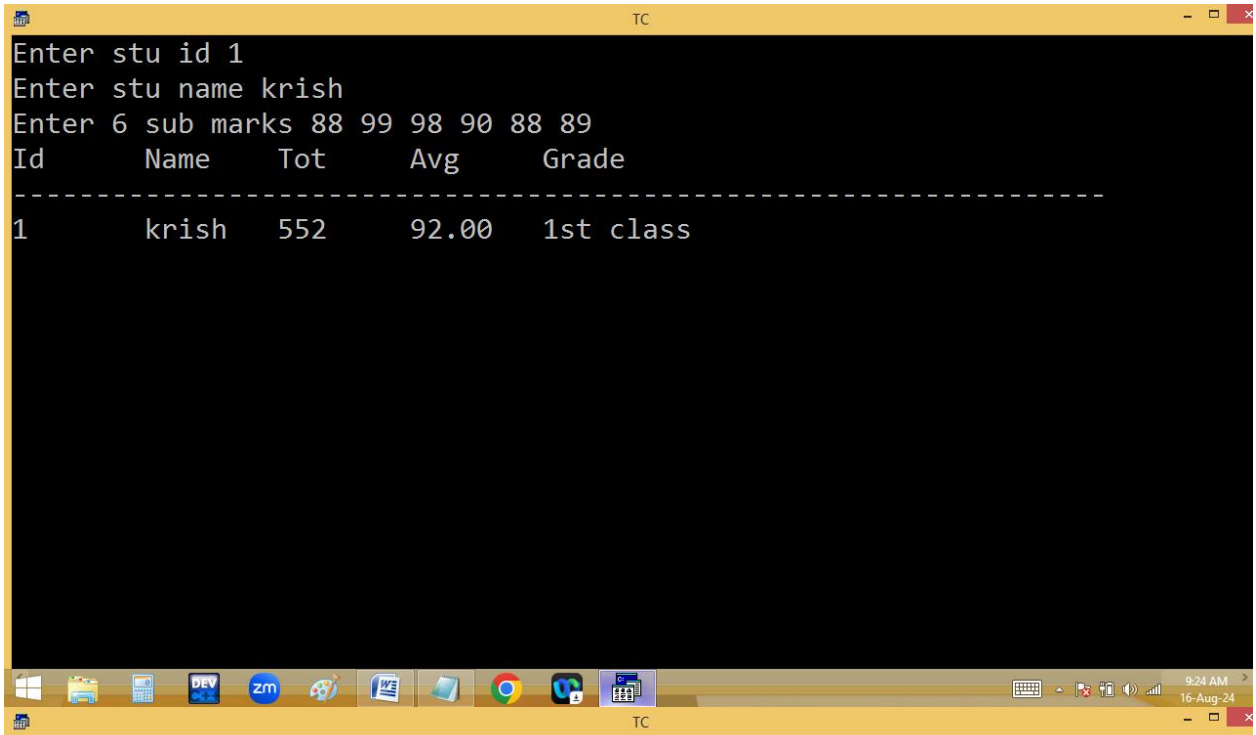
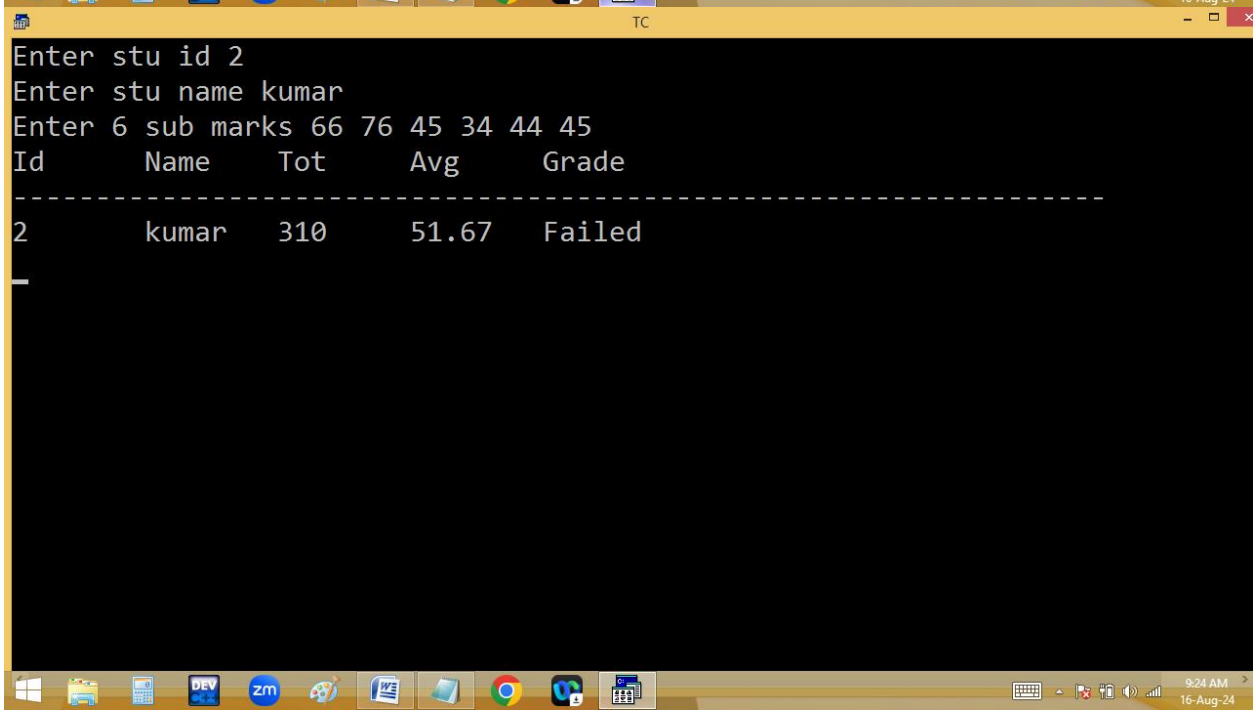
Read a stu id, name, marks in 6 subjects and find the stu result using array:

```
#include<stdio.h>
#include<conio.h>
void main()
{
int id, sub[6],tot=0,p=1,i;
char name[20];
float avg;
clrscr();
printf("Enter stu id "); scanf("%d",&id);
flushall();
printf("Enter stu name "); gets(name);
printf("Enter 6 sub marks ");
for(i=0;i<6;i++)
```

```
{scanf("%d",&sub[i]);tot+=sub[i];if(sub[i]<35)p
=0;}
avg=tot/6.0;
puts("Id\tName\tTot\tAvg\tGrade");
puts("-----------------------------------------------
----------");
printf("%d\t%s\t%d\t%.2f\t",id,name,tot,avg);
if(p==0)puts("Failed");
else if(avg>=60)puts("1st class");
else if(avg>=50)puts("2nd class");
else puts("3rd Class");
getch();
}
```

