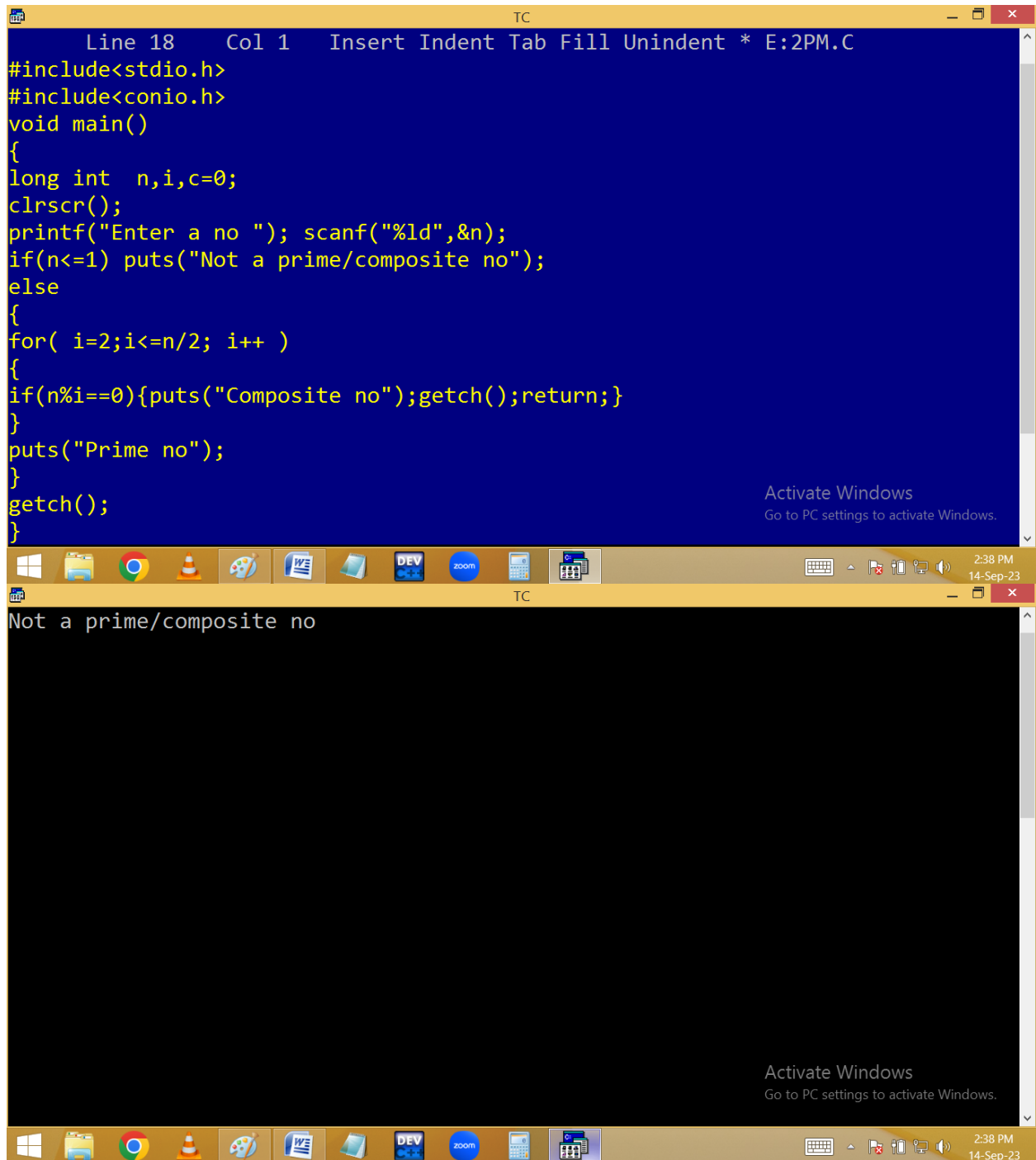
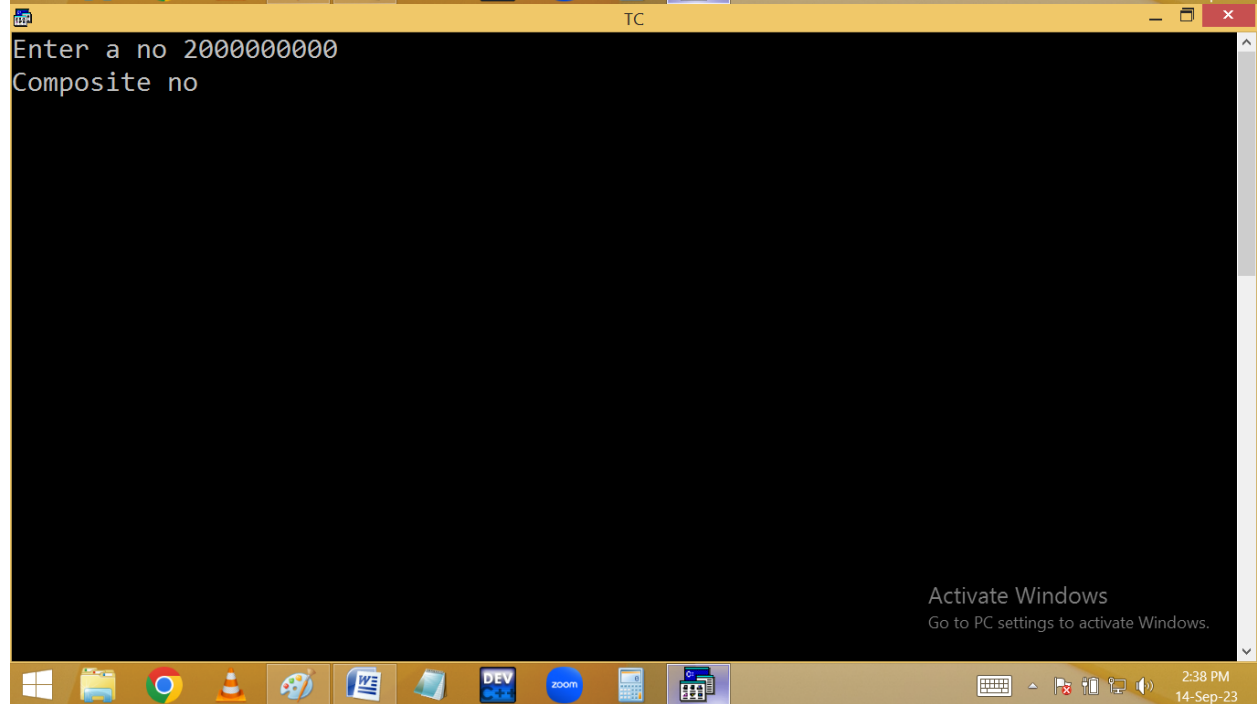
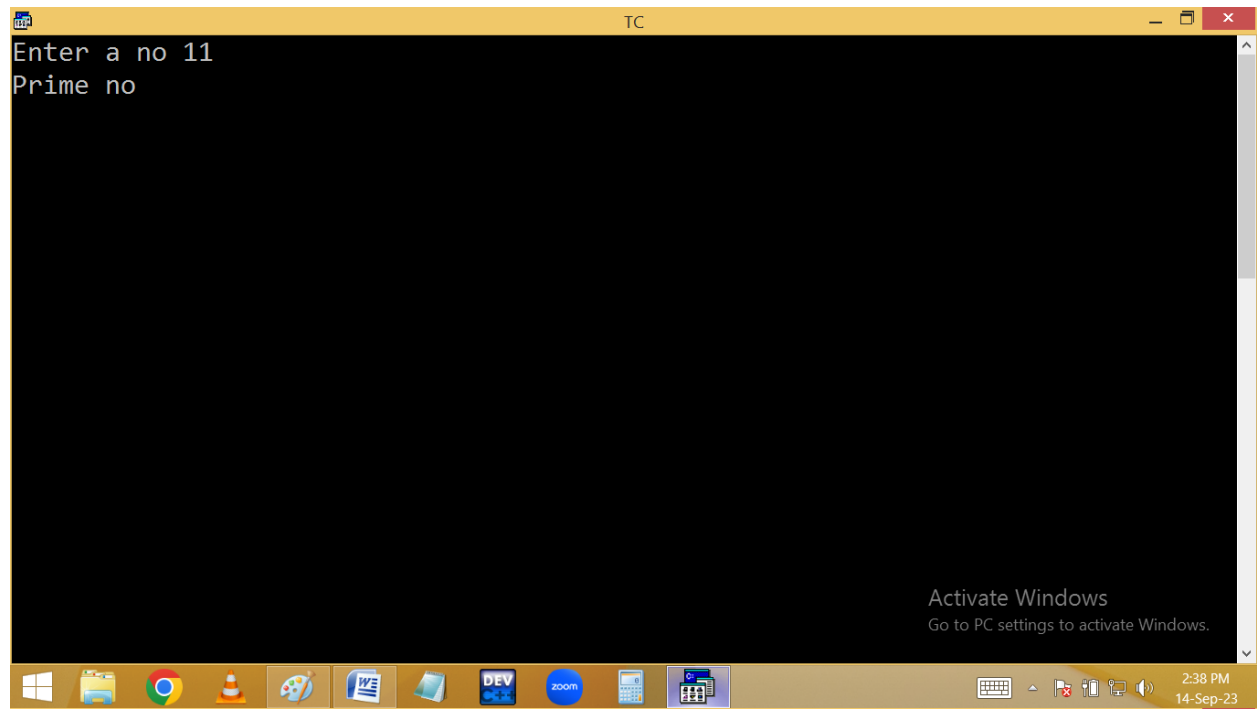


