

## WEEK 5

Sort a given set of N integer elements using Quick Sort technique

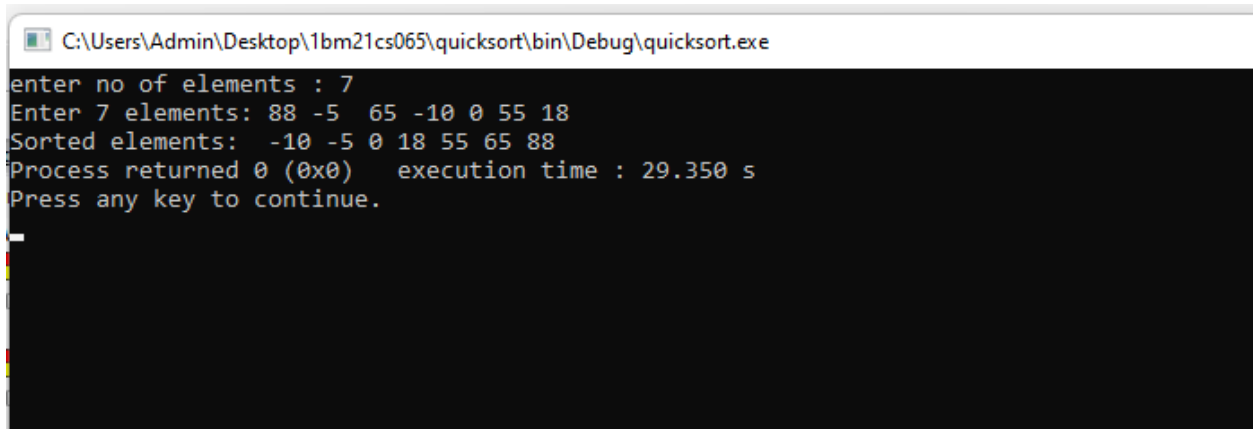
CODE:

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

```
void quicksort(int number[25],int first,int last)
{
    int i, j, pivot, temp;
    if(first<last)
    {
        pivot=first;
        i=first;
        j=last;
        while(i<j)
        {
            while(number[i]<=number[pivot]&& i<last)
                i++;
            while(number[j]>number[pivot])
                j--;
            if(i<j)
            {
                temp=number[i];
                number[i]=number[j];
                number[j]=temp;
            }
        }
        temp=number[pivot];
        number[pivot]=number[j];
        number[j]=temp;
        quicksort(number,first,j-1);
        quicksort(number,j+1,last);
    }
}
```

```
}  
int main()  
{  
    int i, count, number[25];  
    printf("enter no of elements : ");  
    scanf("%d",&count);  
    printf("Enter %d elements: ", count);  
    for(i=0;i<count;i++)  
        scanf("%d",&number[i]);  
    quicksort(number,0,count-1);  
    printf("Sorted elements: ");  
    for(i=0;i<count;i++)  
        printf(" %d",number[i]);  
    return 0;  
}
```

## OUTPUT:



The screenshot shows a Windows command prompt window with the title bar "C:\Users\Admin\Desktop\1bm21cs065\quicksort\bin\Debug\quicksort.exe". The window contains the following text:

```
enter no of elements : 7  
Enter 7 elements: 88 -5 65 -10 0 55 18  
Sorted elements: -10 -5 0 18 55 65 88  
Process returned 0 (0x0)   execution time : 29.350 s  
Press any key to continue.
```

A cursor is visible at the end of the "Press any key to continue." line.