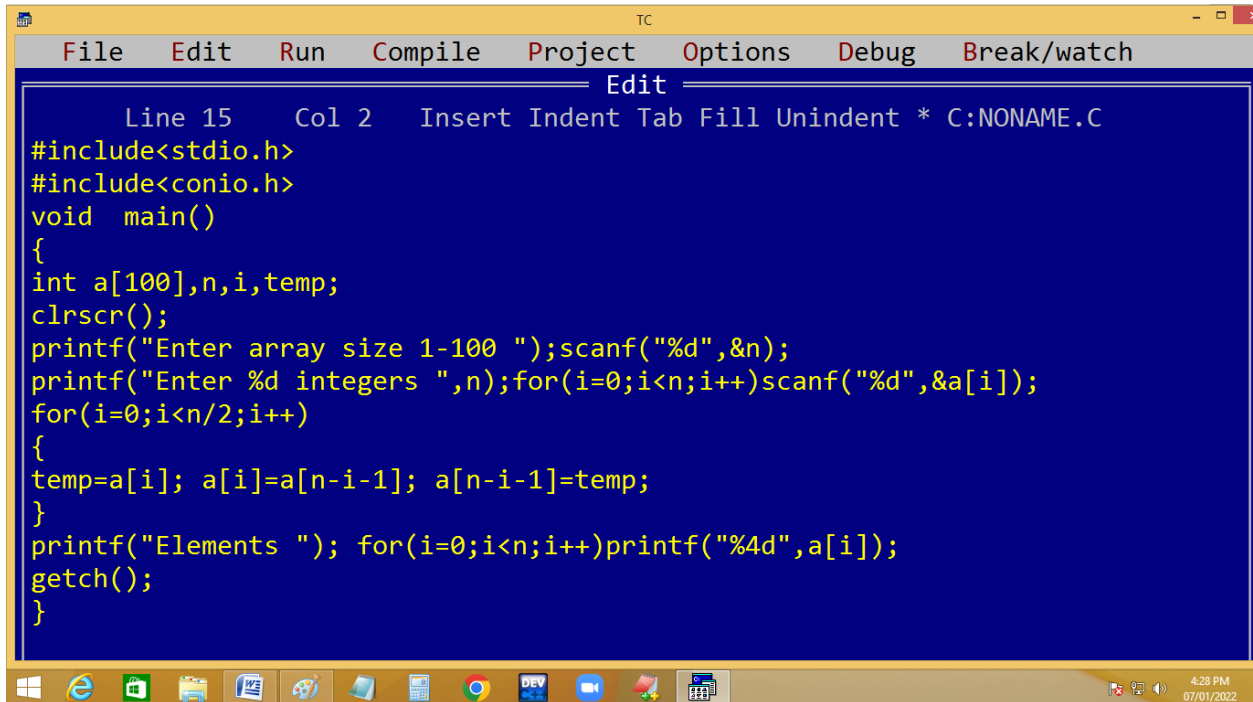


Arranging array elements in reverse order.



The screenshot shows the Turbo C++ (TC) IDE with a menu bar (File, Edit, Run, Compile, Project, Options, Debug, Break/watch) and a toolbar. The main editing area has a blue background and displays the following C code:

```
Line 15   Col 2   Insert Indent Tab Fill Unindent * C:NONAME.C
#include<stdio.h>
#include<conio.h>
void main()
{
int a[100],n,i,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++)
{
temp=a[i]; a[i]=a[n-i-1]; a[n-i-1]=temp;
}
printf("Elements "); for(i=0;i<n;i++)printf("%4d",a[i]);
getch();
}
```

The Windows taskbar at the bottom shows various application icons and the system clock indicating 4:28 PM on 07/01/2022.

```
TC
Enter array size 1-100 5
Enter 5 integers 10 20 30 40 50
Elements    50  40  30  20  10_
```

