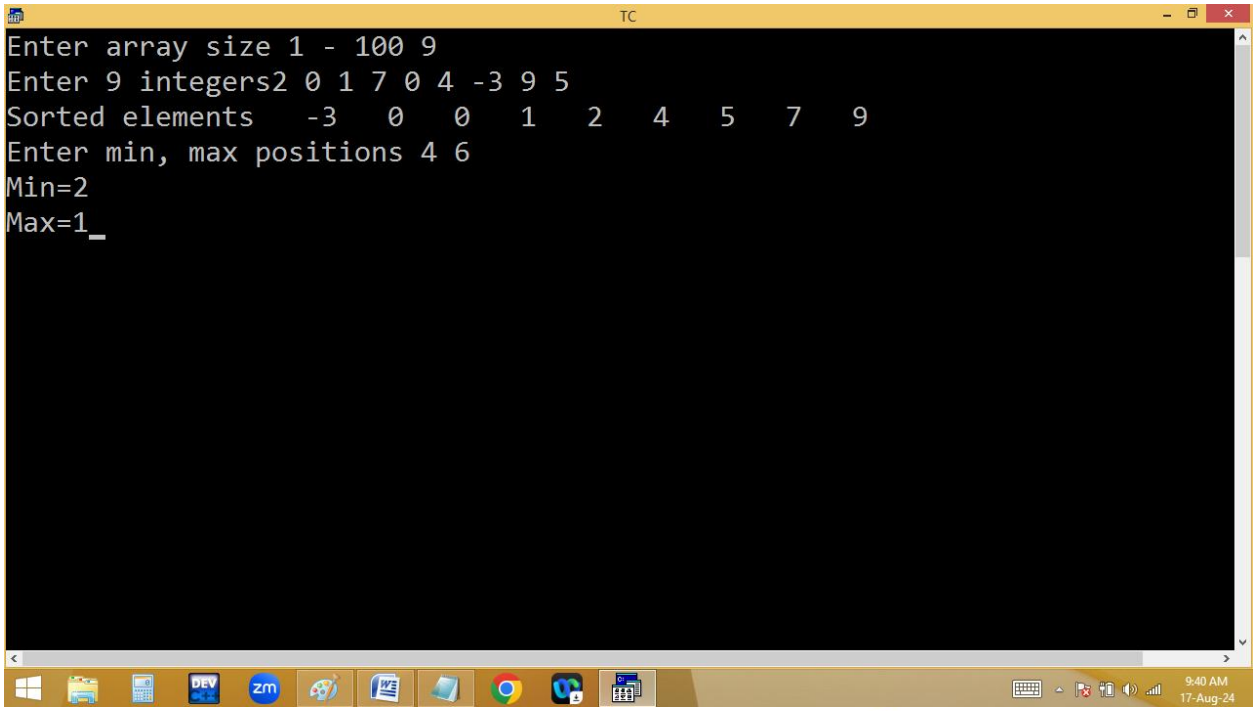
Finding nth min, nth max elements of array:

```
#include<stdio.h>
#include<conio.h>
void main()
{
int  a[100], i,j, n, max, min, temp;
clrscr();
printf("Enter array size 1 - 100 ");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;}
}
}
```

```
printf("Sorted elements ");
for(i=0;i<n;i++)printf("%4d",a[i]);

printf("\nEnter min, max positions
");scanf("%d %d",&min,&max);

for(i=1;i<n;i++)

{if(a[i]>a[i-1])min--;

if(min==1){printf("Min=%d\n", a[i]);break;}}

for(i=n-2;i>=0;i--)

{if(a[i]<a[i+1])max--
;if(max==1){printf("Max=%d",a[i]);break;}}

getch();

}
```




```
for( i=1; i<6; i++ )
{
if( a[i]>a[i-1] ) min--;
if(min==1) p("3rd min=%d",a[i]);break;
}
for(i=n-2; i>=0; i-- )
{
if(a[i]<a[i+1]) max--;
 if(max==1)p("5th max=%d",a[i]);break;
 }
```