## Prime no method 2:



```
Line 18   Col 1   Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
long int  n,i,c=0;
clrscr();
printf("Enter a no "); scanf("%ld",&n);
if(n<=1) puts("Not a prime/composite no");
else
{
for( i=2;i<=n/2; i++ )
{
if(n%i==0){puts("Composite no");getch();return;}
}
puts("Prime no");
}
getch();
}
```

Not a prime/composite no



$4 \nmid 10$  ✓  
 for(  $i=2$ ;  $i \leq n/2$ ;  $i++$  )  
 {  
   if( $n \% i == 0$ ) {  $p(\text{"composite"})$ ; return;  
 }  
 $p(\text{prime})$ ;  
 }

10 - ~~1~~, 2, 5, ~~10~~

100 - ~~1~~ 2 4 5 10 20 25 50 ~~100~~

3 - ~~1~~, 3

$2000000000 \% 2 = 0$

$\frac{17}{5} \nmid$      $\frac{1}{2} = 1$   
 $3 \leq 2$

## Twisted prime:

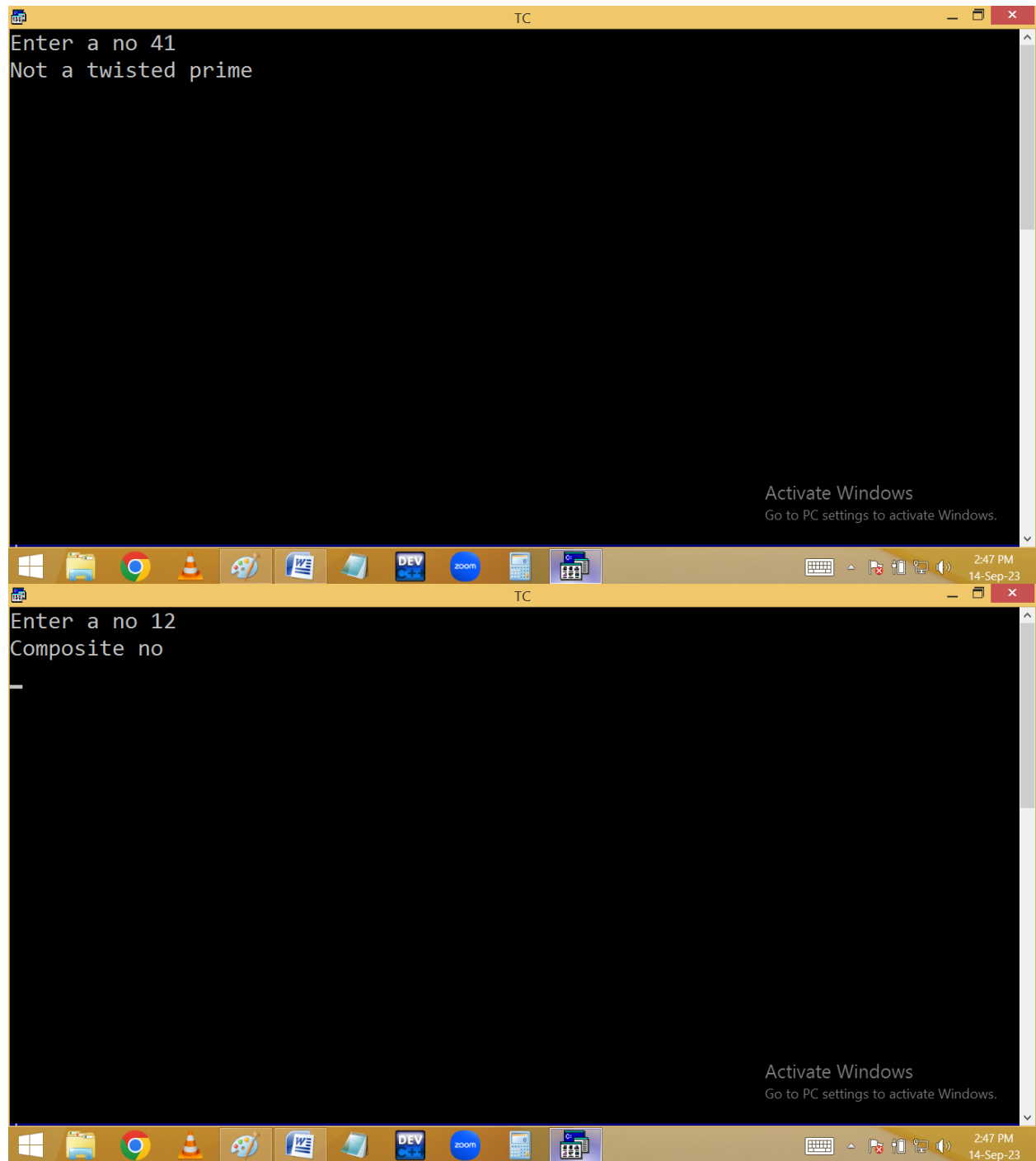
13 is prime and 13 reverse is 31 also prime

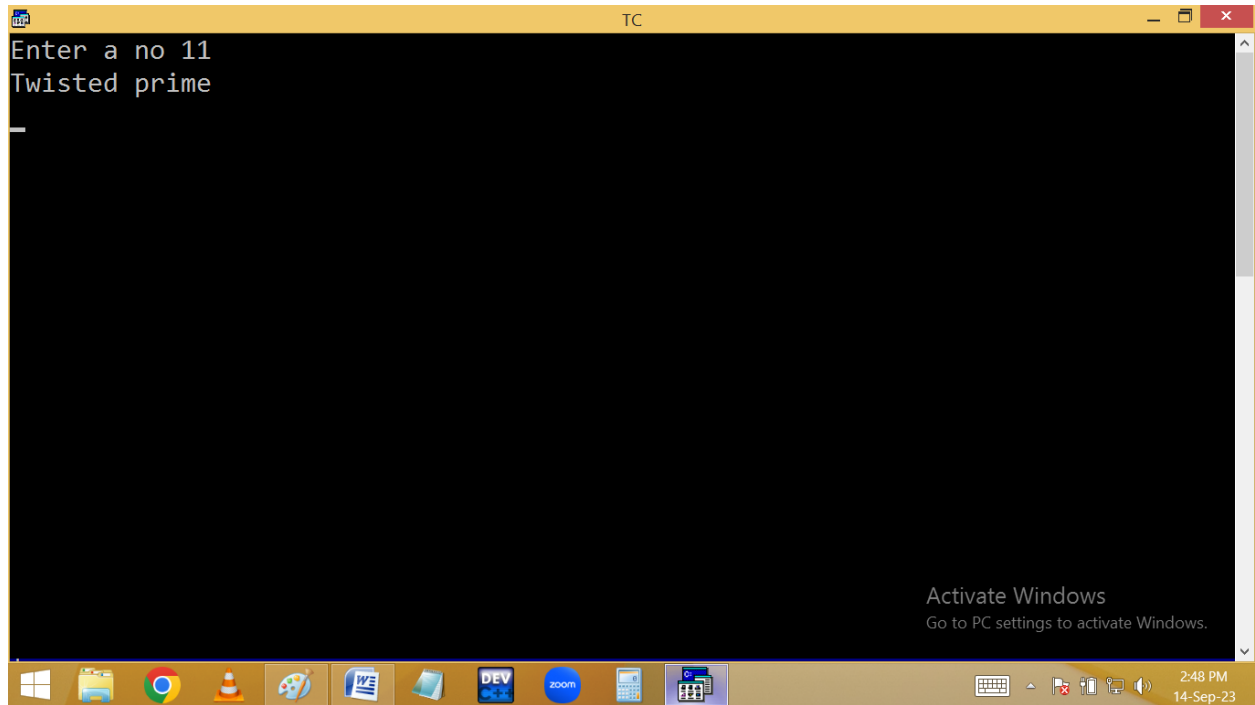
19 prime and 91 is not a prime

```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 16 Col 1 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
long int rev=0,n,i;
clrscr();
printf("Enter a no "); scanf("%ld",&n);
for( i=2;i<=n/2; i++ )
{
if(n%i==0){puts("Composite no");getch();return;}
}
for( ; n!=0 ; n/=10 ) rev=rev*10+(n%10); /* rev no */
for( i=2; i<=rev/2; i++ )
{if(rev%i==0){ puts("Not a twisted prime");getch(); return; }}
puts("Twisted prime");
getch();
}
```

Enter a no 13  
Twisted prime

Activate Windows  
Go to PC settings to activate Windows.





Fibonacci series:

$n = 5 \rightarrow 0\ 1\ 1\ 2\ 3$

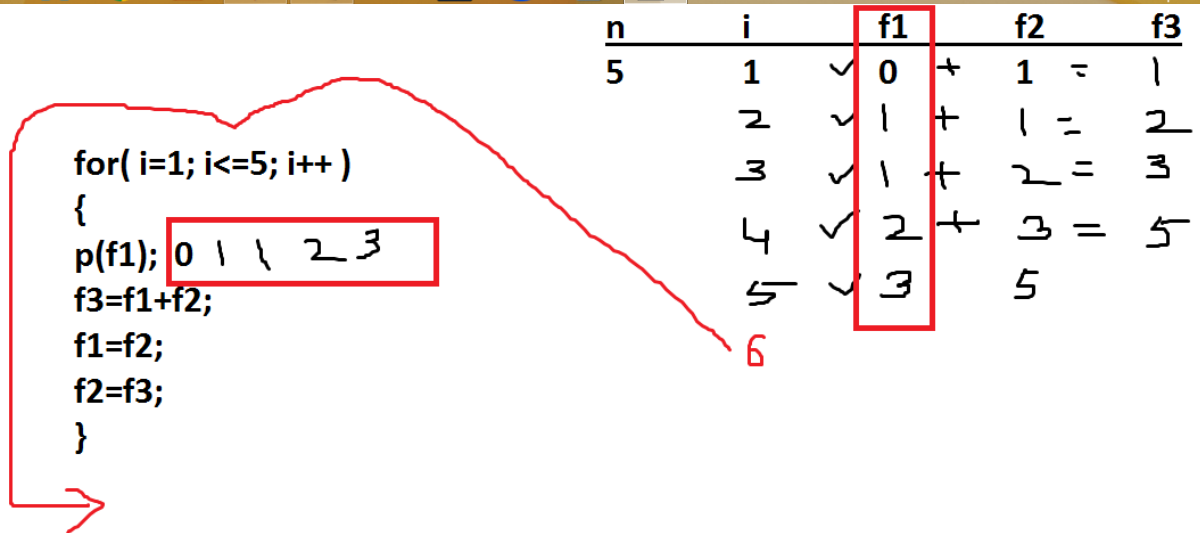
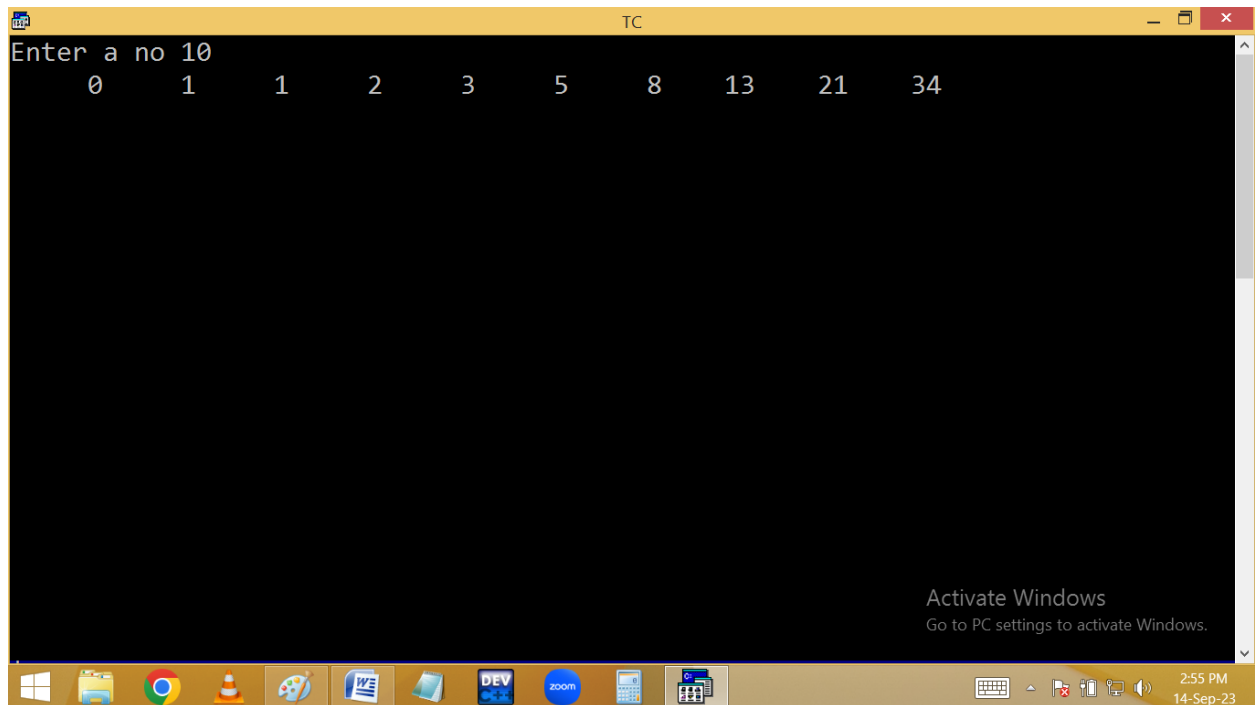
The image shows two windows of the Turbo C++ (TC) IDE. The top window is the source code editor for a file named E:2PM.C. It contains a C program that calculates the first 'n' terms of the Fibonacci sequence. The code includes headers for `stdio.h` and `conio.h`, and uses `printf` and `scanf` for input/output. The logic involves a loop where the first two numbers (1 and 1) are printed, and subsequent numbers are calculated as the sum of the two preceding ones. The bottom window is the output console, which shows the program's execution. It prompts the user to 'Enter a no 5', and then displays the sequence: 0, 1, 1, 2, 3, followed by a cursor. Both windows have a standard Windows taskbar at the bottom with various application icons and a system clock showing 2:55 PM on 14-Sep-23.

```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 14 Col 2 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int n,i,f1=0, f2=1, f3;
clrscr();
printf("Enter a no "); scanf("%ld",&n);
for( i=1;i<=n; i++ )
{
printf("%6d", f1);
f3=f1+f2;
f1=f2;
f2=f3;
}
getch();
}
```

TC

Enter a no 5

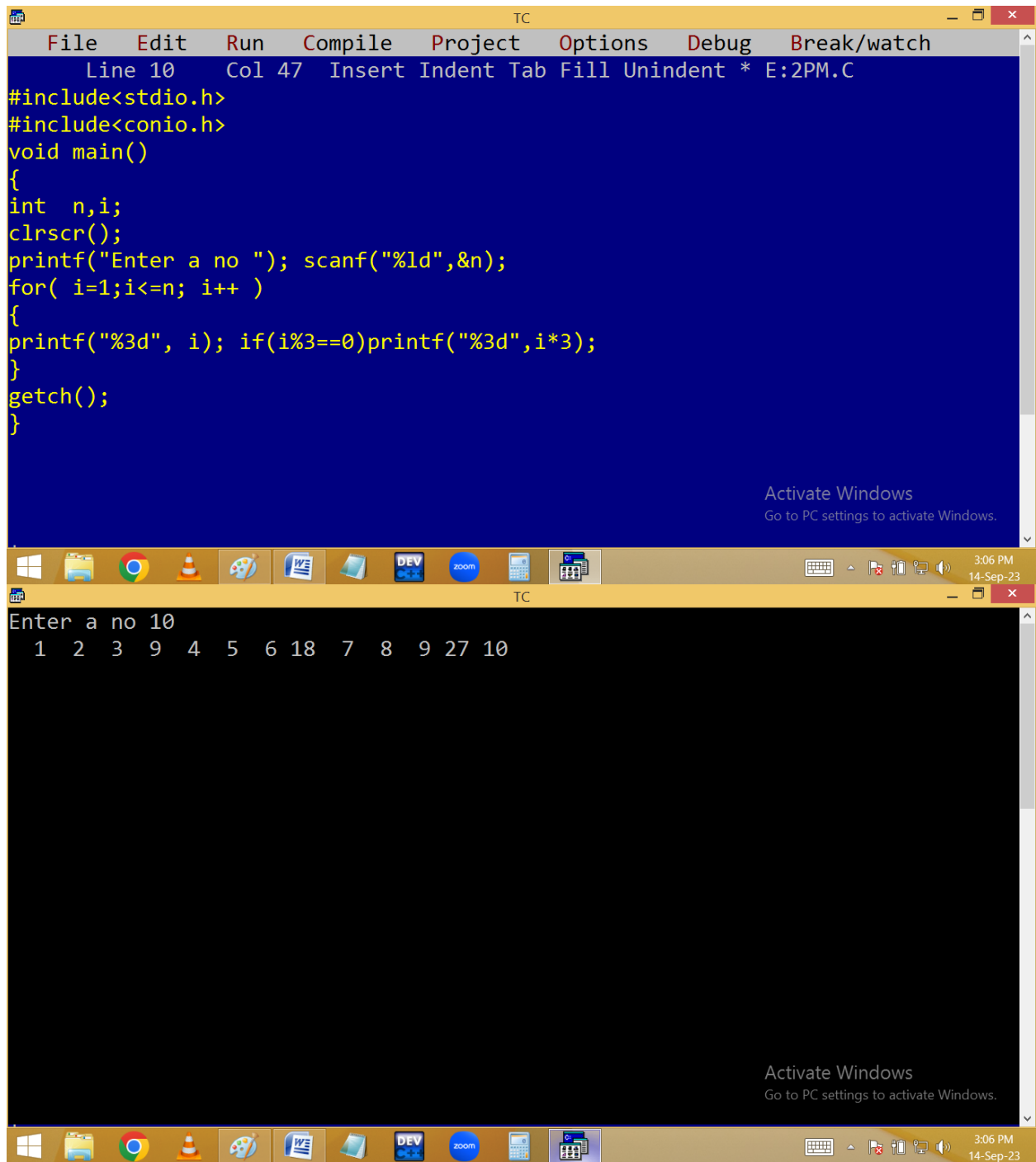
0 1 1 2 3\_



**Eg. printing below series.**

1 2 3 9 4 5 6 18 7 8 9 27 10....n





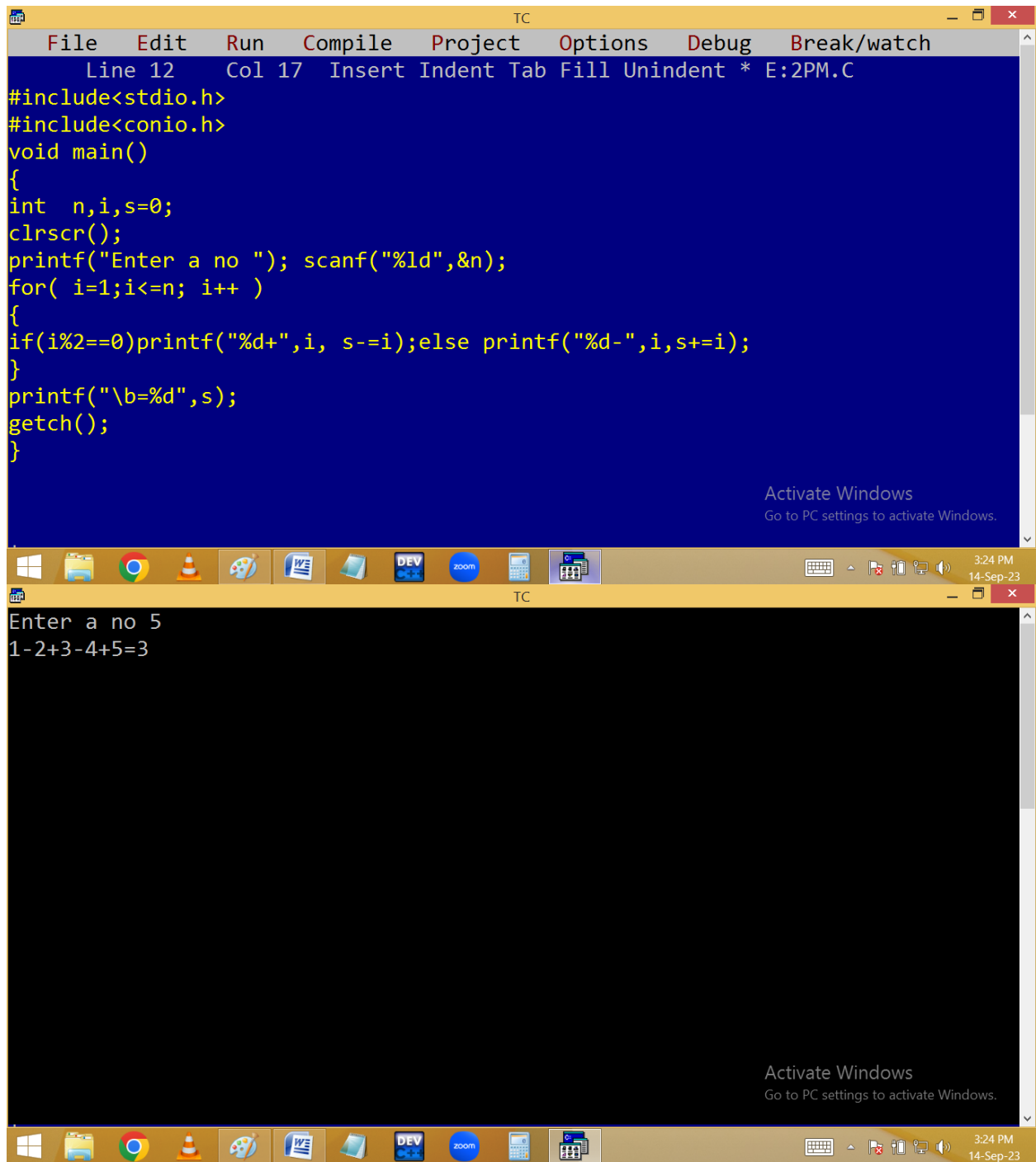
The image shows two windows from the Turbo C++ (TC) IDE. The top window is the source code editor, titled 'TC', showing a C program. The code includes `<stdio.h>` and `<conio.h>`, defines `main()`, declares `int n, i;`, clears the screen with `clrscr();`, prompts the user to 'Enter a no', reads the input `n` using `scanf`, and then uses a `for` loop to print numbers from 1 to `n`. For every third number (where `i % 3 == 0`), it prints the number multiplied by 3. The bottom window is the output console, also titled 'TC', showing the execution results. It displays the prompt 'Enter a no' followed by the input '10'. The output line shows the sequence: '1 2 3 9 4 5 6 18 7 8 9 27 10'. The Windows taskbar at the bottom indicates the time is 3:06 PM on 14-Sep-23.

```
File Edit Run Compile Project Options Debug Break/watch
Line 10 Col 47 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
    int n,i;
    clrscr();
    printf("Enter a no "); scanf("%ld",&n);
    for( i=1;i<=n; i++ )
    {
        printf("%3d", i); if(i%3==0)printf("%3d",i*3);
    }
    getch();
}
```

Enter a no 10  
1 2 3 9 4 5 6 18 7 8 9 27 10

**$n=5 \implies 1-2+3-4+5=3$**

$$\begin{array}{rcl}
 & 1 + 3 + 5 = 9 & \\
 5 & & = 3 \\
 & - 2 + -4 = -6 & 
 \end{array}$$



The image shows two windows from the Turbo C++ (TC) IDE. The top window is the source code editor, titled 'TC', with a menu bar (File, Edit, Run, Compile, Project, Options, Debug, Break/watch) and a status bar (Line 12, Col 17, Insert, Indent, Tab, Fill, Unindent, \* E:2PM.C). The code is as follows:

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int n,i,s=0;
    clrscr();
    printf("Enter a no "); scanf("%ld",&n);
    for( i=1;i<=n; i++ )
    {
        if(i%2==0)printf("%d+",i, s-=i);else printf("%d-",i,s+=i);
    }
    printf("\b=%d",s);
    getch();
}
```

The bottom window is the output console, also titled 'TC'. It displays the program's execution: 'Enter a no 5' followed by the output '1-2+3-4+5=3'. Both windows feature a Windows taskbar at the bottom with various application icons and a system tray showing the time as 3:24 PM on 14-Sep-23. 'Activate Windows' watermarks are visible in the bottom right of both windows.

```
TC
Enter a no 10
1-2+3-4+5-6+7-8+9-10=-5
```

Activate Windows  
Go to PC settings to activate Windows.

3:24 PM  
14-Sep-23

```
for( i=1; i<=5; i++ )
{
    ✓ if(i%2==0) p("%d+",i,s-=i);
    else p("%d-",i,s+=i);
}
p("\b=%d",s);
```

$\frac{17}{5}$

$\frac{1}{1 \div 2 = 1}$   
 $\frac{3}{2 \div 2 = 0}$   
 $\frac{4}{5}$   
 $\frac{6}{1 - 2 + 3 - 4 + 5 = 3}$

$\frac{5}{0 + 1 = 1}$   
 $1 - 2 = -1$   
 $-1 + 3 = 2$   
 $2 - 4 = -2$   
 $-2 + 5 = 3$

$1 - 2 + 3 - 4 + 5 = 3$

$1 - 2 + 3 - 4 + 5 = 3$

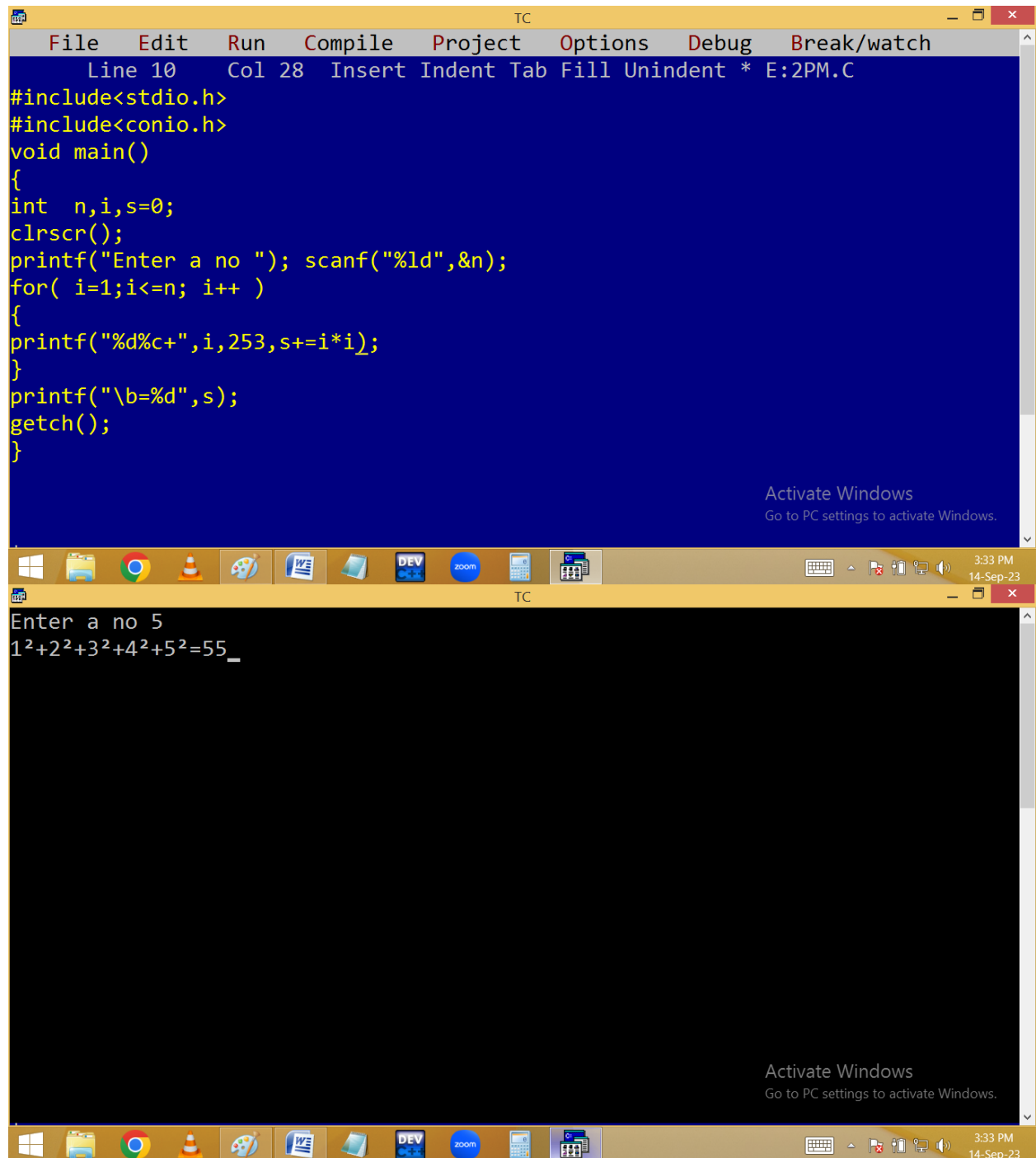
Printing 1..n number series sum

```
File Edit Run Compile Project Options Debug Break/watch
Line 8 Col 5 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int n,i,s=0;
clrscr();
printf("Enter a no "); scanf("%ld",&n);
for( i=1;i<=n; i++ )
{
printf("%d+",i);
s+=i;
}
printf("\b=%d",s);
getch();
}
```

Enter a no 5  
1+2+3+4+5=15\_

Printing square sum.

$$n=5 \rightarrow 1^2 + 2^2 + 3^2 + 4^2 + 5^2 = 55$$

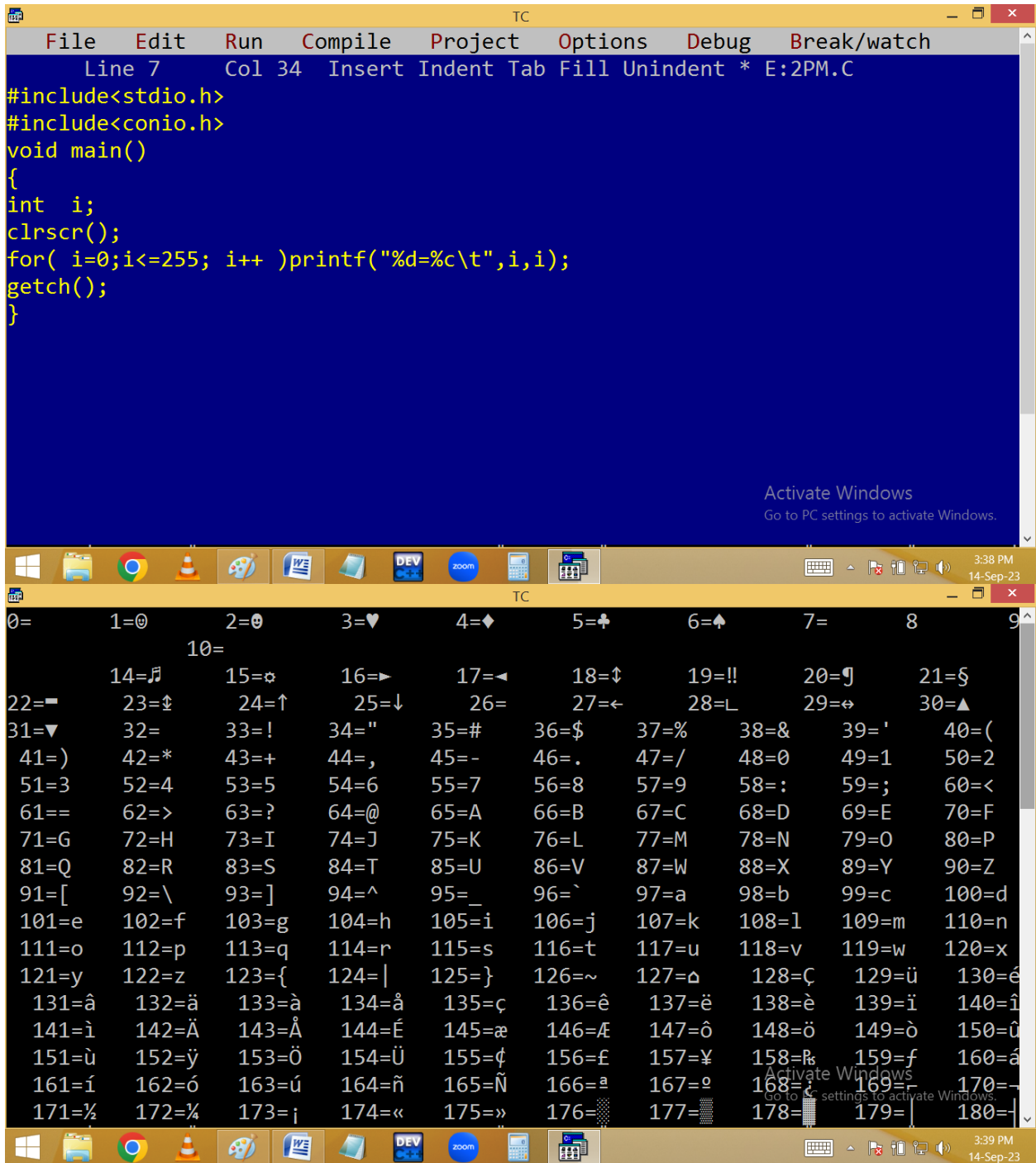


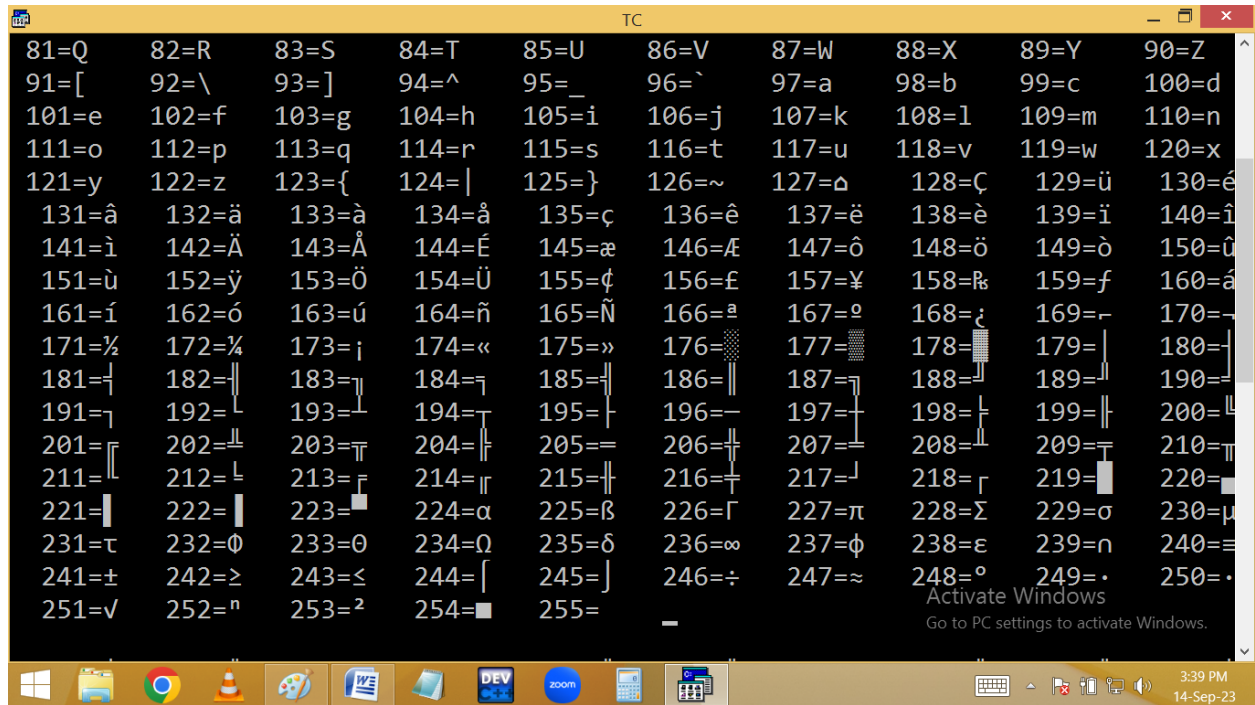
The image shows two screenshots of the Turbo C++ (TC) IDE. The top screenshot displays the source code for a C program that calculates the sum of squares of the first 5 natural numbers. The code is as follows:

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int n,i,s=0;
    clrscr();
    printf("Enter a no "); scanf("%ld",&n);
    for( i=1;i<=n; i++ )
    {
        printf("%d%c+",i,253,s+=i*i);
    }
    printf("\b=%d",s);
    getch();
}
```

The bottom screenshot shows the program's execution. It prompts the user to "Enter a no" and the user has entered "5". The output of the program is displayed as "1<sup>2</sup>+2<sup>2</sup>+3<sup>2</sup>+4<sup>2</sup>+5<sup>2</sup>=55\_".

**ASCII TABLE:**





## Harmonic series:

$$n=5 \rightarrow 1 + 1/1 + 1/2 + 1/3 + 1/4 + 1/5 = \text{sum}$$

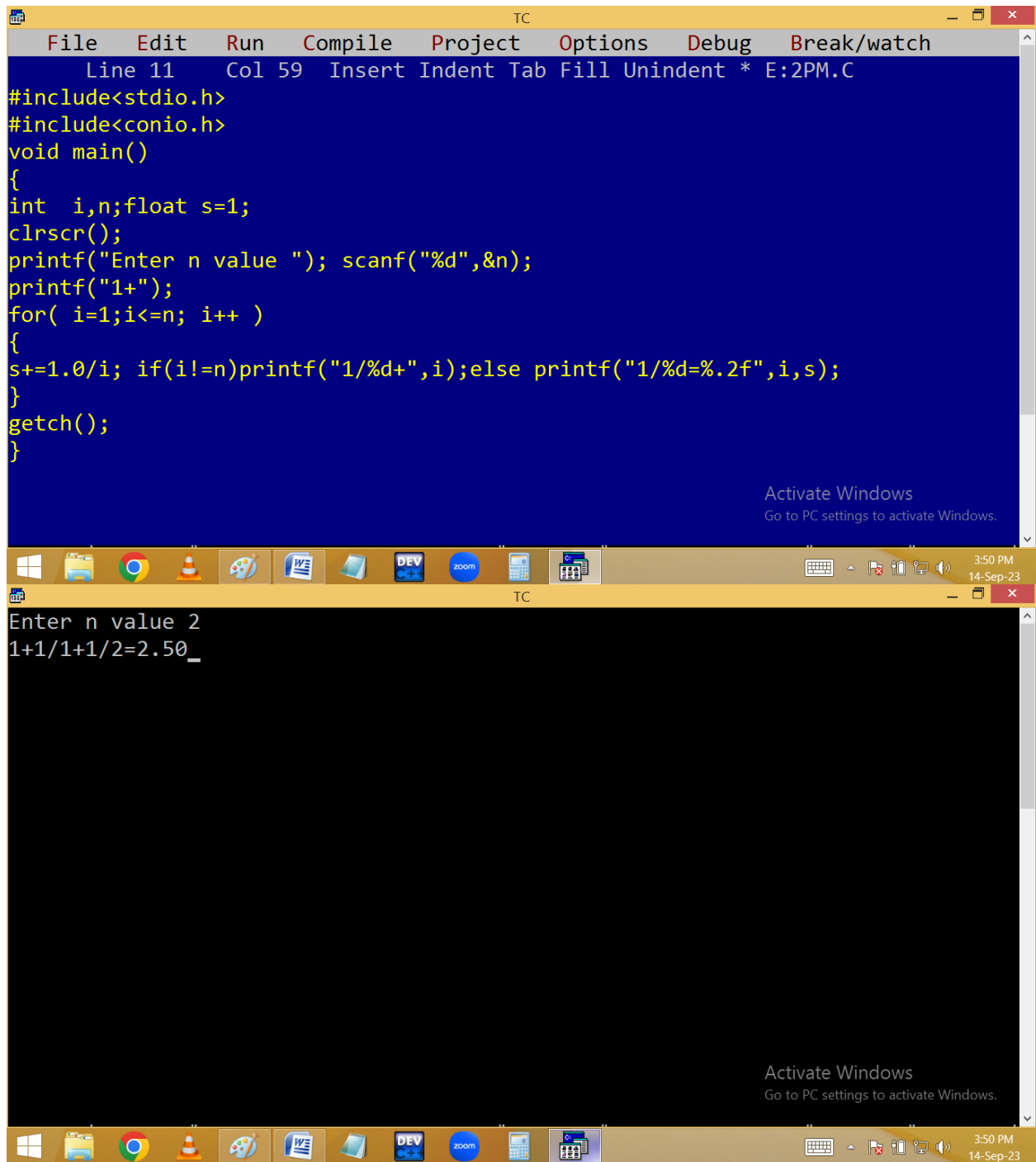


The image shows two screenshots of the Turbo C++ (TC) IDE. The top screenshot displays the source code of a C program in a blue editor window. The code calculates the harmonic series sum for a given value of n. The bottom screenshot shows the program's execution output in a black window, where the user has entered '2' and the program has printed the result '1+1/1+1/2=2.50\_'. Both windows have a menu bar with options like File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The Windows taskbar at the bottom shows various application icons and the system clock indicating 3:45 PM on 14-Sep-23.

```
File Edit Run Compile Project Options Debug Break/watch
Line 10 Col 21 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int i,n;float s=1;
clrscr();
printf("Enter n value "); scanf("%d",&n);
printf("1+");
for( i=1;i<=n; i++ )printf("1/%d+",i,s+=1.0/i);
printf("\b=%.2f",s);
getch();
}
```

Enter n value 2  
1+1/1+1/2=2.50\_

Without using \b:



The image shows two windows of the Turbo C++ (TC) IDE. The top window is the source code editor for a file named E:2PM.C. It contains a C program that calculates the sum of the reciprocals of integers from 1 to n. The code is as follows:

```
File Edit Run Compile Project Options Debug Break/watch
Line 11 Col 59 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int i,n;float s=1;
clrscr();
printf("Enter n value "); scanf("%d",&n);
printf("1+");
for( i=1;i<=n; i++ )
{
s+=1.0/i; if(i!=n)printf("1/%d+",i);else printf("1/%d=%.2f",i,s);
}
getch();
}
```

The bottom window shows the execution output of the program. It displays the prompt "Enter n value 2" and the result "1+1/1+1/2=2.50\_".

Both windows have a taskbar at the bottom with various application icons and a system tray showing the time as 3:50 PM on 14-Sep-23. An "Activate Windows" watermark is visible in the bottom right corner of each window.