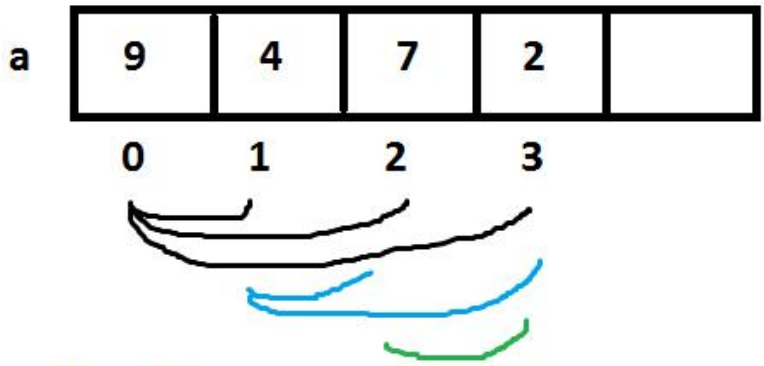

TC
Enter stu id 1
Enter stu name krish
Enter 6 sub marks 88 99 98 90 88 89
Id Name Tot Avg Grade
1 krish 552 92.00 1st class


TC
Enter stu id 2
Enter stu name kumar
Enter 6 sub marks 66 76 45 34 44 45
Id Name Tot Avg Grade
2 kumar 310 51.67 Failed

Sorting – Arranging data in a order.

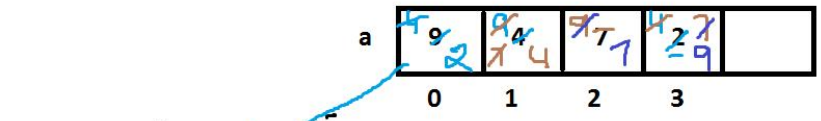
Selection sort ascending order:

9	4	7	2
4	9	7	2
2	9	7	4
2	7	9	4
2	4	9	7
2	4	7	9



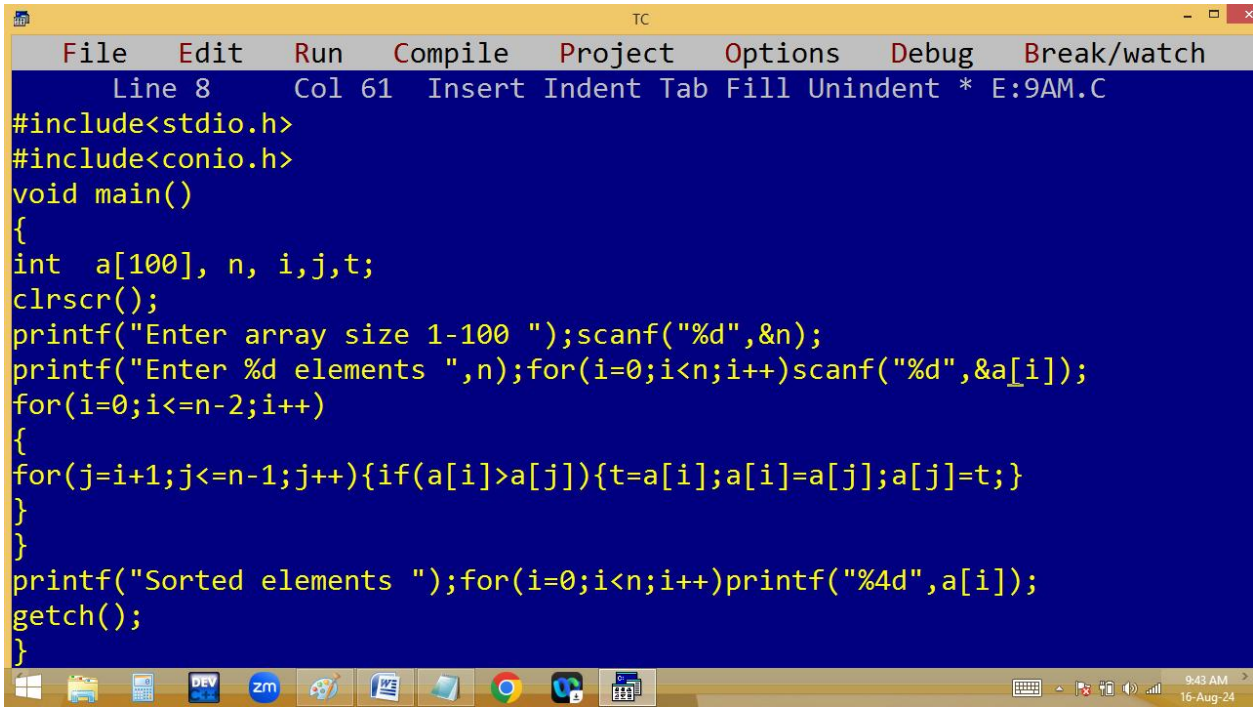
L	R
i	j
0	1,2,3
1	2,3
2	3

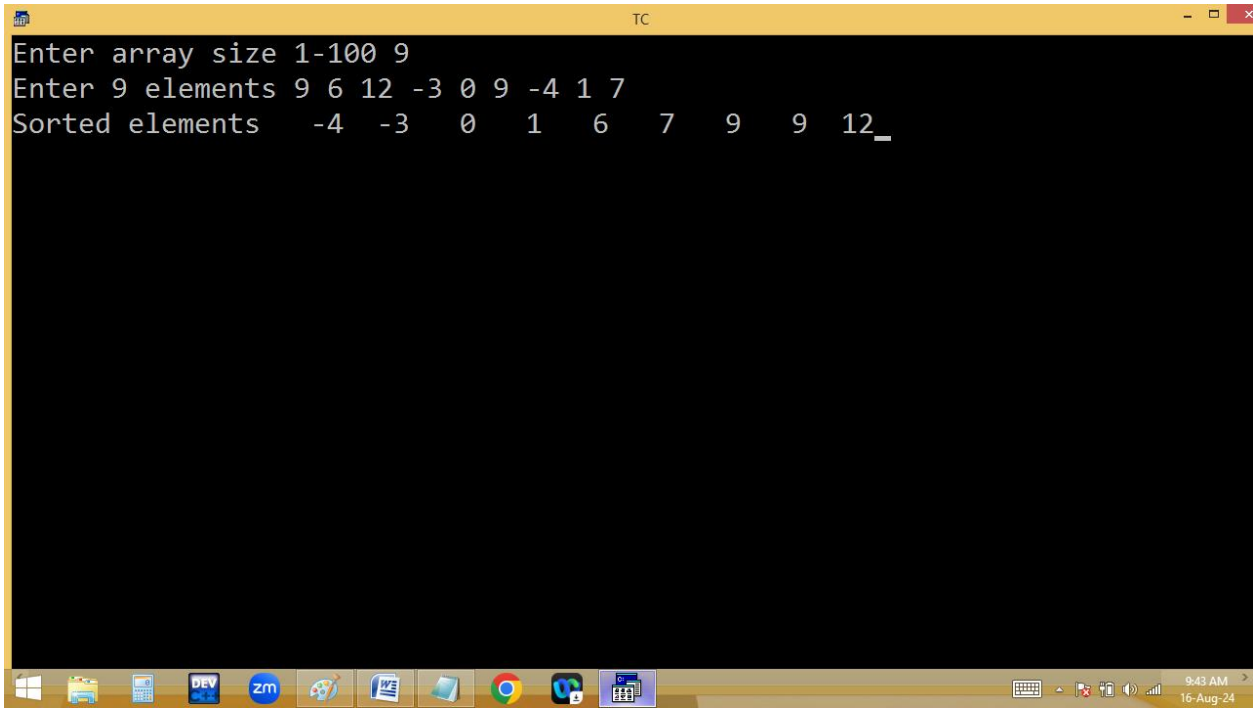
```
for( i=0; i<=n-2;i++ )
{
for( j=i+1; j<=n-1;j++)
{ if(a[i]>a[ j])
int t=a[i];
a[i]=a[j];
a[j]=t;
}
}
}
```