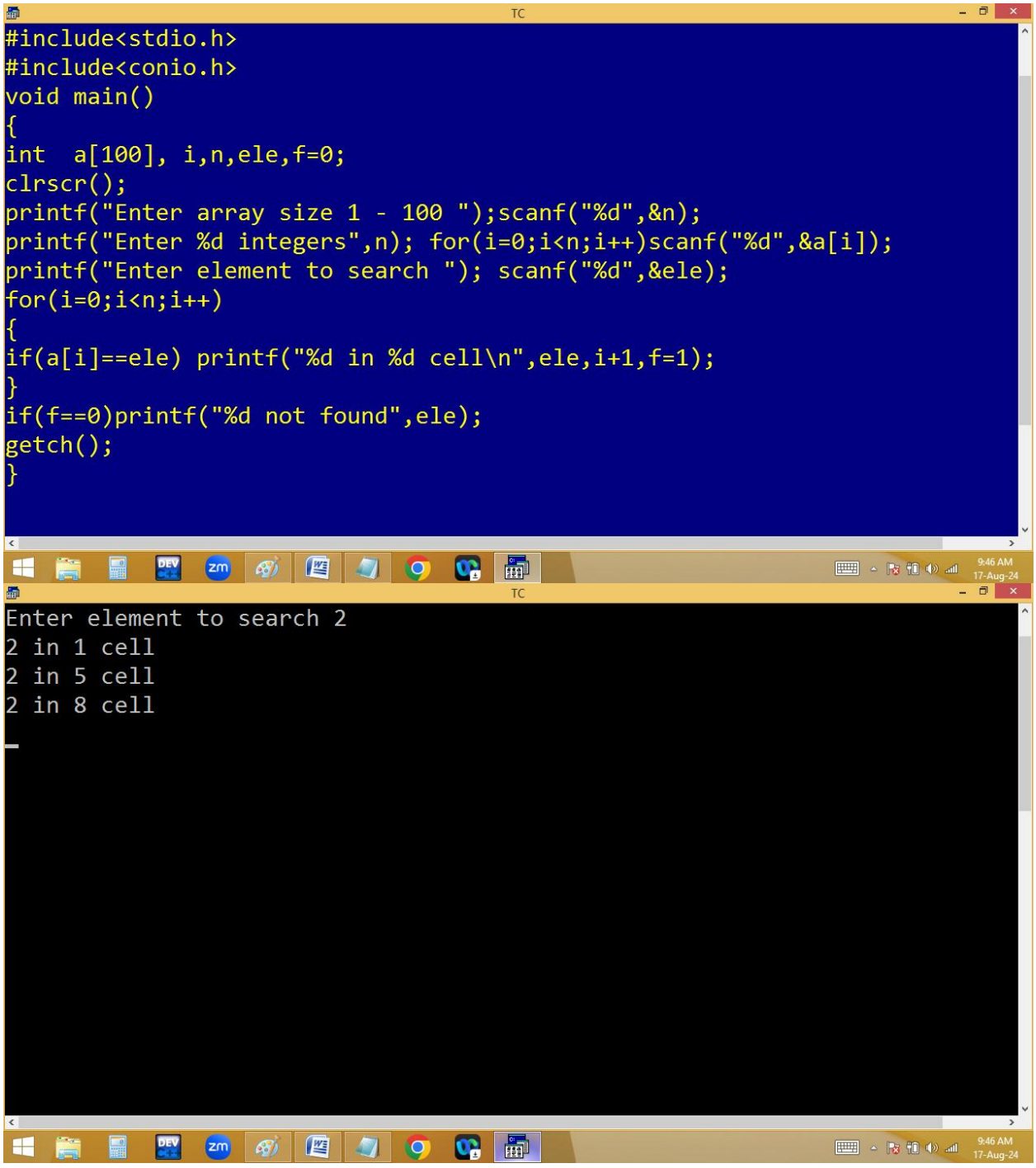
a	3	6	7	9	12	15
	0	1	2	3	4	5

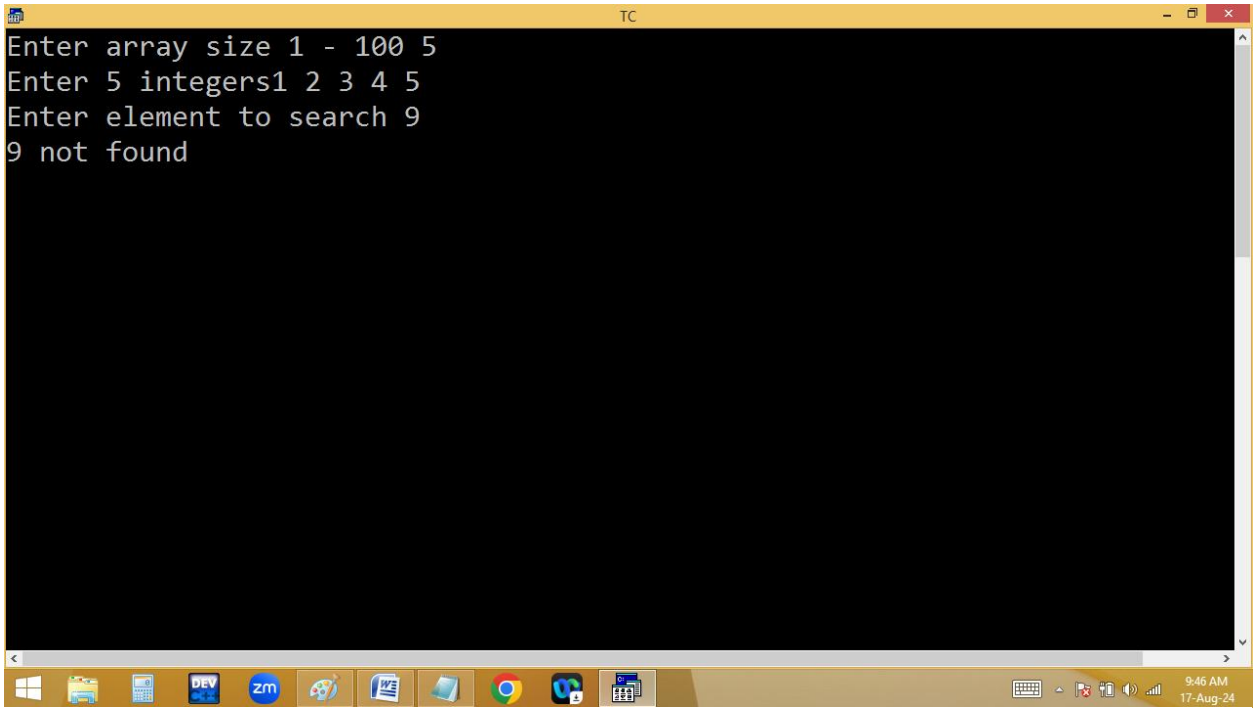
i	i-1
1	0
2	1

min	max
3	5
2	4
1	3
	2
	1

n	i	i+1
6	4	5
	3	4
	2	3
	1	1

Linear search:


TC
#include<stdio.h>
#include<conio.h>
void main()
{
int a[100], i,n,ele,f=0;
clrscr();
printf("Enter array size 1 - 100 ");scanf("%d",&n);
printf("Enter %d integers",n); for(i=0;i<n;i++)scanf("%d",&a[i]);
printf("Enter element to search "); scanf("%d",&ele);
for(i=0;i<n;i++)
{
if(a[i]==ele) printf("%d in %d cell\n",ele,i+1,f=1);
}
if(f==0)printf("%d not found",ele);
getch();
}
9:46 AM
17-Aug-24
TC
Enter element to search 2
2 in 1 cell
2 in 5 cell
2 in 8 cell
9:46 AM
17-Aug-24




```
for( i=1; i<6; i++ )
{
if(a[i]==ele) p("%d in %d cell\n",ele,i+1,f=1);
}

if(f==0)p("ele not found");
```

