

13.quick sort :-

```
#include<stdio.h>

void quicksort(int x[20],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);
    }
}

int main()
```

```

{
int x[20],size,i;

printf("\tQuick sort\n");

printf("-----\n");

printf(" How many numbers you want to sort?: ");

scanf("%d",&size);

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

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

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

quicksort(x,0,size-1);

printf("\n Sorted elements after applying quick sort: \n\n");

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

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

return 0;

}

```

The screenshot shows the Dev-C++ IDE with a project named 'l3.cpp'. The console window is open, displaying the output of the 'Quick sort' program. The program prompts the user for the number of elements to sort (6) and then for the elements themselves (1 2 3 7 4 2). It then displays the sorted elements (1 2 2 3 4 7). The status bar at the bottom indicates the program is done parsing in 0.015 seconds.

```

C:\Users\Naga Narendra B\Downloads\l3.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(globals)
Project Classes
C:\Users\Naga Narendra B\Downloads\l3.cpp
Quick sort
-----
How many numbers you want to sort?: 6
Enter 6 elements:
1 2 3 7 4 2
Sorted elements after applying quick sort:
1 2 2 3 4 7
-----
Process exited after 15.62 seconds with return value 0
Press any key to continue . . .
Compiler
Abort Compilation
Shorten compiler paths
- Warnings: 0
- Output Filename: C:\Users\Naga Narendra B\Downloads\l3.exe
- Output Size: 129.8046875 KiB
- Compilation Time: 0.38s
Line: 26 Col: 24 Sel: 0 Lines: 45 Length: 785 Insert Done parsing in 0.015 seconds

```