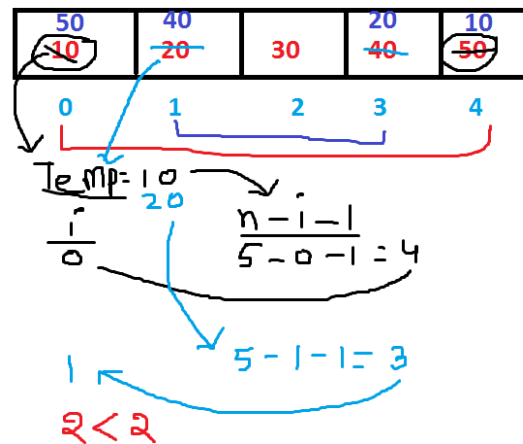
```
TC
Enter array size 1-100 4
Enter 4 integers 3 0 -4 7
Elements    7  -4  0  3
```

```

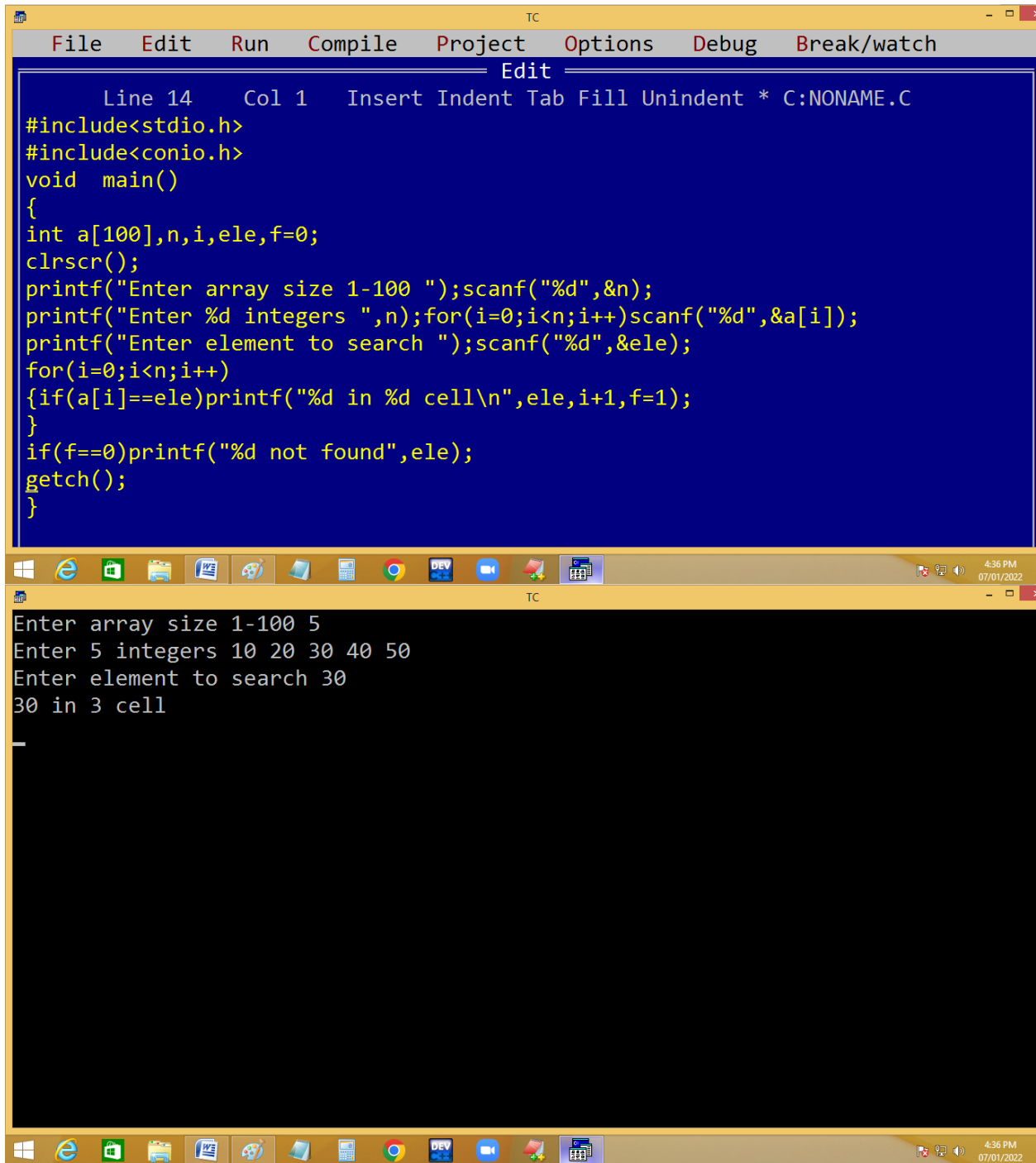
for(i=0; i<5/2; i++) ✓
{
temp=a[i];
a[i]=a[5-i-1];
a[5-i-1]=temp;
}