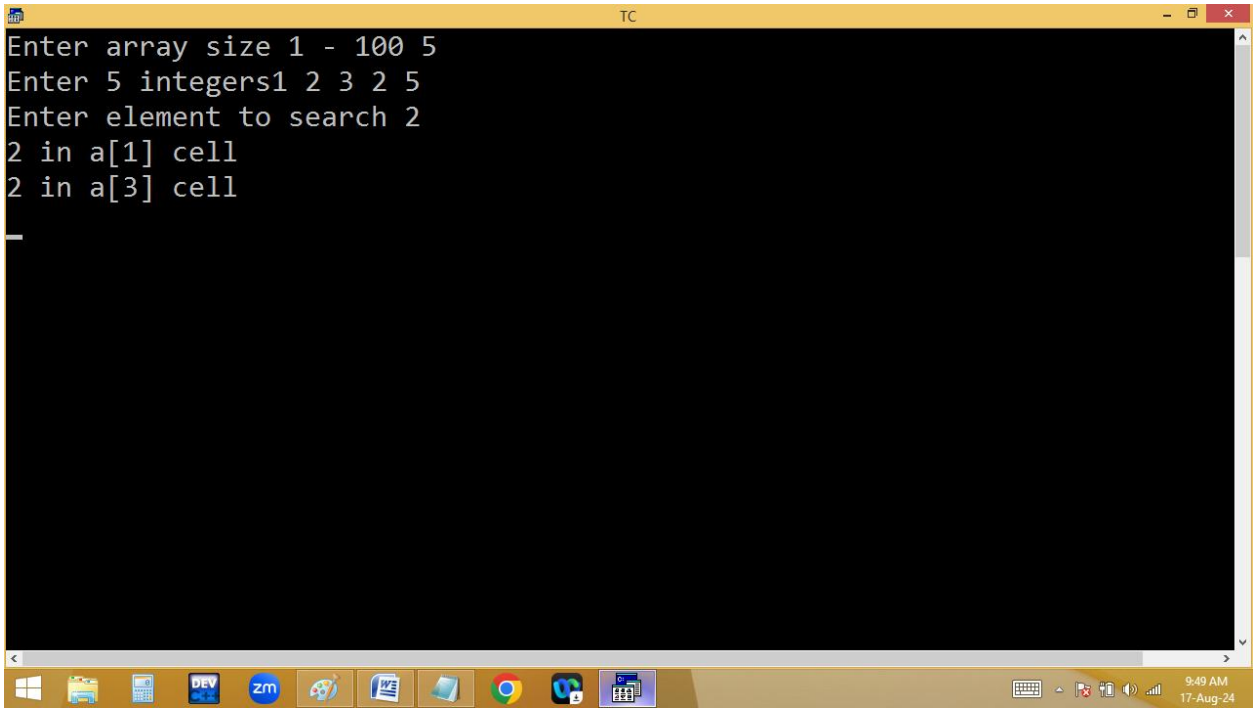
a	3	6	7	9	12	15
	0	1	2	3	4	5

n	i	ele	f
6	0	7	0
	1		
	2		

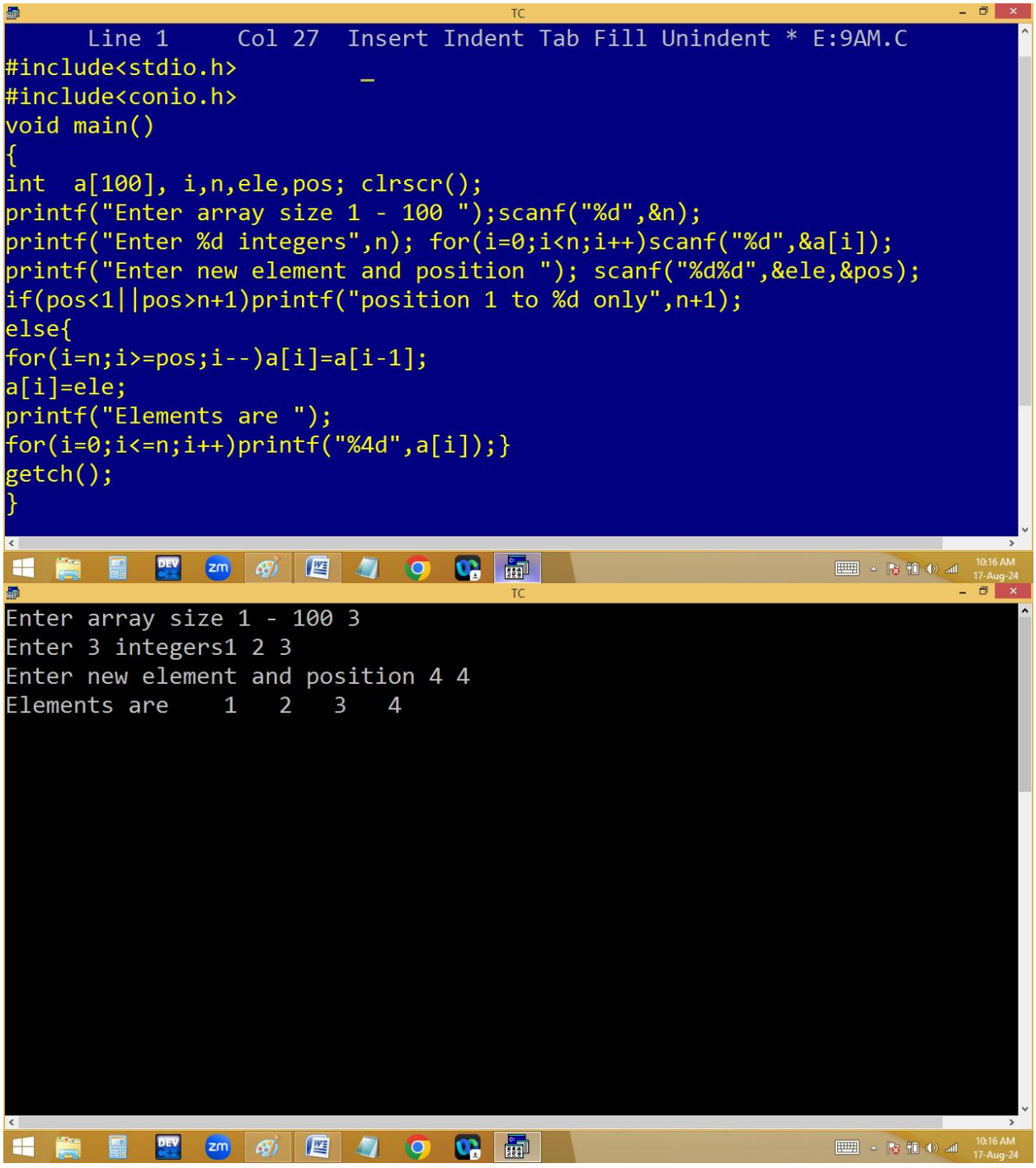
Finding element index no:

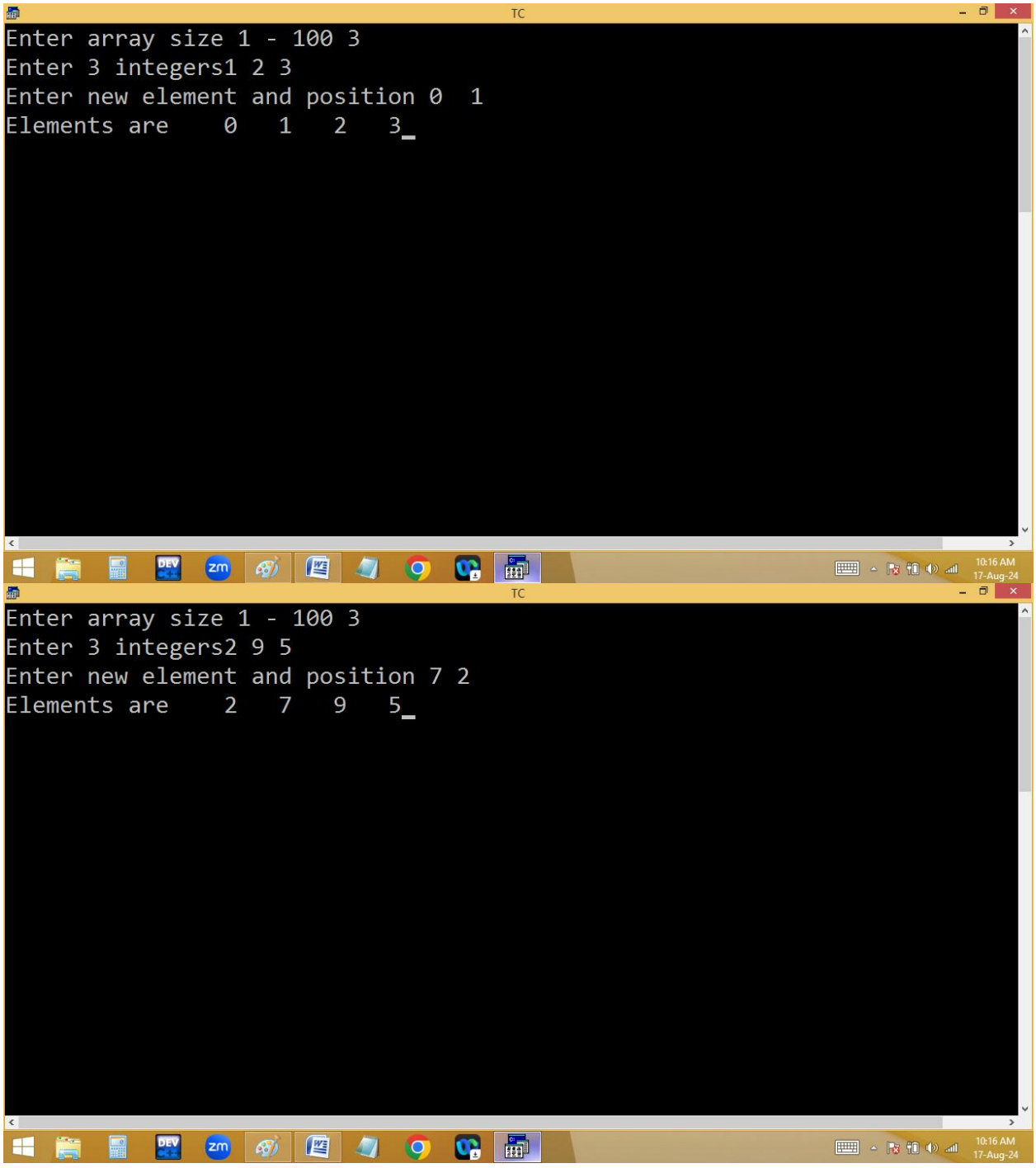
```
#include<stdio.h>

#include<conio.h>

void main()

{

int  a[100], i,n,ele,f=0;
```