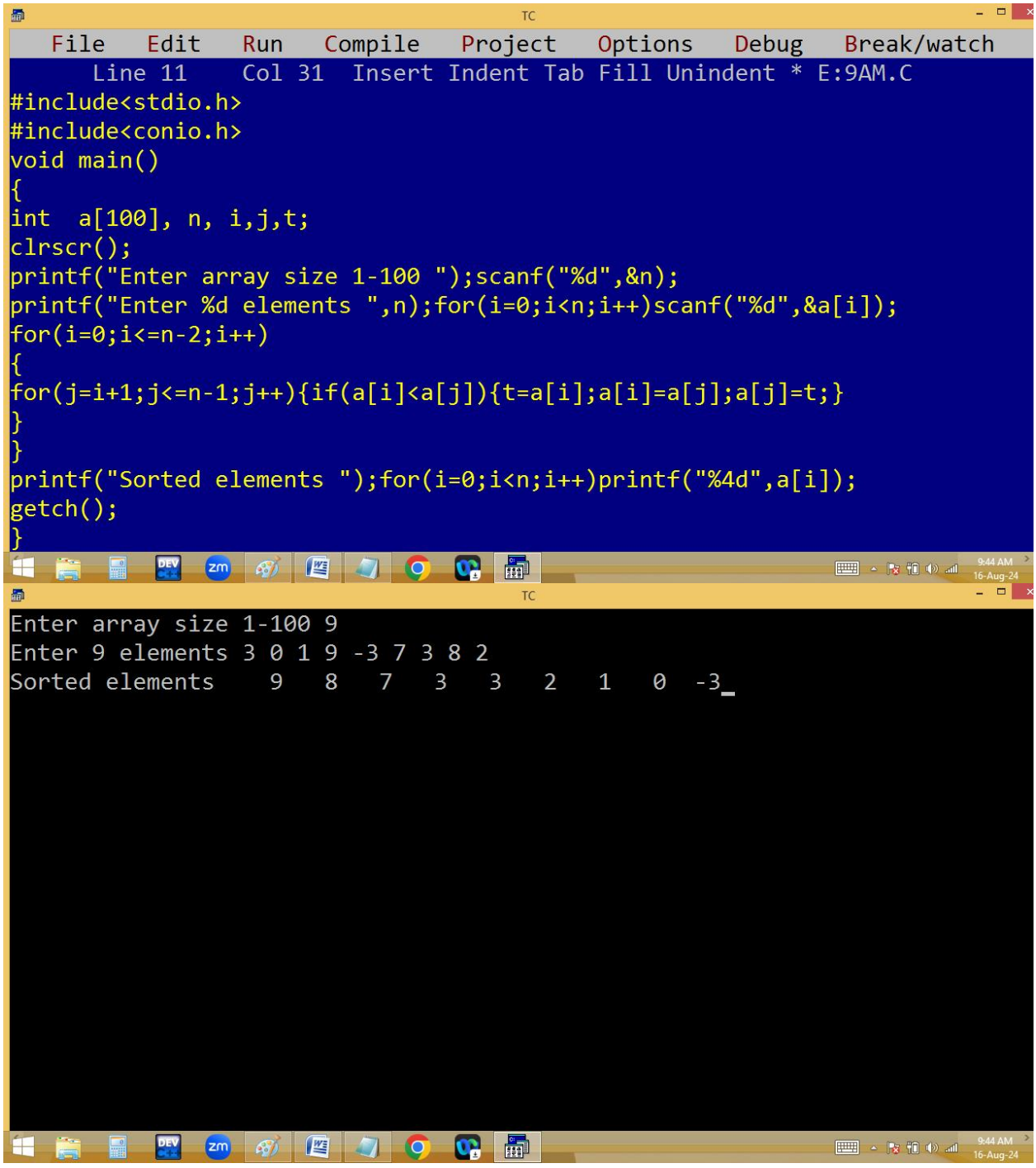
n	i	t	j
4	0	9	1 2 3 4
	1		2 3 4
	2		3 4
	3		

L i	R j
0	1,2,3
1	2,3
2	3





Descending order:

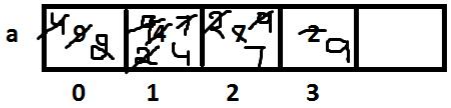

TC
File Edit Run Compile Project Options Debug Break/watch
Line 11 Col 31 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int a[100], n, i,j,t;
clrscr();
printf("Enter array size 1-100 ");scanf("%d",&n);
printf("Enter %d elements ",n);for(i=0;i<n;i++)scanf("%d",&a[i]);
for(i=0;i<=n-2;i++)
{
for(j=i+1;j<=n-1;j++){if(a[i]<a[j]){t=a[i];a[i]=a[j];a[j]=t;}
}
}
printf("Sorted elements ");for(i=0;i<n;i++)printf("%4d",a[i]);
getch();
}
TC
Enter array size 1-100 9
Enter 9 elements 3 0 1 9 -3 7 3 8 2
Sorted elements 9 8 7 3 3 2 1 0 -3

Bubble sort ascending order:

9 4 7 2
4 9 7 2
4 7 9 2
4 7 2 9
4 2 7 9
2 4 7 9

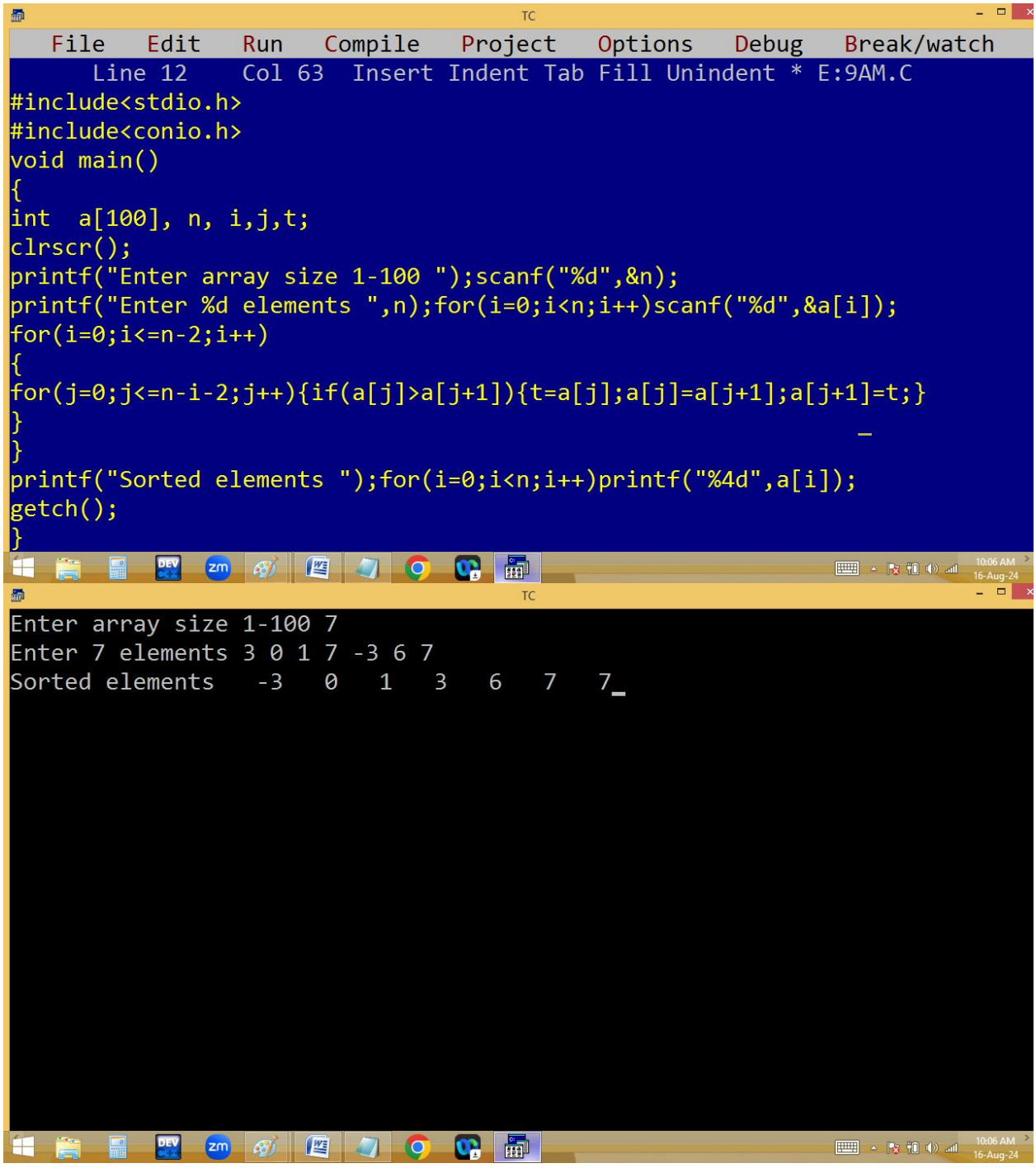
L	R
i	j -j+1
0	0-1, 1-2, 2-3
1	0-1, 1-2
2	0-1

```
for( i=0; i<=n-2;i++ )
{
 for( j=0;j<=n-i-2;j++)
{
if(a[j]>a[j+1])
{
t=a[j];
a[j]=a[j+1];
a[j+1]=t;
}
}
}
```