```

$\frac{n}{2}$



Eg. linear search:



The image shows a screenshot of the Turbo C++ (TC) IDE. The top window, titled 'Edit', displays the source code of a C program. The code is as follows:

```
Line 14 Col 1 Insert Indent Tab Fill Unindent * C:NONAME.C
#include<stdio.h>
#include<conio.h>
void main()
{
int a[100],n,i,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();
}
```

The bottom window, titled 'TC', shows the output of the program's execution:

```
Enter array size 1-100 5
Enter 5 integers 10 20 30 40 50
Enter element to search 30
30 in 3 cell
```

The Windows taskbar at the bottom of the screen shows the time as 4:36 PM on 07/01/2022.

```
TC
Enter array size 1-100 8
Enter 8 integers 1 2 0 1 -5 0 1 5
Enter element to search 1
1 in 1 cell
1 in 4 cell
1 in 7 cell
_
```

```
TC
Enter array size 1-100 4
Enter 4 integers 1 2 3 4
Enter element to search 9
9 not found
```

```
for(i=0;i<n;i++)
```

```
{
```

```
if(a[i]==ele)
```

```
{p("%d in %d cell\n",ele,i+1,f=1);}
```

```
}
```

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

10	20	30	40	50
----	----	----	----	----

0 1 2 3 4

$\frac{n}{5}$ $\frac{i}{2}$ $\frac{ele}{30}$ $\frac{f}{1}$
 5 2 30 1
 2+1
 3

Eg. read n elements into array and insert a new element into the array at specified position.

```

TC
Edit
Line 17 Col 2 Insert Indent Tab Fill Unindent * C:NONAME.C
#include<stdio.h>
#include<conio.h>
void main()
{
int a[100],n,i,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 element and position to insert ");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 ");for(i=0;i<=n;i++)printf("%4d",a[i]);
}
getch();
}

```

```
TC
Enter 3 integers 1 2 3
Enter element and position to insert 5 5
position 1 to 4 only_
```

```
TC
Enter array size 1-100 3
Enter 3 integers 1 2 3
Enter element and position to insert 0 0
position 1 to 4 only
```

```
TC
Enter array size 1-100 5
Enter 5 integers 1 2 4 5 6
Enter element and position to insert 3 3
Elements    1    2    3    4    5    6
```