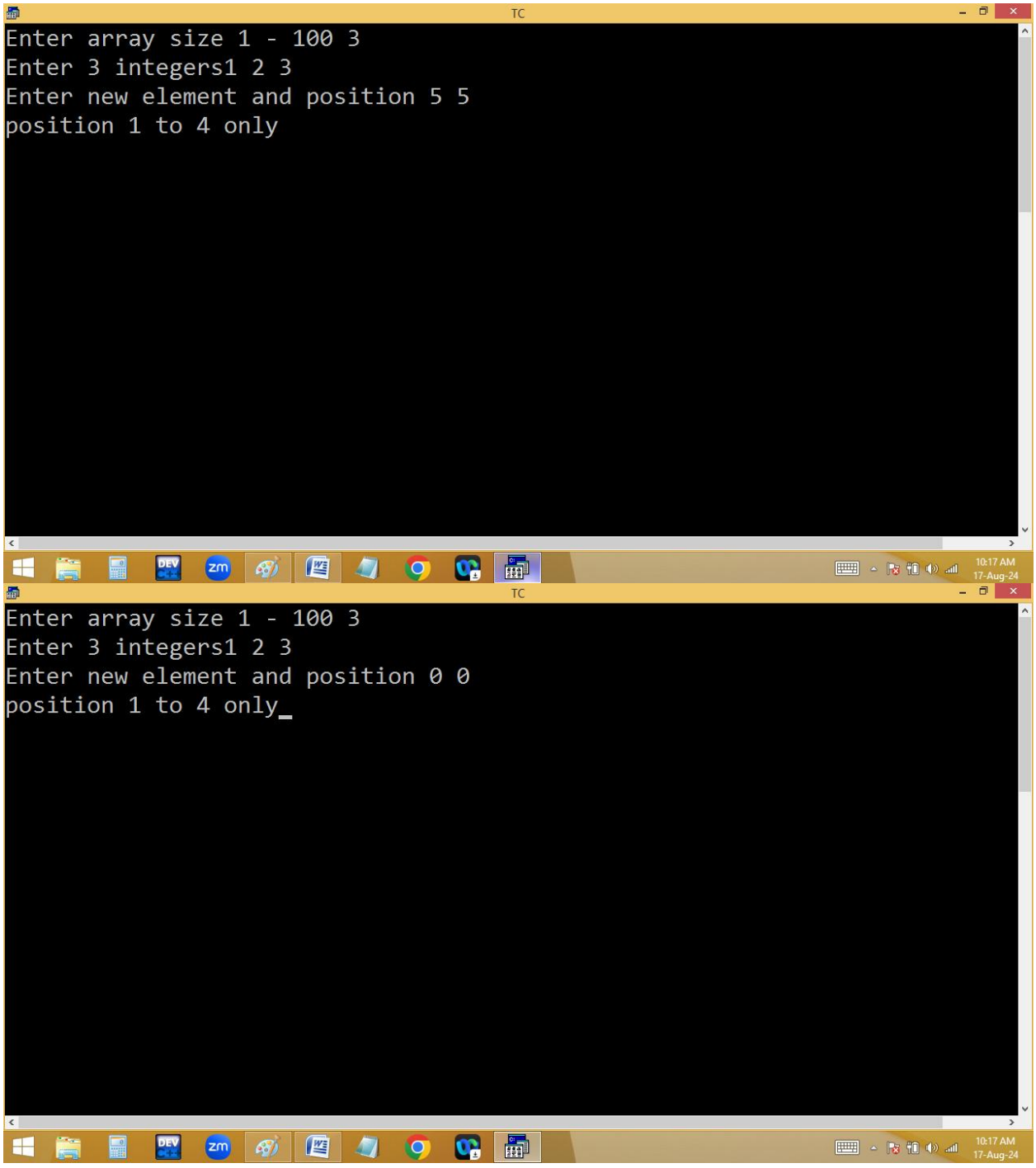
```
clrscr();
printf("Enter array size 1 - 100 ");scanf("%d",&n);
printf("Enter %d integers",n);
for(i=0;i<n;i++)scanf("%d",&a[i]);
printf("Enter element to search "); scanf("%d",&ele);
for(i=0;i<n;i++)
{
if(a[i]==ele) printf("%d in a[%d] cell\n",ele,i,f=1);
}
if(f==0)printf("%d not found",ele);
getch();
}
```

