
if(i<j)
{
mid=(i+j)/2;
mergesort(a,i,mid); //left recursion
mergesort(a,mid+1,j); //right recursion
merge(a,i,mid,mid+1,j); //merging of two sorted sub-arrays
}
}
void merge(int a[],int i1,int j1,int i2,int j2)
{
int temp[50]; //array used for merging
Compiler Resources Compile Log Debug Find Results Close
Line: 4 Col: 49 Sel: 0 Lines: 54 Length: 1151 Insert Done parsing in 0.016 seconds
Type here to search
27°C
ENG IN
10:41
08-12-2021

F:\DSA\ASSN 6\Merge Sort.c - Dev-C++ 5.11

File Edit Search View Project Execute Tools AStyle Window Help

TDM-GCC 4.9.2 64-bit Release

(globals)

Project Classes Debug

Merge Sort.c Quick Sort.cpp

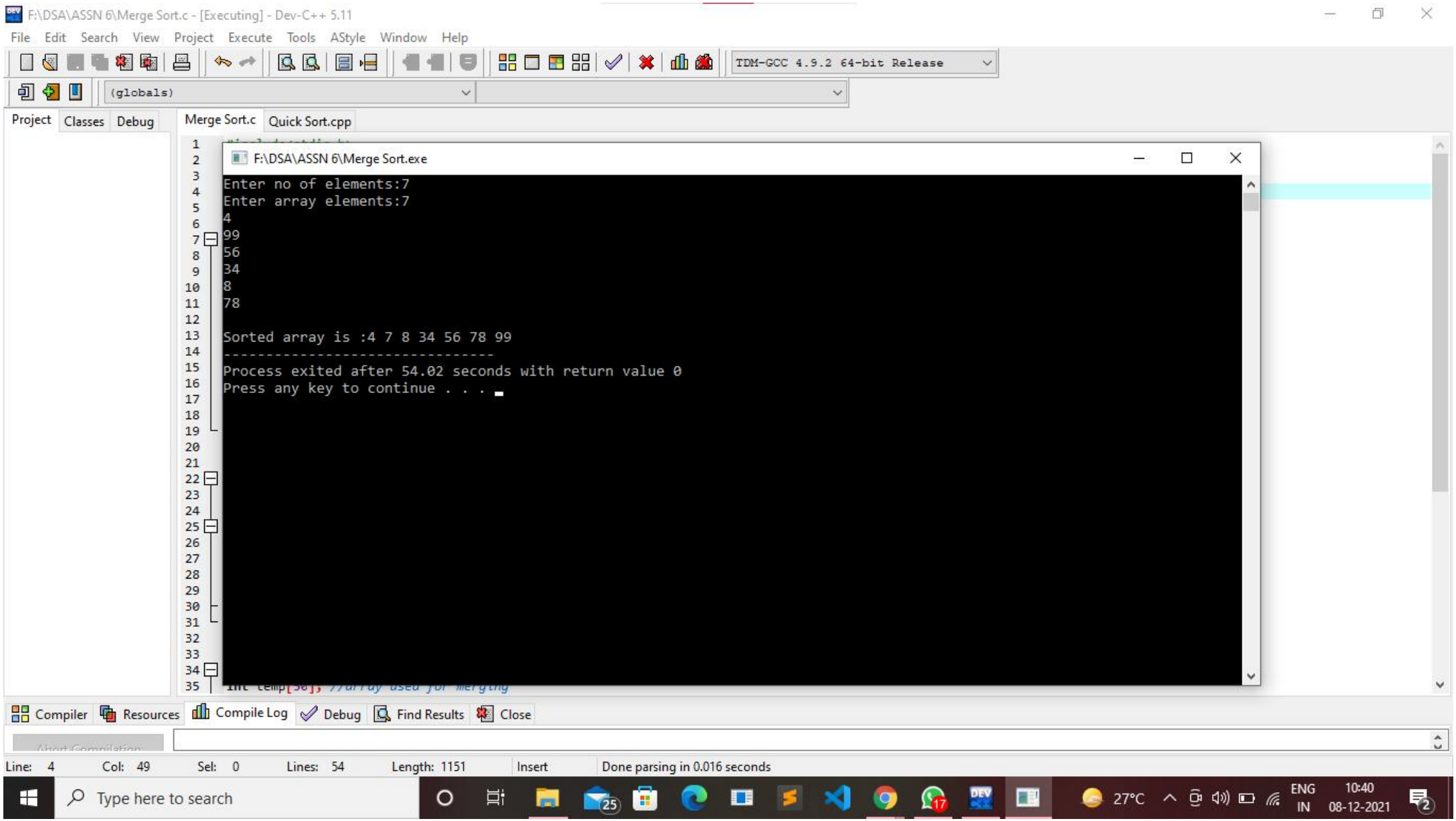
```
20
21  void mergesort(int a[],int i,int j)
22  {
23  int mid;
24  if(i<j)
25  {
26  mid=(i+j)/2;
27  mergesort(a,i,mid); //left recursion
28  mergesort(a,mid+1,j); //right recursion
29  merge(a,i,mid,mid+1,j); //merging of two sorted sub-arrays
30  }
31  }
32
33  void merge(int a[],int i1,int j1,int i2,int j2)
34  {
35  int temp[50]; //array used for merging
36  int i,j,k;
37  i=i1; //beginning of the first list
38  j=i2; //beginning of the second list
39  k=0;
40  while(i<=j1 && j<=j2) //while elements in both lists
41  {
42  if(a[i]<a[j])
43  temp[k++]=a[i++];
44  else
45  temp[k++]=a[j++];
46  }
47  while(i<=j1) //copy remaining elements of the first list
48  temp[k++]=a[i++];
49  while(j<=j2) //copy remaining elements of the second list
50  temp[k++]=a[j++];
51  //Transfer elements from temp[] back to a[]
52  for(i=i1,j=0;i<=j2;i++,j++)
53  a[i]=temp[j];
54  }
```