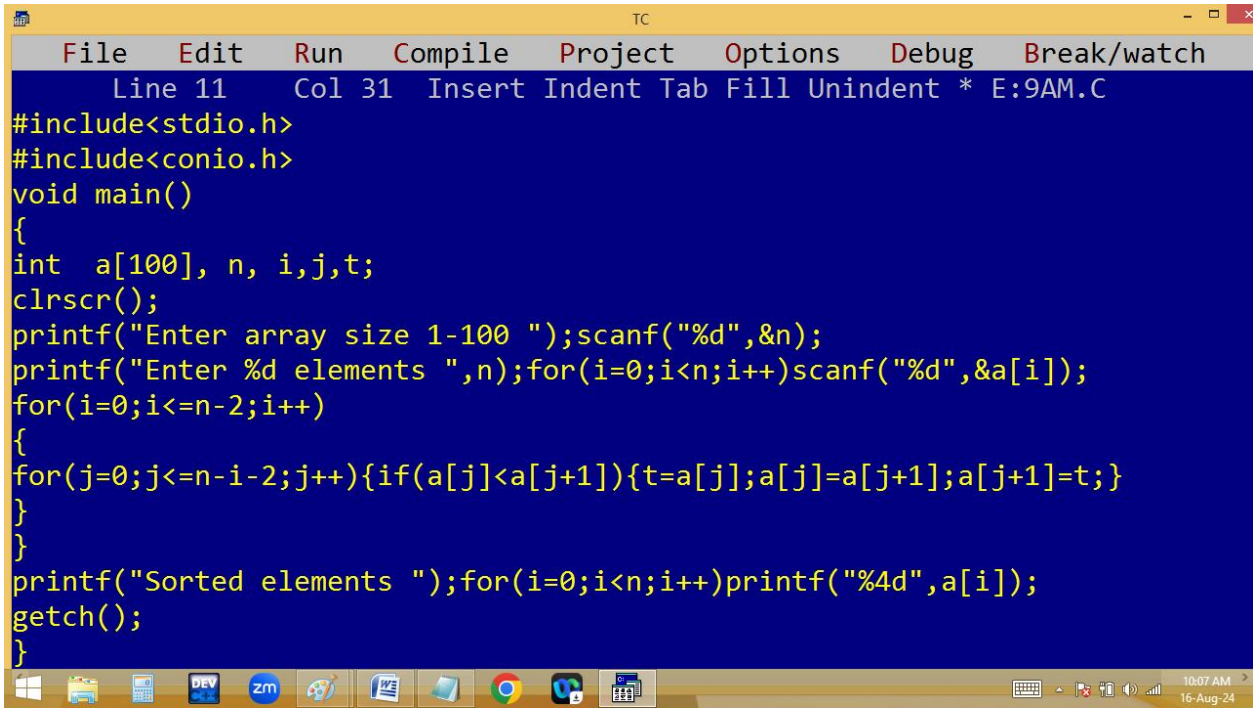


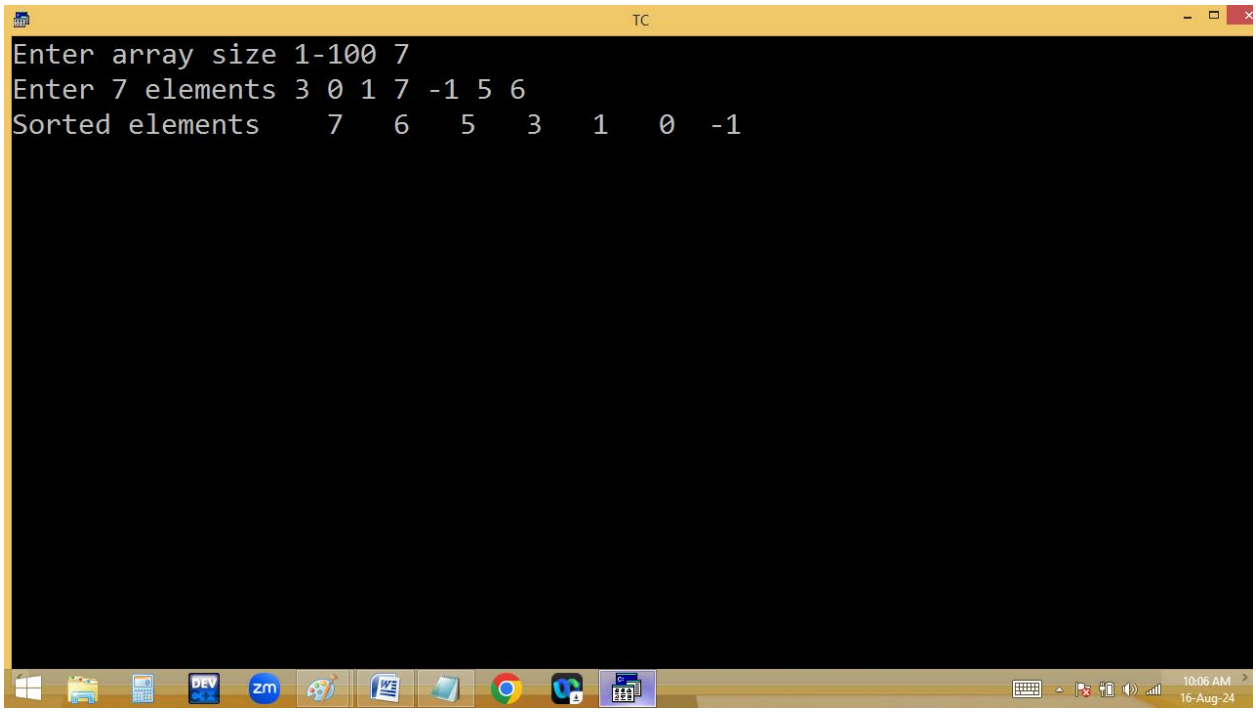
n	i	j	j+1
4	0	0 1 2 3	1 2 3
	1	0 1 2	1 2
	2	0 1	1

L	R
i	j -j+1
0	0-1, 1-2, 2-3
1	0-1, 1-2
2	0-1



Descending order:

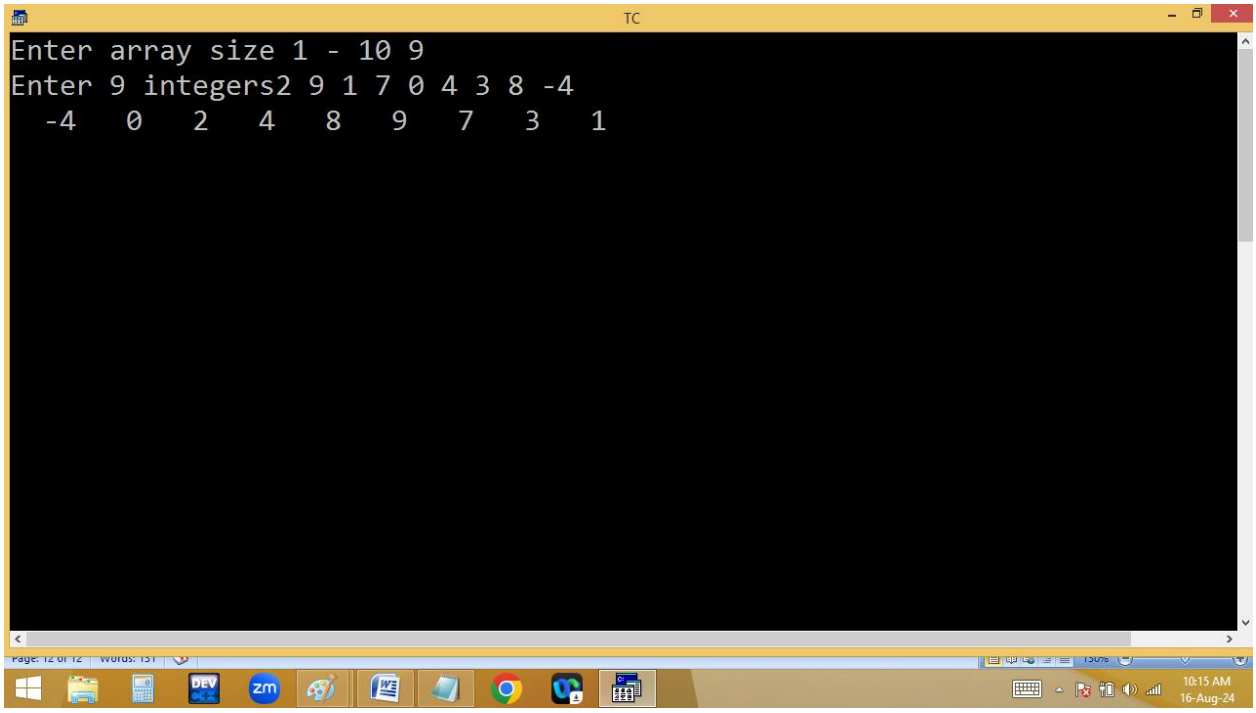




arrange even elements in ascending and odd in descending order:

```
#include<stdio.h>
#include<conio.h>
void main()
{
int  a[10], i,j, temp, n;
clrscr();
printf("Enter array size 1 - 10 ");scanf("%d",&n);
printf("Enter %d integers",n);
for(i=0;i<n;i++)scanf("%d",&a[i]);
for(i=0;i<=n-2;i++)
{
for(j=0;j<=n-i-2;j++)
{
```

```
if(a[j]>a[j+1]){                                temp=a[j];
a[j]=a[j+1];a[j+1]=temp;
}
}
}
for(i=0;i<n;i++)if(a[i]%2==0)printf("%4d",a[i]);
for(n--;n>=0;n--
)if(a[n]%2!=0)printf("%4d",a[n]);
getch();
}
```

