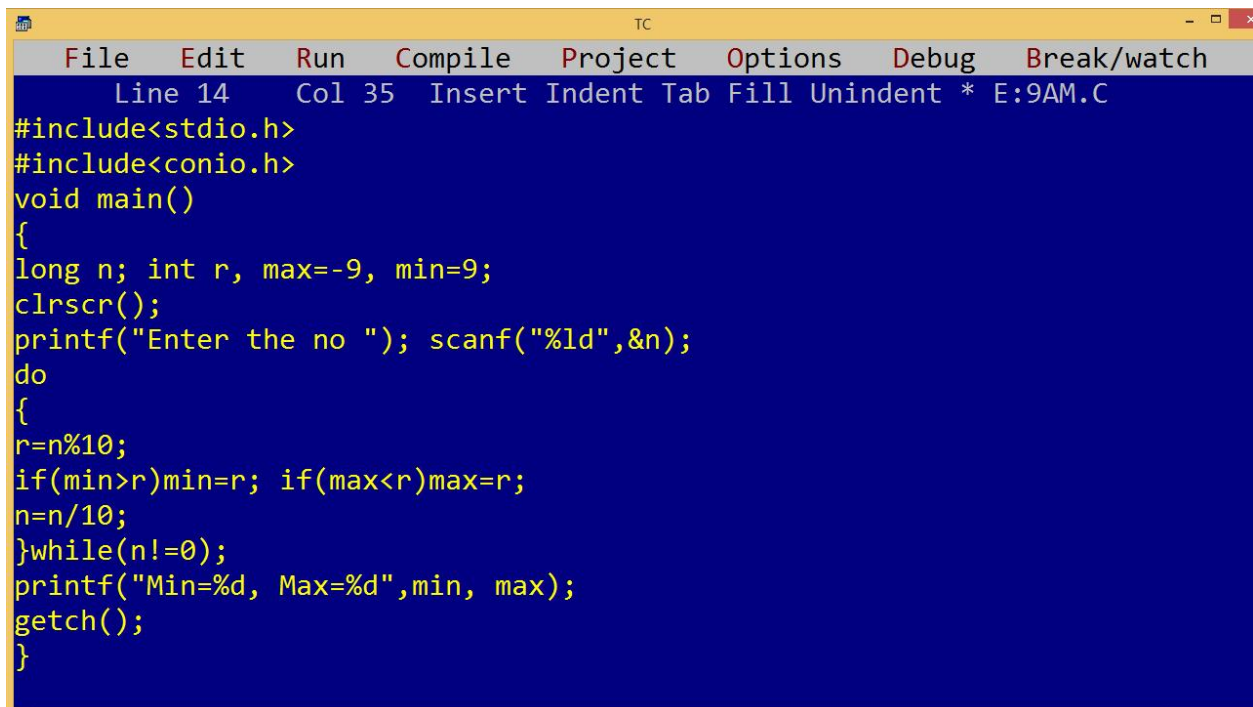


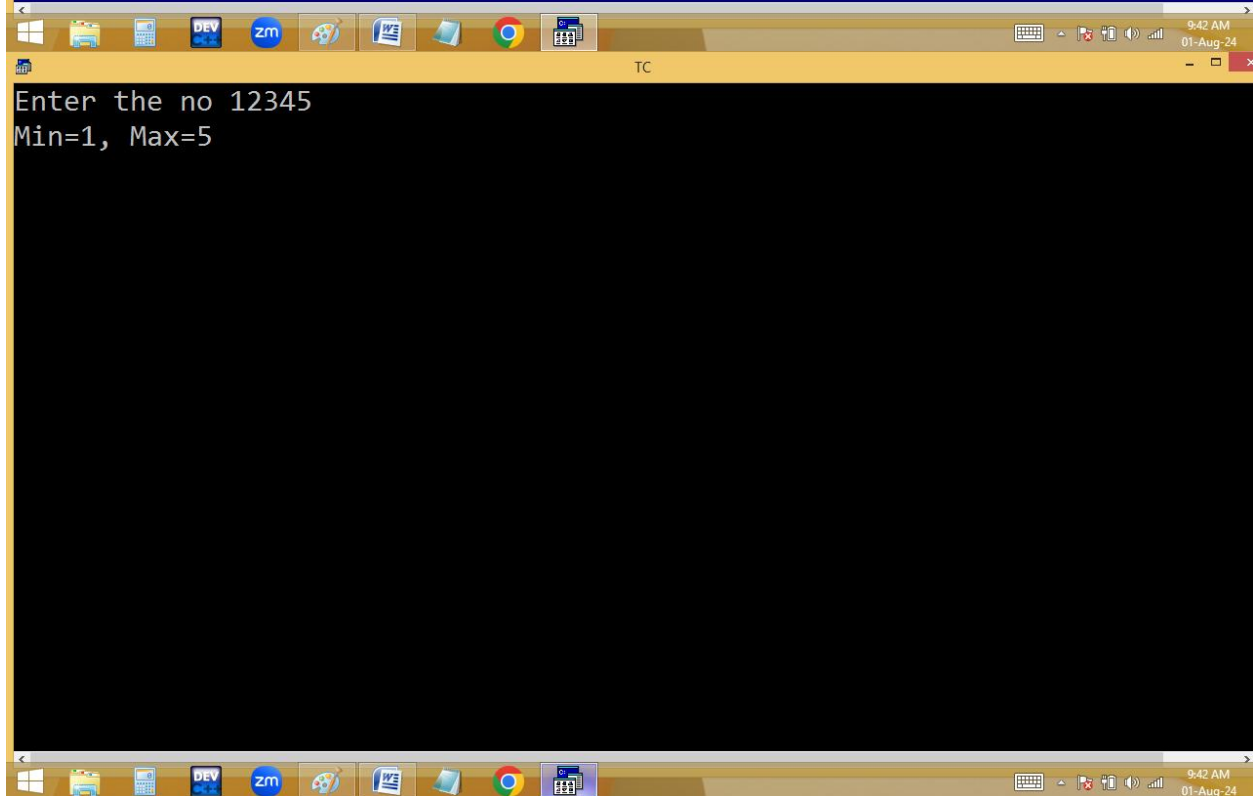
**Finding max, min digits of given no.**

**Eg: 20923 → 9 max, 0 min**



The screenshot shows the Turbo C++ (TC) IDE with a menu bar (File, Edit, Run, Compile, Project, Options, Debug, Break/watch) and a status bar (Line 14, Col 35, Insert, Indent, Tab, Fill, Unindent, \*, E:9AM.C). The code in the editor is as follows:

```
#include<stdio.h>
#include<conio.h>
void main()
{
long n; int r, max=-9, min=9;
clrscr();
printf("Enter the no "); scanf("%ld",&n);
do
{
r=n%10;
if(min>r)min=r; if(max<r)max=r;
n=n/10;
}while(n!=0);
printf("Min=%d, Max=%d",min, max);
getch();
}
```



The screenshot shows the Turbo C++ (TC) IDE with the same menu bar and status bar. The output window displays the following text:

```
Enter the no 12345
Min=1, Max=5
```

```
TC
Enter the no 40972
Min=0, Max=9_
```

```
TC
Enter the no -12345
Min=-5, Max=-1
```

```

TC
Enter the no 0
Min=0, Max=0_

```

	n	r	min	max
	1093	3	5	5
do	109	3	3	3
{	10	9	9	9