Compiler Resources Compile Log Debug Find Results Close

Line: 4 Col: 49 Sel: 0 Lines: 54 Length: 1151 Insert Done parsing in 0.016 seconds

Type here to search

27°C ENG IN 10:42 08-12-2021


F:\DSA\ASSN 6\Merge Sort.c - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 64-bit Release
(globals)
Project Classes Debug
Merge Sort.c Quick Sort.cpp
F:\DSA\ASSN 6\Merge Sort.exe
Enter no of elements:7
Enter array elements:7
4
99
56
34
8
78
Sorted array is :4 7 8 34 56 78 99
Process exited after 54.02 seconds with return value 0
Press any key to continue . . .
Compiler Resources Compile Log Debug Find Results Close
Line: 4 Col: 49 Sel: 0 Lines: 54 Length: 1151 Insert Done parsing in 0.016 seconds
Type here to search
27°C
ENG IN
10:40
08-12-2021

F:\DSA\ASSN 6\Quick Sort.cpp - Dev-C++ 5.11

File Edit Search View Project Execute Tools AStyle Window Help

TDM-GCC 4.9.2 64-bit Release

(globals)

Project Classes Debug

Merge Sort.c Quick Sort.cpp

```
1   #include <stdio.h>
2
3   void quicksort (int [], int, int);
4
5   int main()
6   {
7       int list[50];
8       int size, i;
9
10      printf("Enter the number of elements: ");
11      scanf("%d", &size);
12      printf("Enter the elements to be sorted:\n");
13      for (i = 0; i < size; i++)
14      {
15          scanf("%d", &list[i]);
16      }
17      quicksort(list, 0, size - 1);
18      printf("After applying quick sort\n");
19      for (i = 0; i < size; i++)
20      {
21          printf("%d ", list[i]);
22      }
23      printf("\n");
24
25      return 0;
26  }
27  void quicksort(int list[], int low, int high)
28  {
29      int pivot, i, j, temp;
30      if (low < high)
31      {
32          pivot = low;
33          i = low;
34          j = high;
35          while (i < j)
```

Compiler Resources Compile Log Debug Find Results Close

Abort Compilation

Line: 58 Col: 2 Sel: 0 Lines: 58 Length: 1274 Insert Done parsing in 0.016 seconds

Type here to search

27°C ENG IN 10:43 08-12-2021

F:\DSA\ASSN 6\Quick Sort.cpp - Dev-C++ 5.11

File Edit Search View Project Execute Tools AStyle Window Help

TDM-GCC 4.9.2 64-bit Release

(globals)

Project Classes Debug

Merge Sort.c Quick Sort.cpp

```
24
25      return 0;
26  }
27  void quicksort(int list[], int low, int high)
28  {
29      int pivot, i, j, temp;
30      if (low < high)
31      {
32          pivot = low;
33          i = low;
34          j = high;
35          while (i < j)
36          {
37              while (list[i] <= list[pivot] && i <= high)
38              {
39                  i++;
40              }
41              while (list[j] > list[pivot] && j >= low)
42              {
43                  j--;
44              }
45              if (i < j)
46              {
47                  temp = list[i];
48                  list[i] = list[j];
49                  list[j] = temp;
50              }
51          }
52          temp = list[j];
53          list[j] = list[pivot];
54          list[pivot] = temp;
55          quicksort(list, low, j - 1);
56          quicksort(list, j + 1, high);
57      }
58  }
```

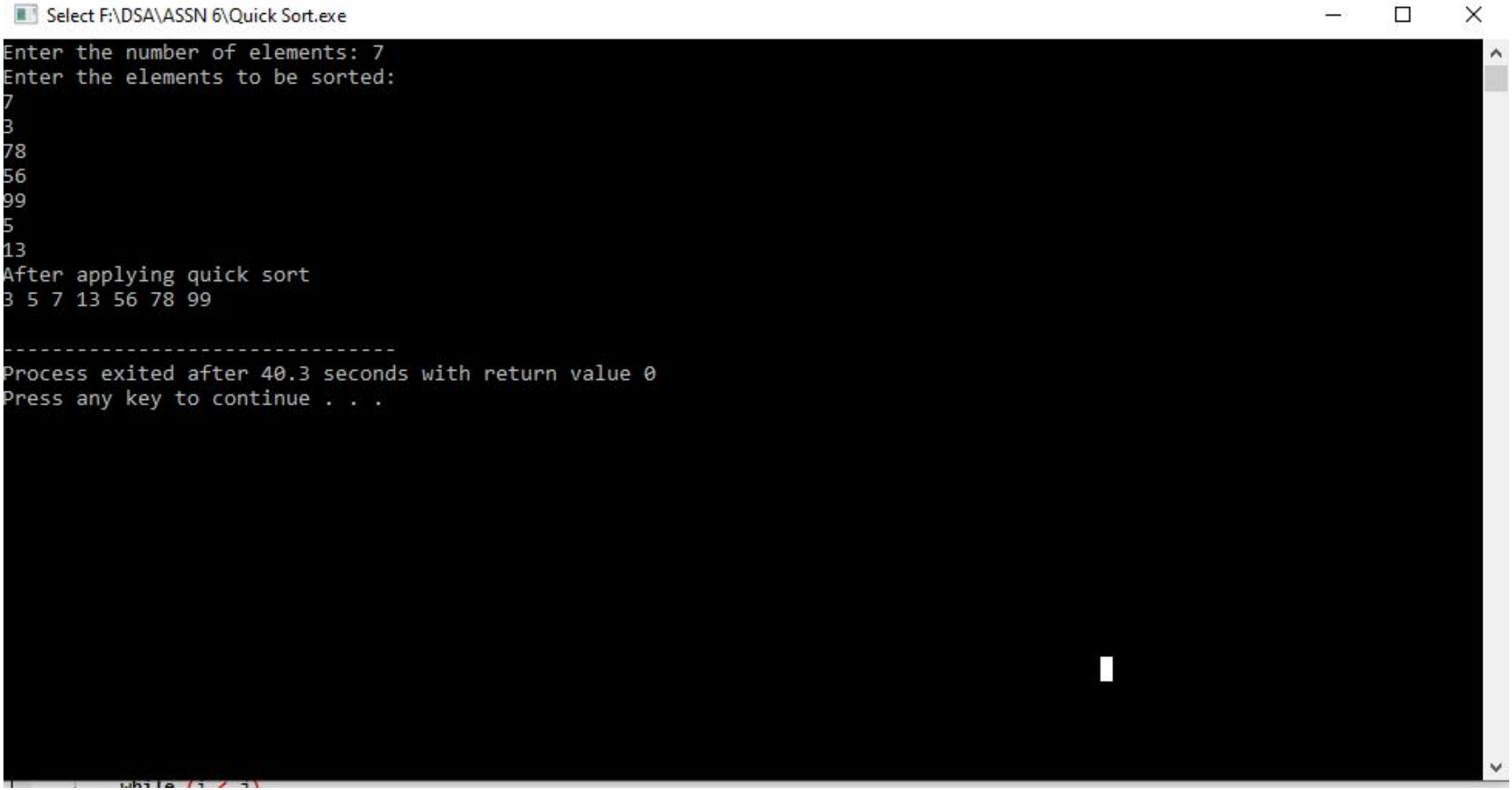
Compiler Resources Compile Log Debug Find Results Close

Abort Compilation

Line: 58 Col: 2 Sel: 0 Lines: 58 Length: 1274 Insert Done parsing in 0.016 seconds

Type here to search

27°C ENG IN 10:43 08-12-2021


Select F:\DSA\ASSN 6\Quick Sort.exe
Enter the number of elements: 7
Enter the elements to be sorted:
7
3
78
56
99
5
13
After applying quick sort
3 5 7 13 56 78 99

Process exited after 40.3 seconds with return value 0
Press any key to continue . . .