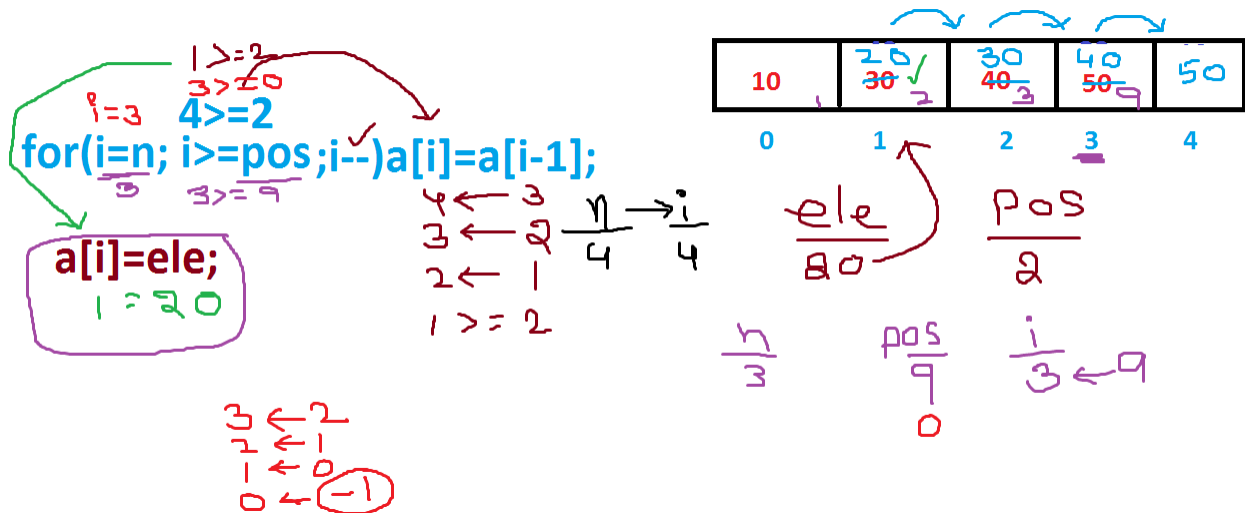
```
TC
Enter array size 1-100 3
Enter 3 integers 1 2 3
Enter element and position to insert 4 4
Elements    1    2    3    4_
```



```

Enter array size 1-100 3
Enter 3 integers 1 2 3
Enter element and position to insert 0 1
Elements    0    1    2    3_

```



Eg. deleting specified element from array.

Method1: skipping that element

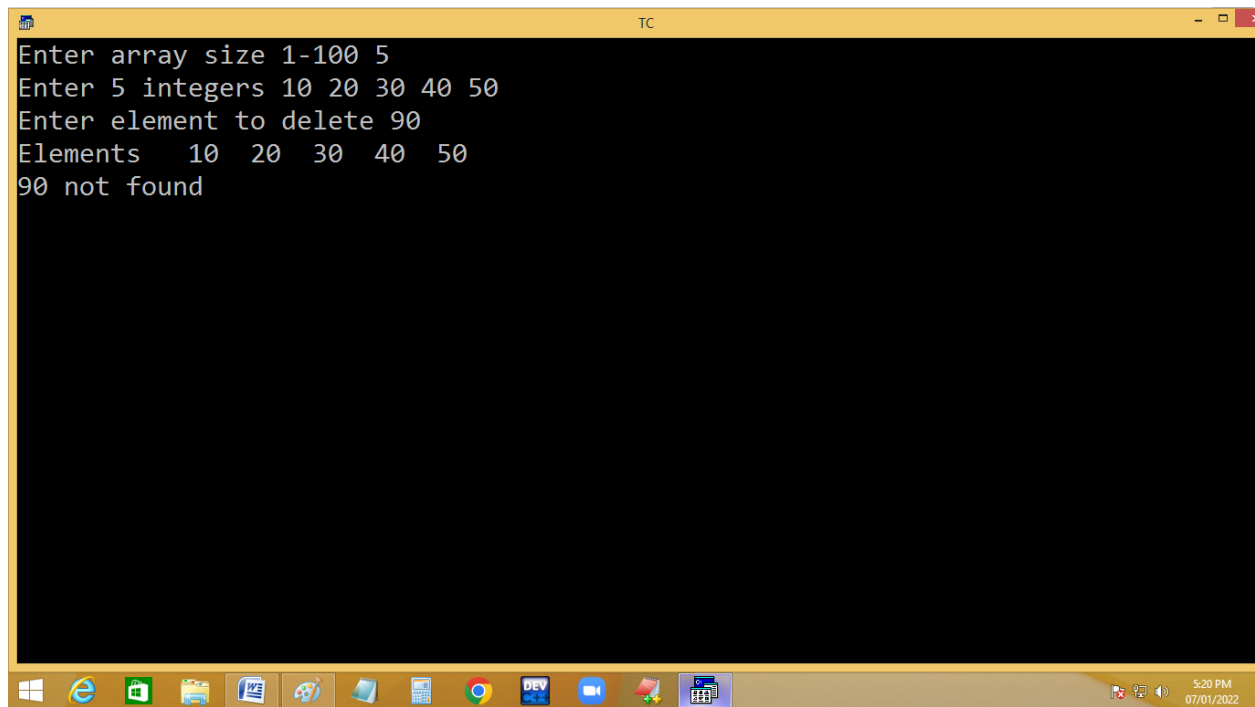
The image shows a Turbo C++ IDE window with a menu bar (File, Edit, Run, Compile, Project, Options, Debug, Break/watch) and a toolbar. The main editor area has a blue background and contains the following C code:

```
Line 12   Col 38   Insert Indent Tab Fill Unindent * C:NONAME.C
#include<stdio.h>
#include<conio.h>
void main()
{
int a[100],n,i,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 ");for(i=0;i<n;i++)if(ele==a[i])f=1;
else printf("%4d",a[i]);
if(f==0)printf("\n%d not found",ele);
getch();
}
```

The bottom console window has a black background and shows the program's execution output:

```
Enter array size 1-100 5
Enter 5 integers 10 20 30 40 50
Enter element to delete 30
Elements   10   20   40   50_
```

The Windows taskbar at the bottom shows the Start button, taskbar icons for various applications, and the system clock displaying 5:19 PM on 07/01/2022.



```
TC
Enter array size 1-100 5
Enter 5 integers 10 20 30 40 50
Enter element to delete 90
Elements 10 20 30 40 50
90 not found
```

The screenshot shows a Turbo C++ (TC) window with a black background and white text. The window title bar is yellow and contains the text 'TC'. The text inside the window shows the execution of a program that takes an array size of 5 and five integers (10, 20, 30, 40, 50) as input. It then prompts for an element to delete (90) and displays the current elements. The output indicates that the element 90 was not found. The Windows taskbar is visible at the bottom, showing various application icons and the system clock indicating 5:20 PM on 07/01/2022.

Method2: Deleting the element permanently

TC

Line 12 Col 56 Insert Indent Tab Fill Unindent * C:NONAME.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
int a[100],n,i,j,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);
for(i=0;i<n;i++)
{
if(a[i]==ele){n--; f=1; for(j=i;j<n;j++)a[j]=a[j+1];i--;}
}
if(f==0)printf("\n%d not found",ele);
else { printf("ELEMENTS "); for(i=0;i<n;i++)printf("%4d",a[i]);}
getch();
}
```

TC

Enter 5 integers 2 2 2 2 2
Enter element to delete 2
ELEMENTS


The image displays two screenshots of a Turbo C++ (TC) IDE window. The top screenshot shows a program where the user enters an array size of 5 and five integers: 1, 2, 7, 4, 2. The user then enters the element 2 to be deleted. The output shows the remaining elements as 1, 7, and 4. The bottom screenshot shows a similar program where the user enters the same five integers (1, 2, 3, 4, 5) but enters the element 9 to be deleted. The output shows '9 not found'.

```
Enter array size 1-100 5
Enter 5 integers 1 2 7 4 2
Enter element to delete 2
ELEMENTS    1    7    4_

Enter array size 1-100 5
Enter 5 integers 1 2 3 4 5
Enter element to delete 9

9 not found_
```

Eg. arrange array elements in ascending order using selection sort.



10	0	-30	-10
----	---	-----	-----