r=n%10;	1	0	0	0
if(min>r)min=r;	1	1	1	1
if(max<r)max=r;				
n=n/10; ✓				
}while(n!=0);				
p( min, max);				

Finding no of even/odd/zero digits in given no

Eg: 1023 → 1 even, 2 odd, 1 zero

```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 14 Col 42 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
long n; int r, e,o,z;
clrscr();
printf("Enter the no "); scanf("%ld",&n); e=o=z=0;
do
{
r=n%10;
if(r==0)z++;else if(r%2==0)e++; else o++;
n=n/10;
}while(n!=0);
printf("%d Even, %d Odd, %d Zero ", e,o,z);
getch();
}
```

```
TC
Enter the no 102030
1 Even, 2 Odd, 3 Zero
```

```
TC
Enter the no 0
0 Even, 0 Odd, 1 Zero _
```

```
TC
Enter the no 2468
4 Even, 0 Odd, 0 Zero _
```

```
TC
Enter the no 1357
0 Even, 4 Odd, 0 Zero
```

```
TC
Enter the no 0000
0 Even, 0 Odd, 1 Zero
```

```
TC
Enter the no -1023
1 Even, 2 Odd, 1 Zero _
```

```
do
{
r=n%10;
if(r==0)z++;
else if(r%2==0)e++;
else o++; ✓
n=n/10; ✓
}while(n!=0);
p( e, o, z );
```

n	r	e	o	z
1023	3	0	0	0
102	2	1	1	0
10	0	0	2	1
1	1	0	1	0

Reverse no:



1 7 4

$\rightarrow 4 \times 10 = 40$

$\rightarrow + 7$

$\underline{47 \times 10 = 470}$

$+ 1$

$\underline{471}$

TC

File Edit Run Compile Project Options Debug Break/watch

Line 14 Col 1 Insert Indent Tab Fill Unindent \* E:9AM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
long n,rev=0; int r;
clrscr();
printf("Enter the no "); scanf("%ld",&n);
while(n!=0)
{
r=n%10; rev=rev*10+r;
n=n/10;
}
printf("Reverse no is %ld",rev);
getch();
}
```

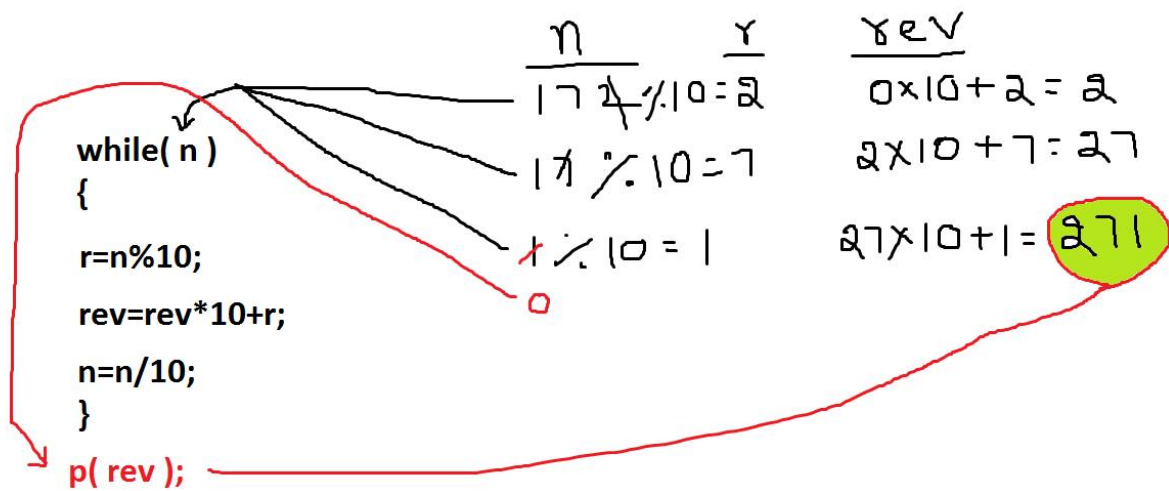
TC

Enter the no 10234  
Reverse no is 43201

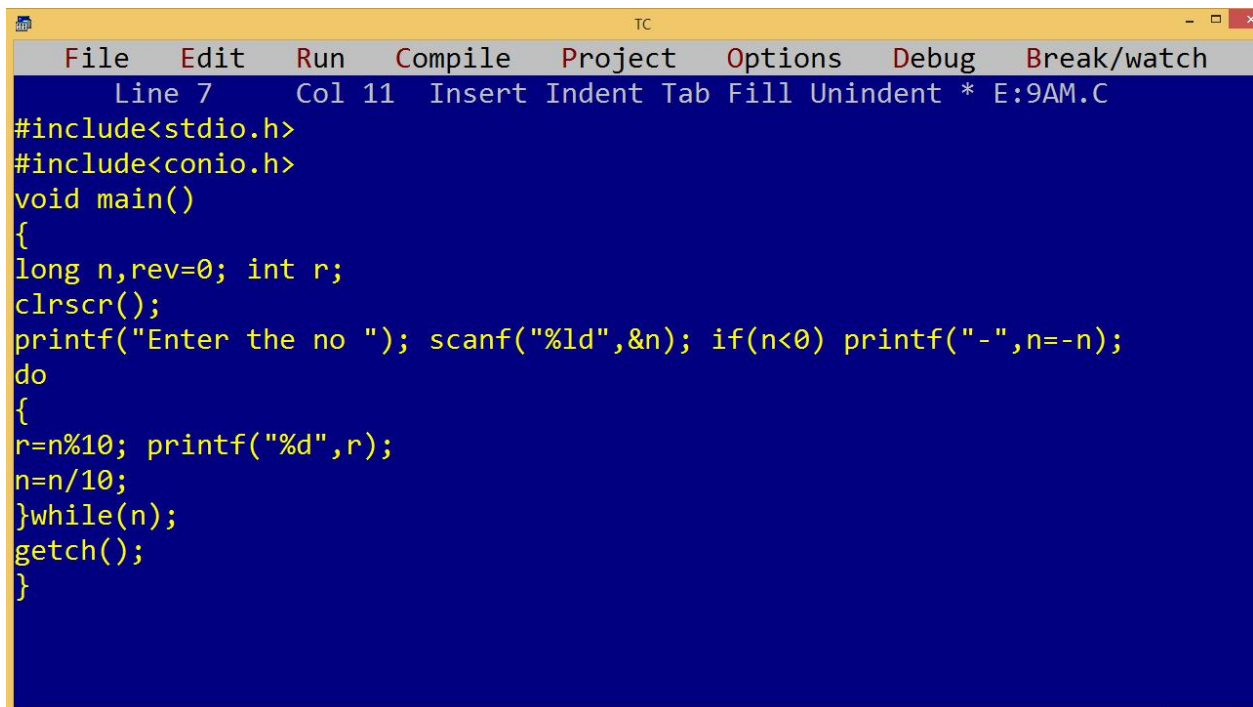
```
TC
Enter the no -123
Reverse no is -321_
```

```
TC
Enter the no 0
Reverse no is 0
```

```
TC
Enter the no 100
Reverse no is 1_
```

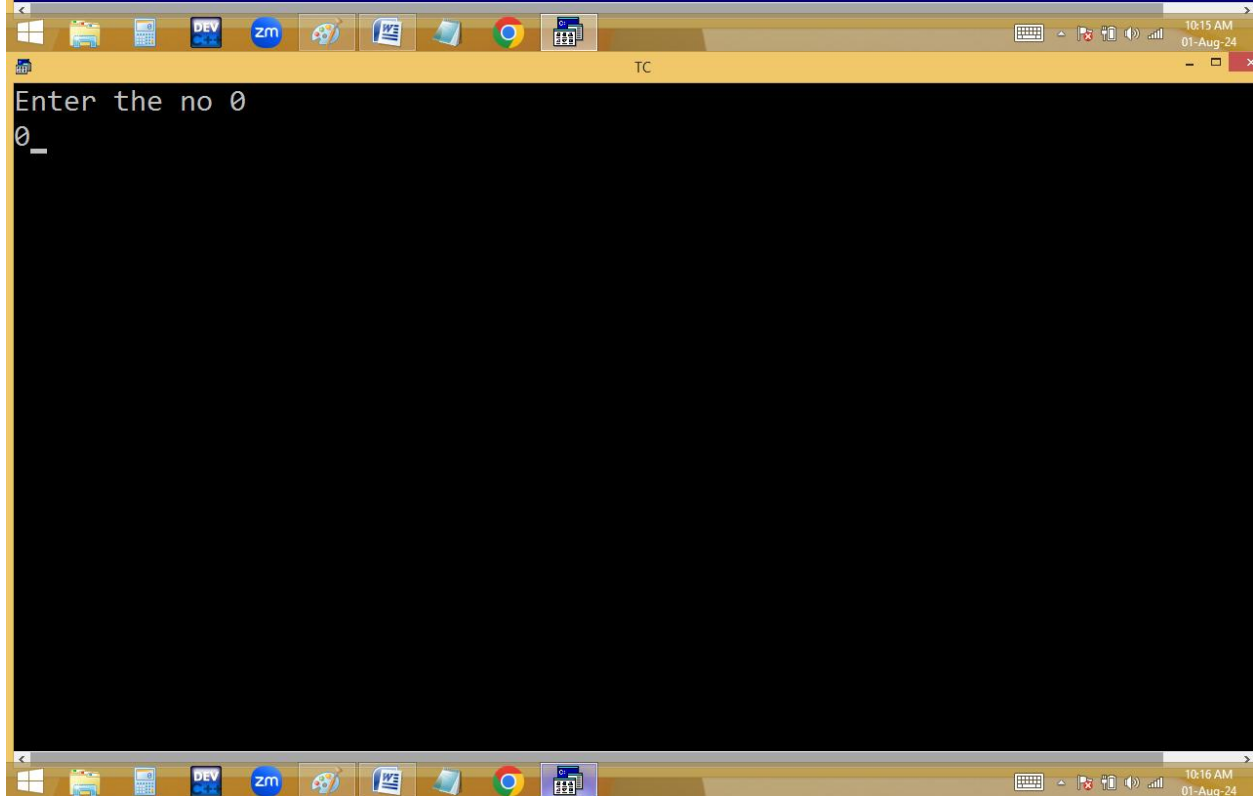


**Method2:**



The screenshot shows the Turbo C++ (TC) IDE with a menu bar (File, Edit, Run, Compile, Project, Options, Debug, Break/watch) and a status bar (Line 7, Col 11, Insert, Indent, Tab, Fill, Unindent, \*, E:9AM.C). The code in the editor is as follows:

```
#include<stdio.h>
#include<conio.h>
void main()
{
long n,rev=0; int r;
clrscr();
printf("Enter the no "); scanf("%ld",&n); if(n<0) printf("- ",n=-n);
do
{
r=n%10; printf("%d",r);
n=n/10;
}while(n);
getch();
}
```



The screenshot shows the Turbo C++ (TC) IDE with the same menu bar and status bar (Line 7, Col 11, Insert, Indent, Tab, Fill, Unindent, \*, E:9AM.C). The program is running, and the output window shows the prompt "Enter the no 0" followed by the input "0" and a cursor. The status bar indicates the time is 10:15 AM on 01-Aug-24.

```
Enter the no 0
0_
```

```
TC
Enter the no 123
321
```

```
TC
Enter the no -123
-321
```

```
TC
Enter the no -100
-001_
```

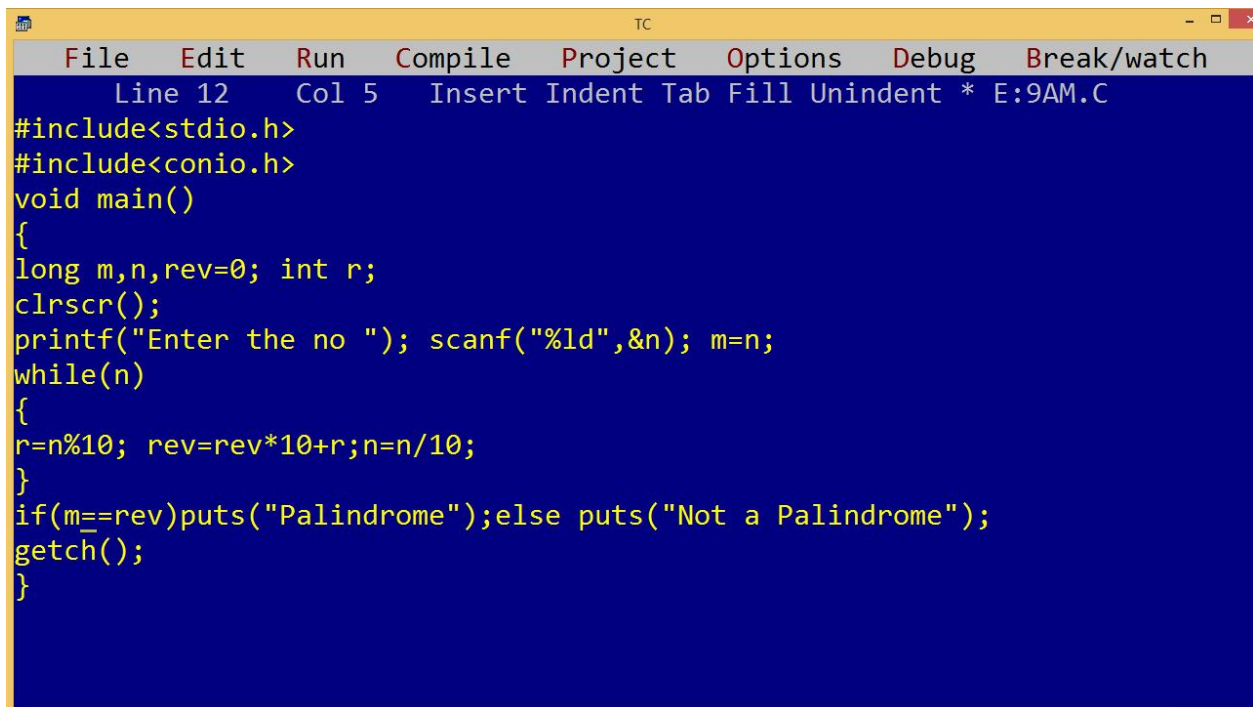
```
TC
Enter the no -12003400
-00430021_
```

$$\begin{array}{r}
 n \\
 \hline
 100 \% 10 = 0 \\
 10 \% 10 = 0 \\
 1 \% 10 = 1
 \end{array}
 \quad
 \begin{array}{l}
 \text{printf} \\
 \downarrow
 \end{array}$$

**Finding palindrome no**  
**121 reverse 121**

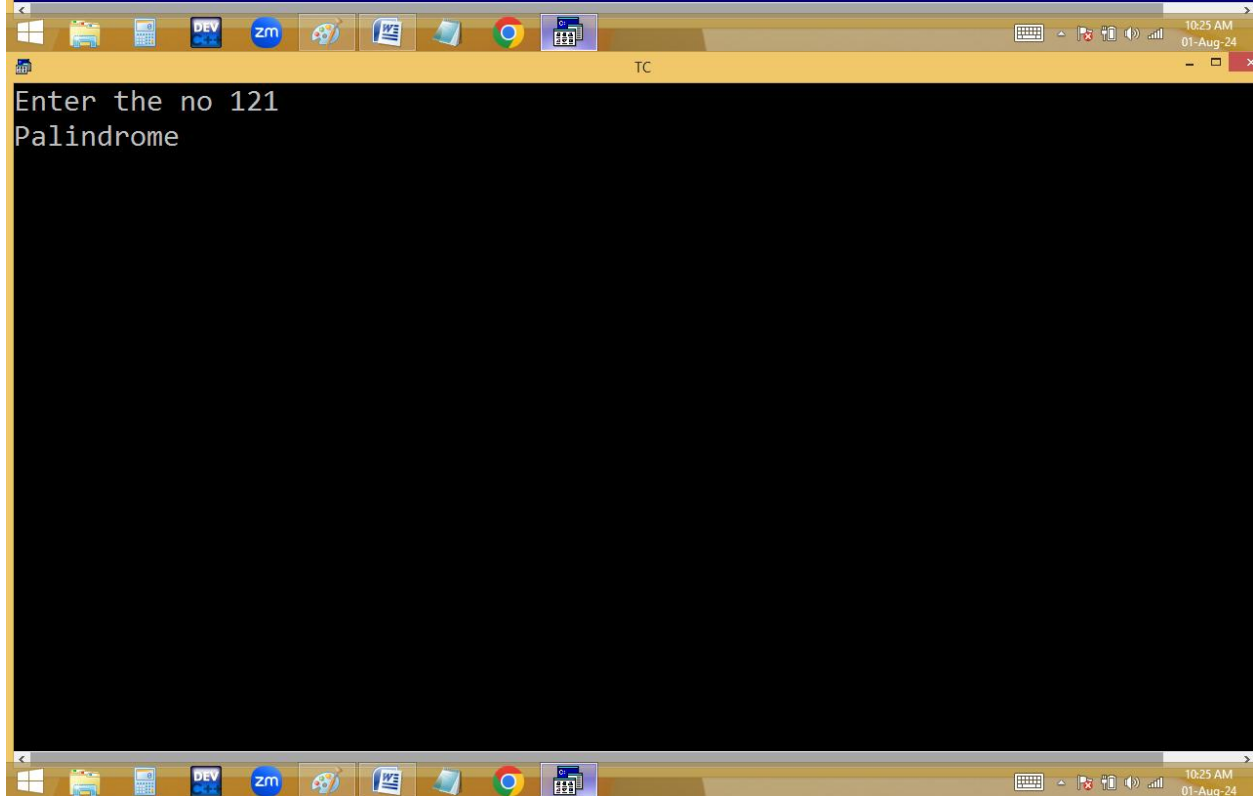
$$\begin{array}{l}
 \text{rev} \\
 0 \times 10 + 1 = 1 \\
 1 \times 10 + 2 = 12 \\
 12 \times 10 + 1 = 121
 \end{array}
 \quad
 \begin{array}{l}
 n \\
 121 \% 10 = 1 \\
 12 \% 10 = 2 \\
 1 \% 10 = 1 \\
 0
 \end{array}
 \quad
 \begin{array}{l}
 m \\
 121
 \end{array}$$





The screenshot shows a Turbo C++ IDE window titled "TC". The menu bar includes File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The status bar at the top indicates "Line 12 Col 5 Insert Indent Tab Fill Unindent \* E:9AM.C". The code in the editor is as follows:

```
#include<stdio.h>
#include<conio.h>
void main()
{
long m,n,rev=0; int r;
clrscr();
printf("Enter the no "); scanf("%ld",&n); m=n;
while(n)
{
r=n%10; rev=rev*10+r;n=n/10;
}
if(m==rev)puts("Palindrome");else puts("Not a Palindrome");
getch();
}
```



The screenshot shows the same Turbo C++ IDE window after execution. The output window displays the following text:

```
Enter the no 121
Palindrome
```

The status bar at the bottom right shows the time as 10:25 AM on 01-Aug-24.

```
TC
Enter the no -101
Palindrome
-
```

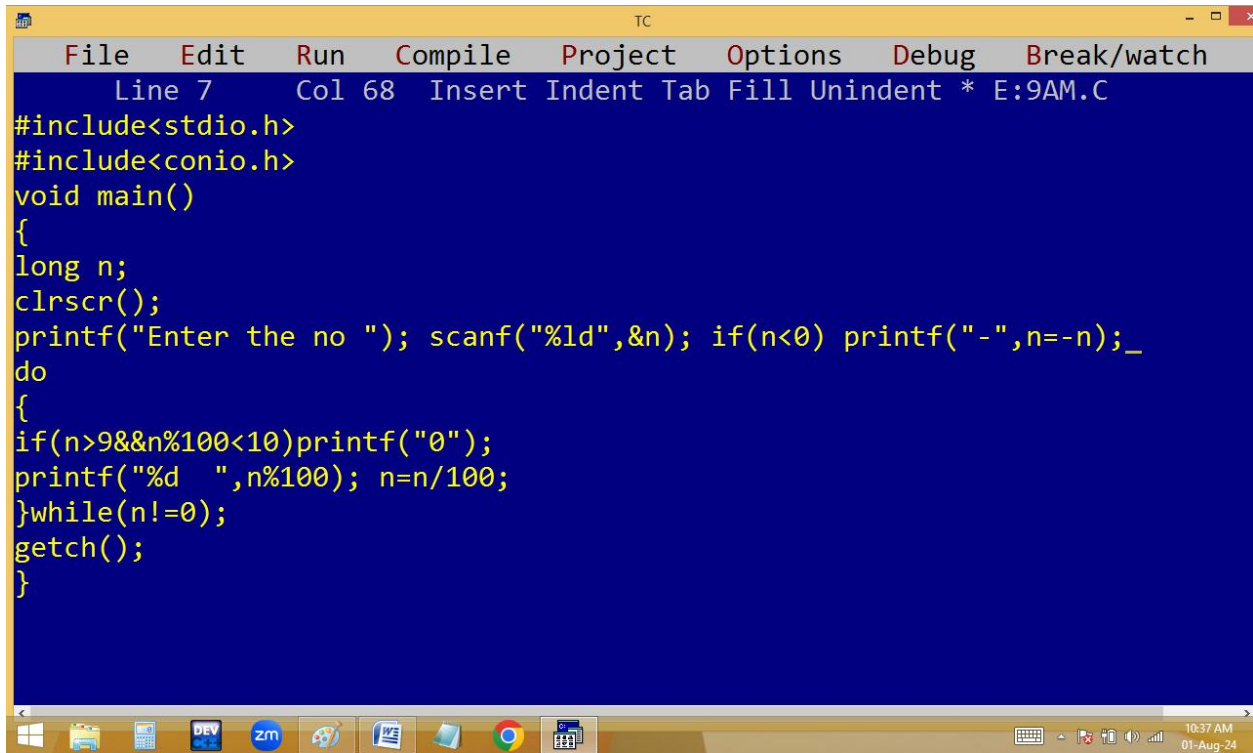
```
TC
Enter the no 0
Palindrome
-
```

```
TC
Enter the no 9
Palindrome
```

```
TC
Enter the no 123
Not a Palindrome
_
```

Printing the below output.

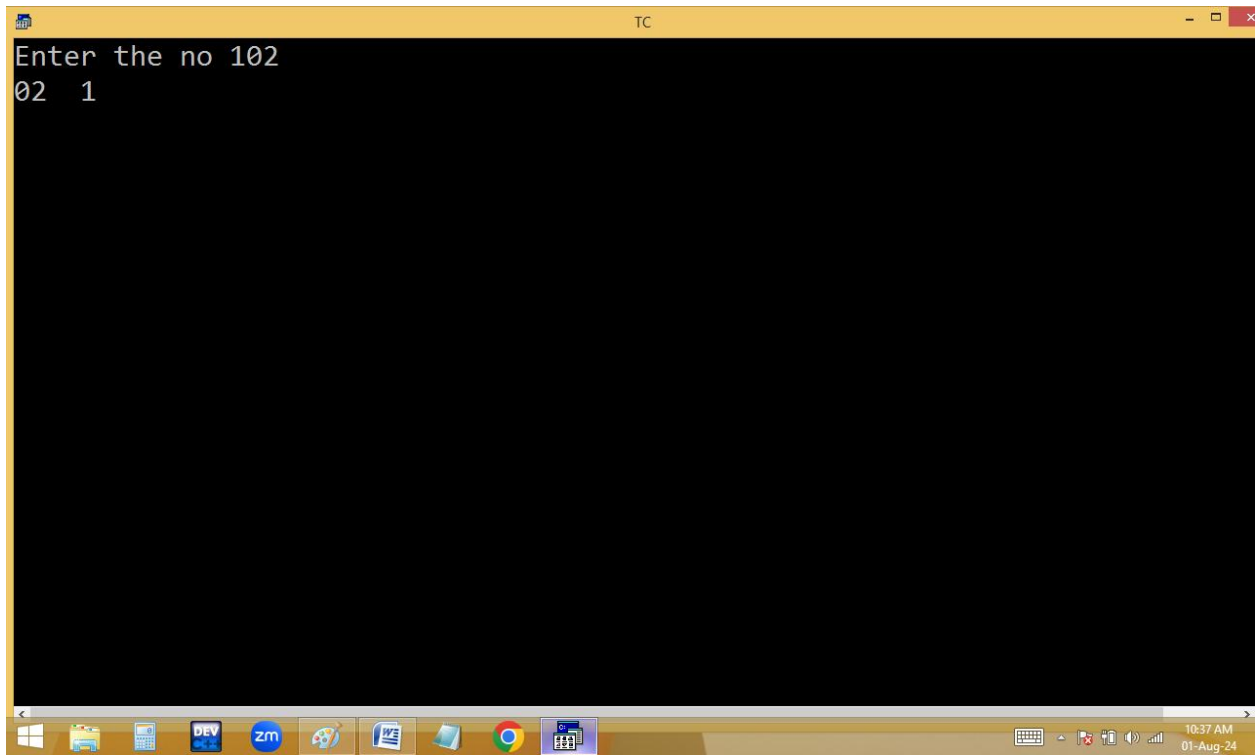
12345678 → 78 56 34 12



The screenshot shows a Turbo C++ (TC) IDE window. The menu bar includes File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The status bar at the top indicates 'Line 7', 'Col 68', and 'Insert Indent Tab Fill Unindent \* E:9AM.C'. The main editing area has a dark blue background with yellow text. The code is as follows:

```
#include<stdio.h>
#include<conio.h>
void main()
{
    long n;
    clrscr();
    printf("Enter the no "); scanf("%ld",&n); if(n<0) printf("-",n=-n);_
    do
    {
        if(n>9&& n%100<10)printf("0");
        printf("%d ",n%100); n=n/100;
    }while(n!=0);
    getch();
}
```

The Windows taskbar is visible at the bottom, showing icons for Windows Explorer, Calculator, DEV C++, Zm, and other applications. The system clock in the bottom right corner shows '10:37 AM' and '01-Aug-24'.



```
TC
Enter the no -100
-00 1
```

```
TC
Enter the no 12000000
00 00 00 12
```

## Home work:

1. Finding the given digit position.

20174 → 1 position is 3<sup>rd</sup>

2. 102 → One Zero Two

3. Finding Armstrong no

1 is a single digit no →  $1^1 = 1$

9 is a single digit no →  $9^1 = 9$

153 is a 3 digit no →  $1^3 + 5^3 + 3^3 = 1 + 125 + 27 = 153$

370, 371, 407, 1634, 8208,...

1634 is 4 digit no →  $1^4 + 6^4 + 3^4 + 4^4 = 1634$