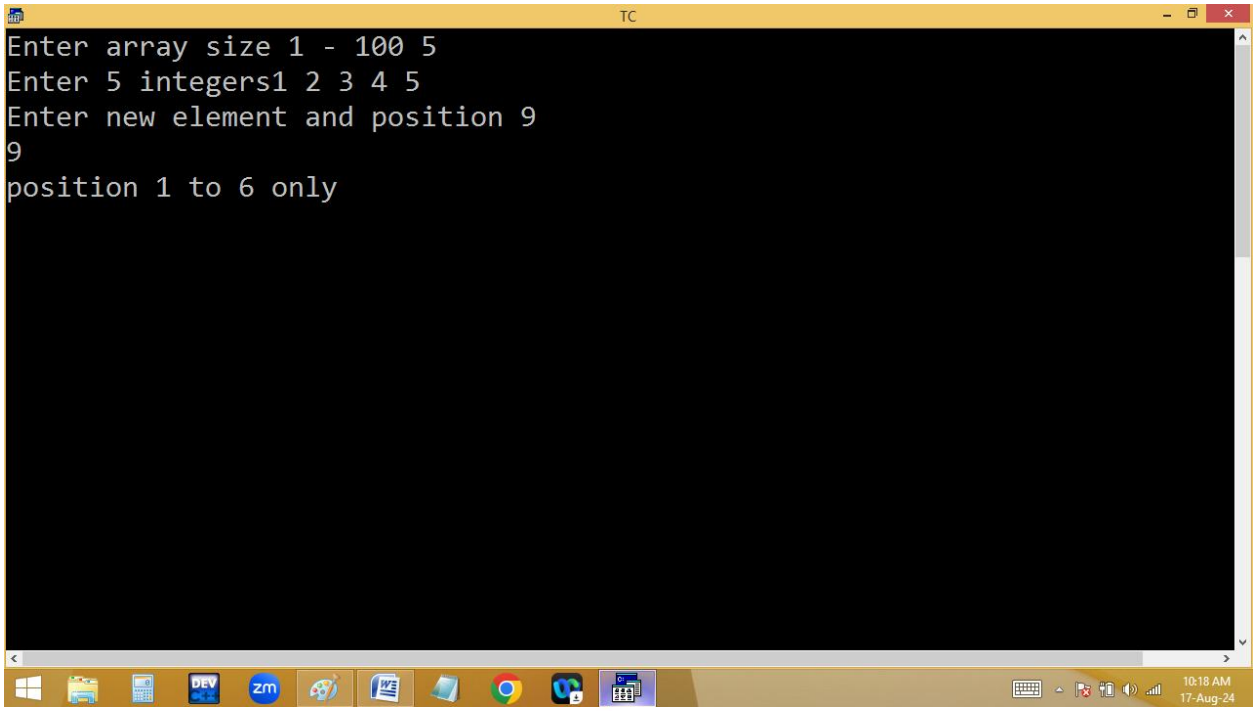


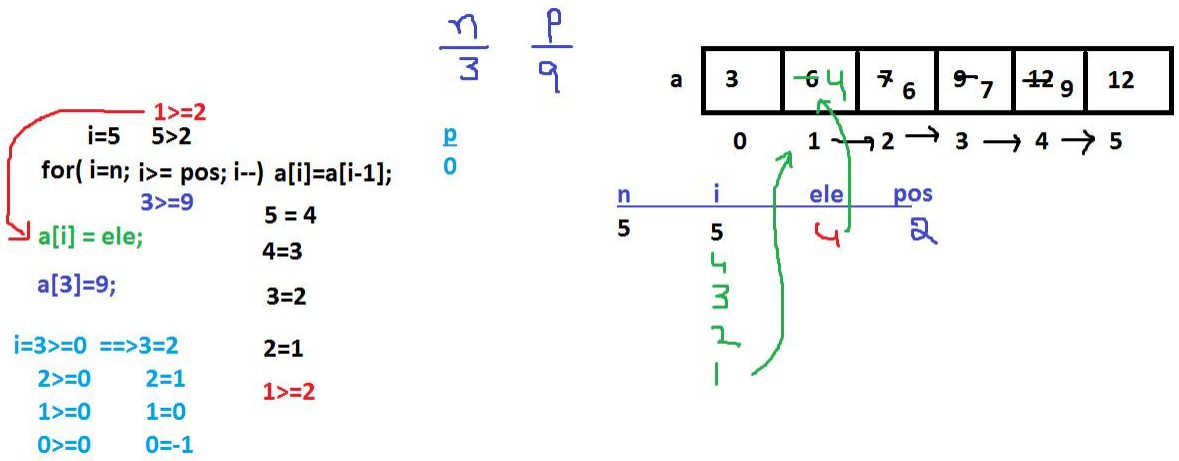
Inserting a new element into array [push-right shifting of array elements]:


TC
Line 1 Col 27 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int a[100], i,n,ele,pos; clrscr();
printf("Enter array size 1 - 100 ");scanf("%d",&n);
printf("Enter %d integers",n); for(i=0;i<n;i++)scanf("%d",&a[i]);
printf("Enter new element and position "); scanf("%d%d",&ele,&pos);
if(pos<1||pos>n+1)printf("position 1 to %d only",n+1);
else{
for(i=n;i>=pos;i--)a[i]=a[i-1];
a[i]=ele;
printf("Elements are ");
for(i=0;i<=n;i++)printf("%4d",a[i]);}
getch();
}
TC
Enter array size 1 - 100 3
Enter 3 integers1 2 3
Enter new element and position 4 4
Elements are 1 2 3 4


TC
Enter array size 1 - 100 3
Enter 3 integers1 2 3
Enter new element and position 0 1
Elements are 0 1 2 3
TC
Enter array size 1 - 100 3
Enter 3 integers2 9 5
Enter new element and position 7 2
Elements are 2 7 9 5

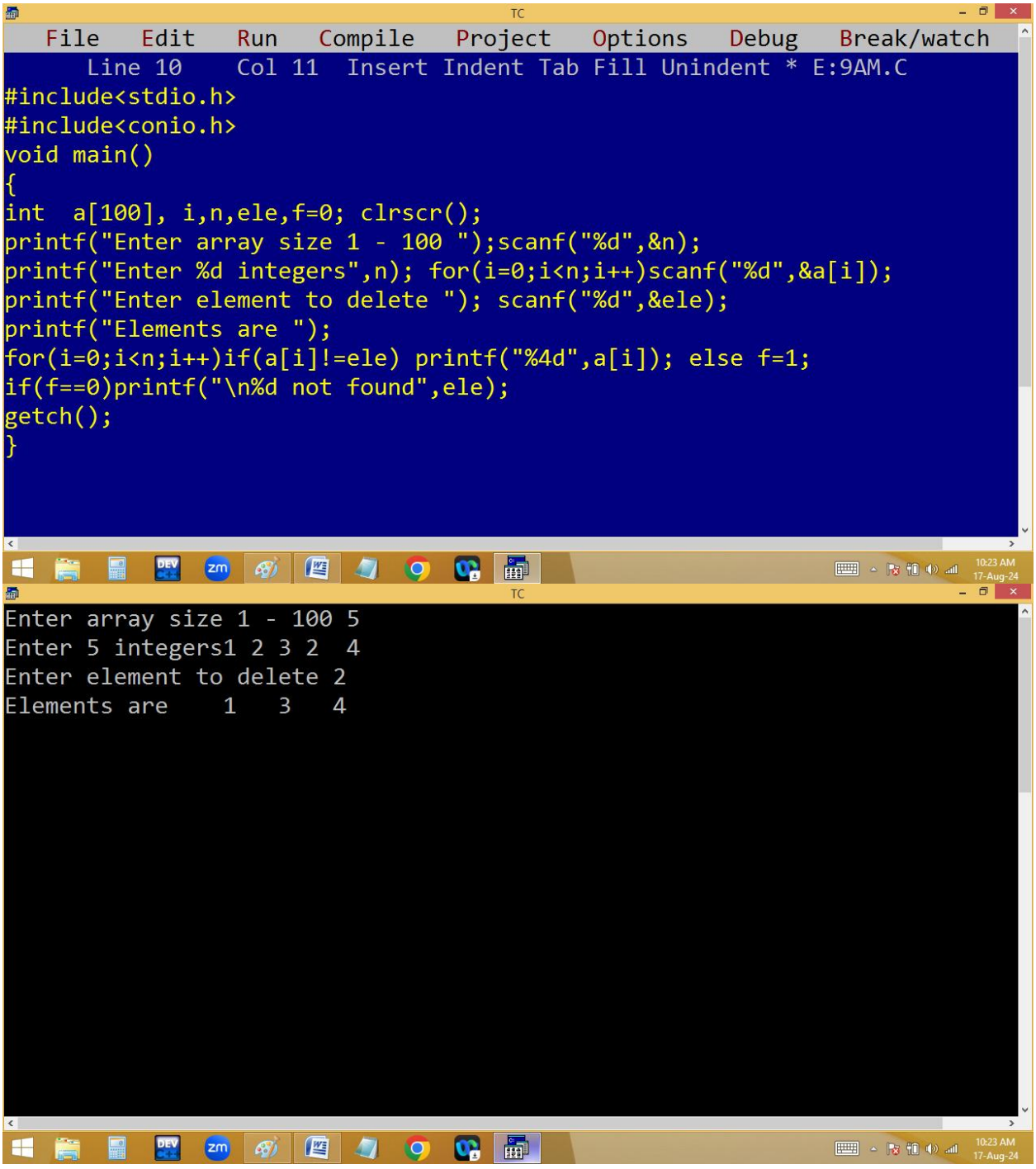

TC
Enter array size 1 - 100 3
Enter 3 integers1 2 3
Enter new element and position 5 5
position 1 to 4 only
TC
Enter array size 1 - 100 3
Enter 3 integers1 2 3
Enter new element and position 0 0
position 1 to 4 only

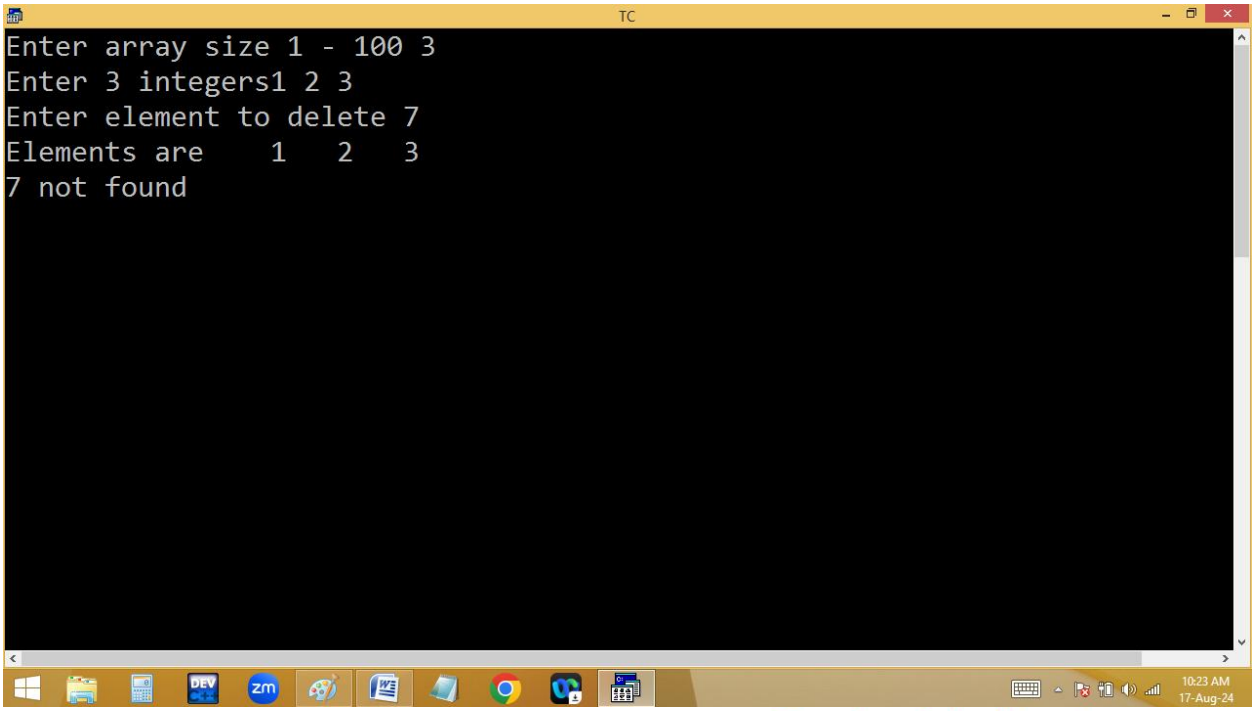




Deleting array element:

1. Skipping method


TC
File Edit Run Compile Project Options Debug Break/watch
Line 10 Col 11 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int a[100], i,n,ele,f=0; clrscr();
printf("Enter array size 1 - 100 ");scanf("%d",&n);
printf("Enter %d integers",n); for(i=0;i<n;i++)scanf("%d",&a[i]);
printf("Enter element to delete "); scanf("%d",&ele);
printf("Elements are ");
for(i=0;i<n;i++)if(a[i]!=ele) printf("%4d",a[i]); else f=1;
if(f==0)printf("\n%d not found",ele);
getch();
}
TC
Enter array size 1 - 100 5
Enter 5 integers1 2 3 2 4
Enter element to delete 2
Elements are 1 3 4




```
for( i=0; i<5; i++ )
if(a[i]!=ele) p(a[i]);
```

3 6 ✗ 9 1

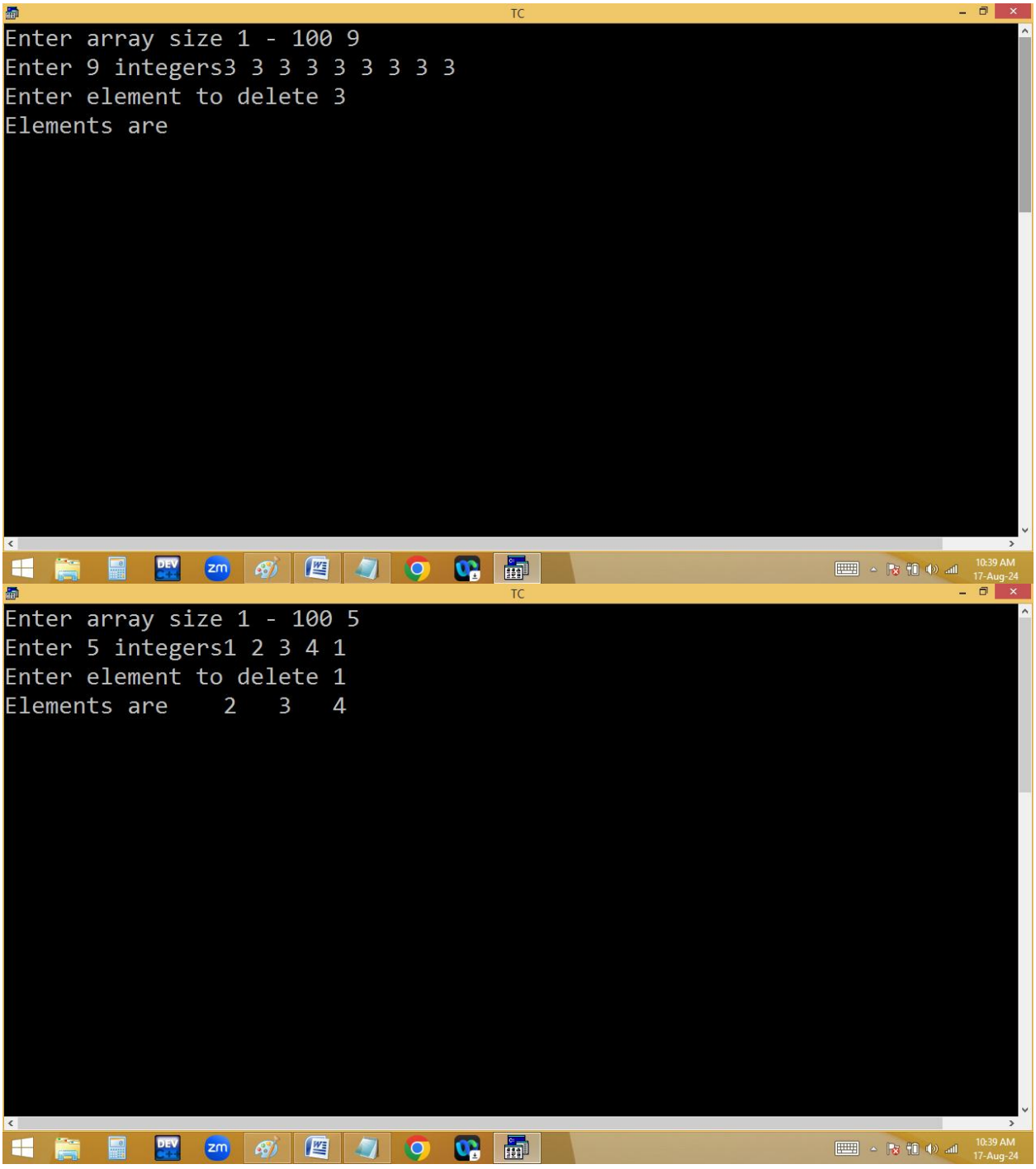
a	3	6	7	9	12	
	0	1	2	3	4	5

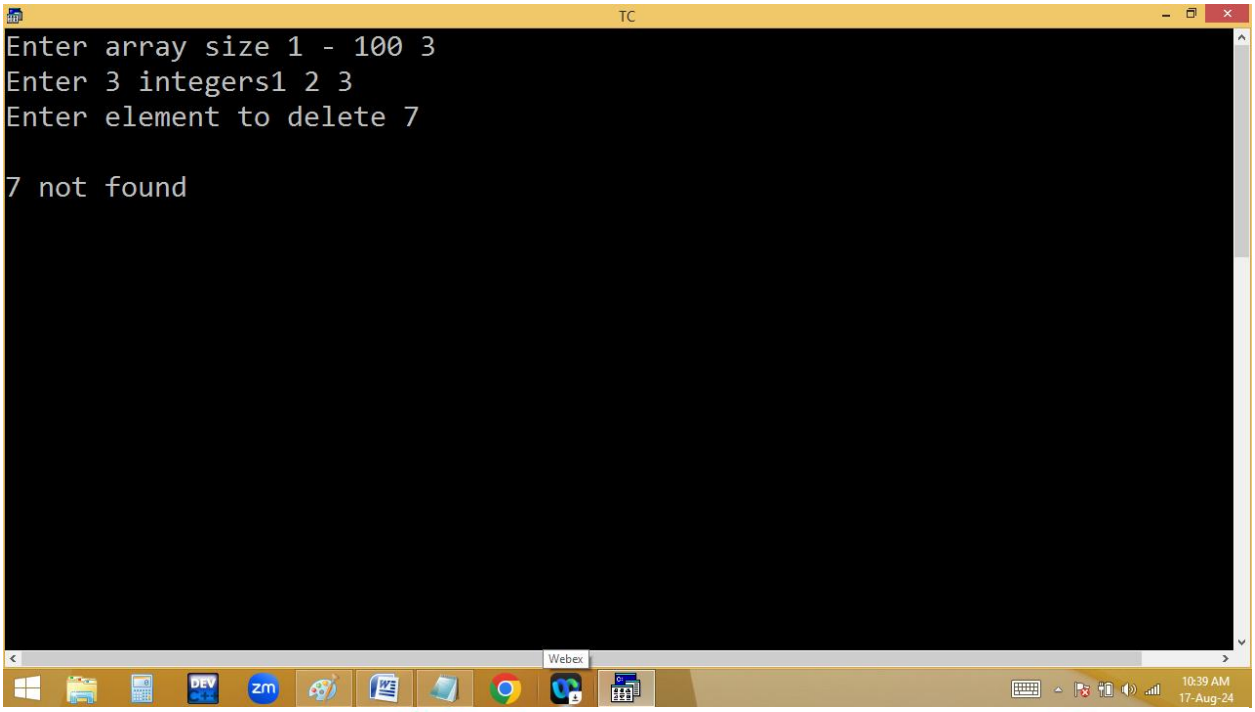
n	i	ele
5	0 1 2	7

Permanent deletion [pop-left shifting of array elements]:

```
#include<stdio.h>

#include<conio.h>

void main()

{

int  a[100], i,n,ele,f=0,j; clrscr();
```

```
printf("Enter array size 1 - 100 ");scanf("%d",&n);
printf("Enter %d integers",n);
for(i=0;i<n;i++)scanf("%d",&a[i]);
printf("Enter element to delete "); scanf("%d",&ele);
for( i=0; i<n;i++)
{
if(a[i]==ele)
{
for( n--,f=1, j=i;j<n;j++) a[j]=a[j+1];i--;
}
}
if(f==0)printf("\n%d not found",ele);
else
{printf("Elements are
");for(i=0;i<n;i++)printf("%4d",a[i]);}
getch();
}
```


TC
Enter array size 1 - 100 9
Enter 9 integers3 3 3 3 3 3 3 3 3
Enter element to delete 3
Elements are
TC
Enter array size 1 - 100 5
Enter 5 integers1 2 3 4 1
Enter element to delete 1
Elements are 2 3 4
10:39 AM
17-Aug-24
10:39 AM
17-Aug-24




```
for( i=0; i<n; i++ )
{
if( a[i]==ele)
{
for( f=1, n-- ,j=i; j<n; j++) a[ j]=a[ j+1];
i--;
}
```

a: 1 1 1 1 1

0 1 2 3 4

2 = 3

3 = 4

4 < 4

n: 5 4 3 2

i: 0 1 2

j

a: 3 6 7 9 12 12

0 1 2 3 4 5

ele: 7

f: 0 1