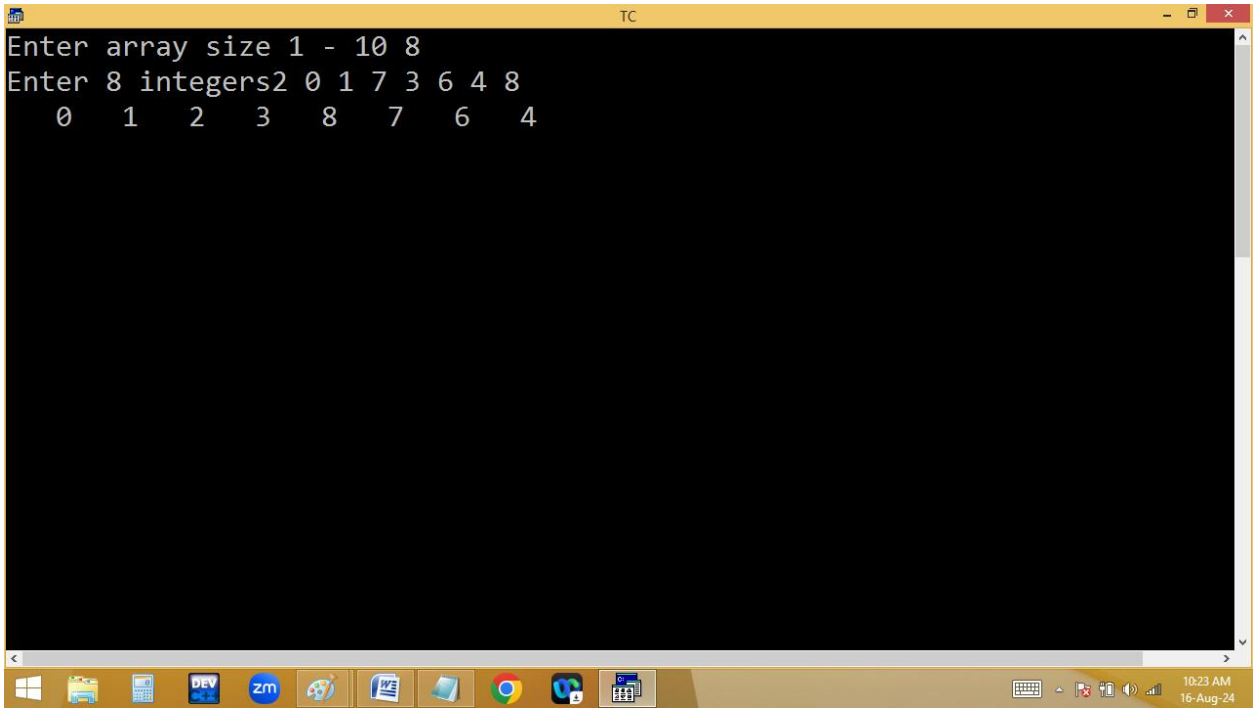


Half elements in ascending and remaining in descending order:

```
#include<stdio.h>
#include<conio.h>
void main()
{
int  a[10], i,j, temp, n;
clrscr();
```

```
printf("Enter array size 1 - 10 ");scanf("%d",&n);
printf("Enter %d integers",n);
for(i=0;i<n;i++)scanf("%d",&a[i]);
for(i=0;i<=n-2;i++)
{
for(j=0;j<=n-i-2;j++)
{
if(a[j]>a[j+1]){ temp=a[j];
a[j]=a[j+1];a[j+1]=temp;
}
}
}
for(i=0;i<n/2;i++)printf("%4d",a[i]);
for(i=n-1;i>=n/2;i--)printf("%4d",a[i]);
```

```
getch();
}
```



Finding 2nd max, 2nd min elements of sorted array:

```
#include<stdio.h>
#include<conio.h>
void main()
{
int  a[10], i,j, temp, n;
```

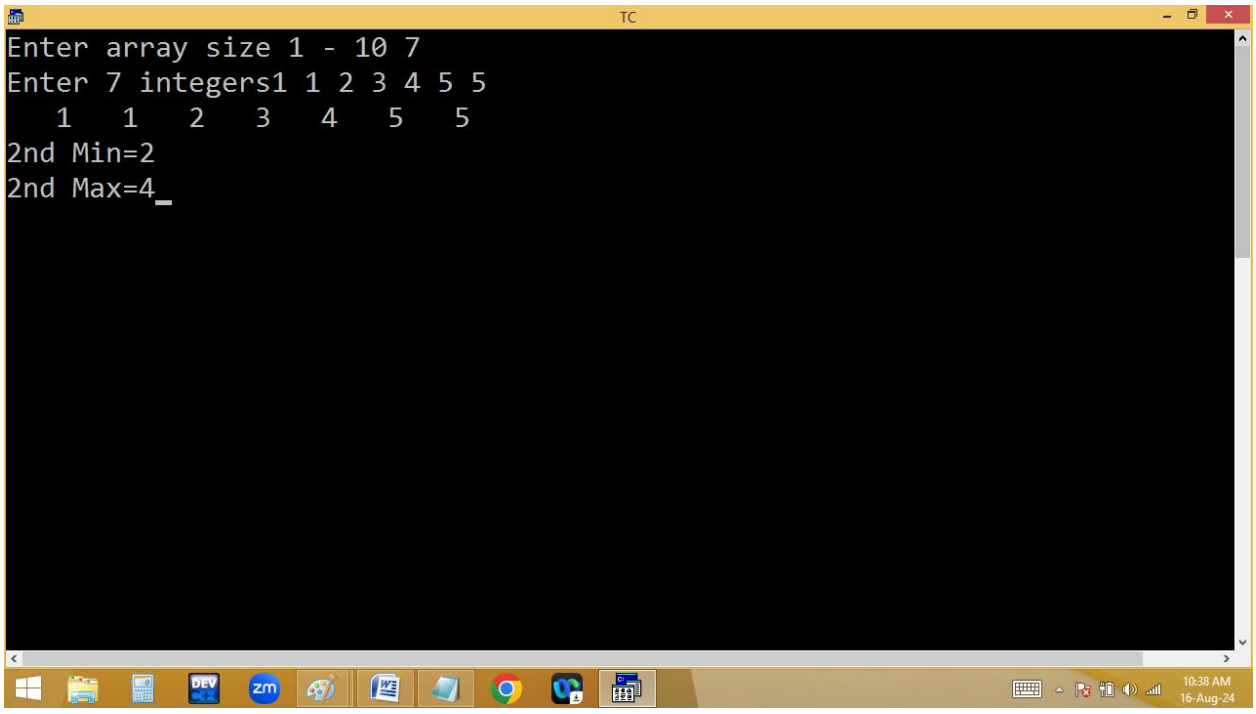
```
clrscr();
printf("Enter array size 1 - 10 ");scanf("%d",&n);
printf("Enter %d integers",n);
for(i=0;i<n;i++)scanf("%d",&a[i]);
for(i=0;i<=n-2;i++)
{
for(j=0;j<=n-i-2;j++)
{
if(a[j]>a[j+1]){ temp=a[j];
a[j]=a[j+1];a[j+1]=temp;
}
}
}
for(i=0;i<n;i++)printf("%4d",a[i]);
```

```
for(i=1;i<n;i++)if(a[i]>a[0]){printf("\n2nd Min=%d\n", a[i]);break;}

for(i=n-2;i>=0;i--)if(a[i]<a[n-1]){printf("2nd Max=%d",a[i]);break;}

getch();

}
```



Finding nth

Finding Nth max, Nth min from array: