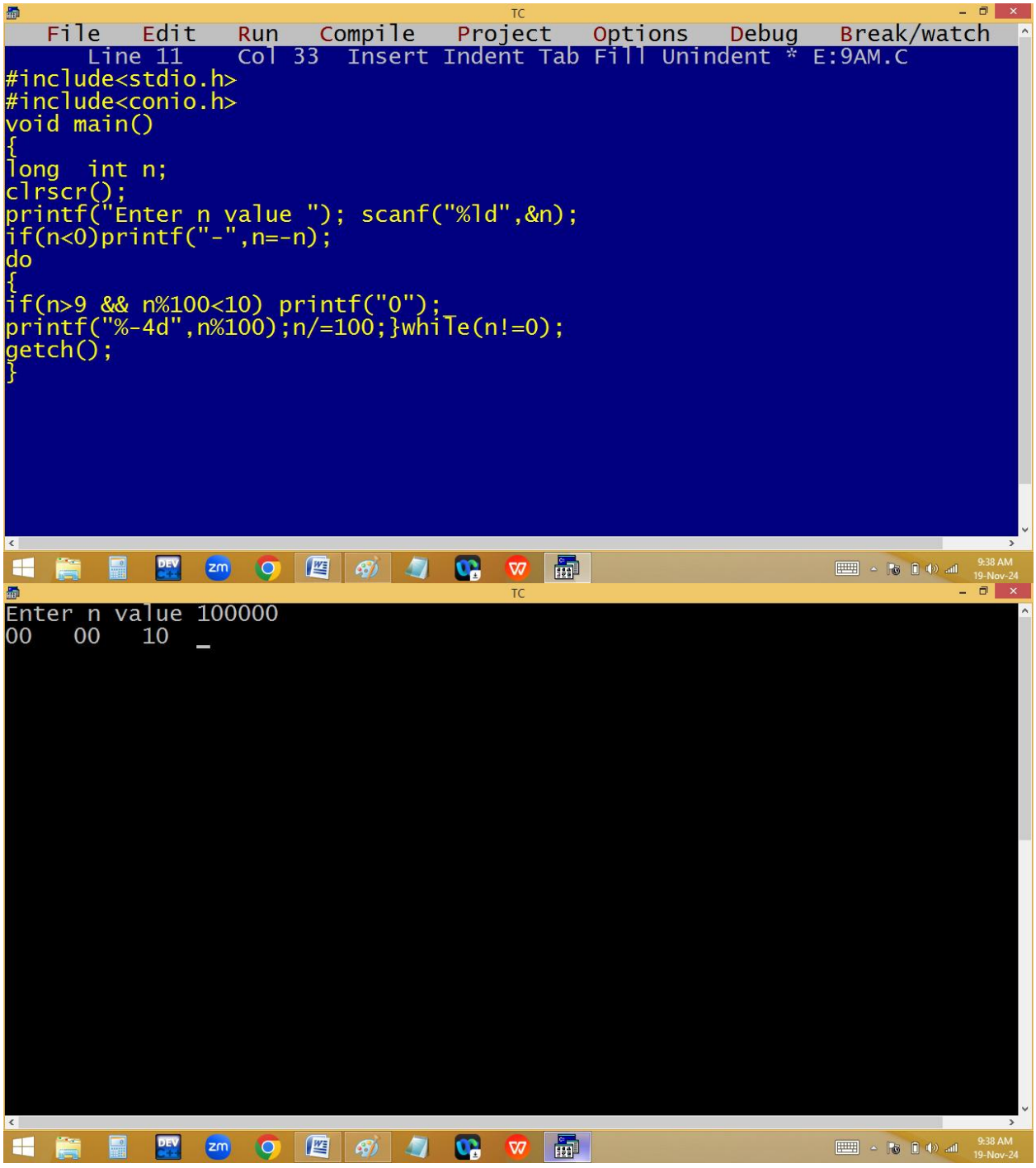

TC
File Edit Run Compile Project Options Debug Break/watch
Line 11 Col 33 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
long int n;
clrscr();
printf("Enter n value "); scanf("%ld",&n);
if(n<0)printf("-",n=-n);
do
{
if(n>9 && n%100<10) printf("0");
printf("%-4d",n%100);n/=100;}while(n!=0);
getch();
}
9:38 AM
19-Nov-24
TC
Enter n value 100000
00 00 10
9:38 AM
19-Nov-24

12345678 ==> 78 56 34 12

1234%100=34
1234/100=12

**Finding perfect no:** sum of factors is equal to given no.

6 factors are 1 + 2 + 3 = 6

28 factors are 1 + 2 + 4 + 7 + 14 = 28

6%1=0

6%2=0

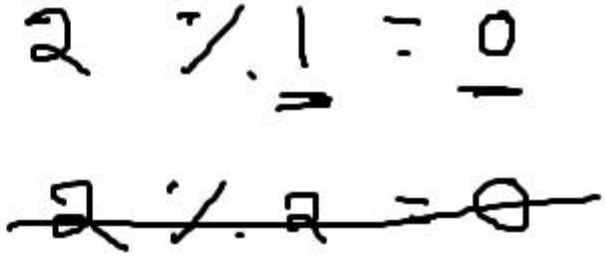
6%3=0

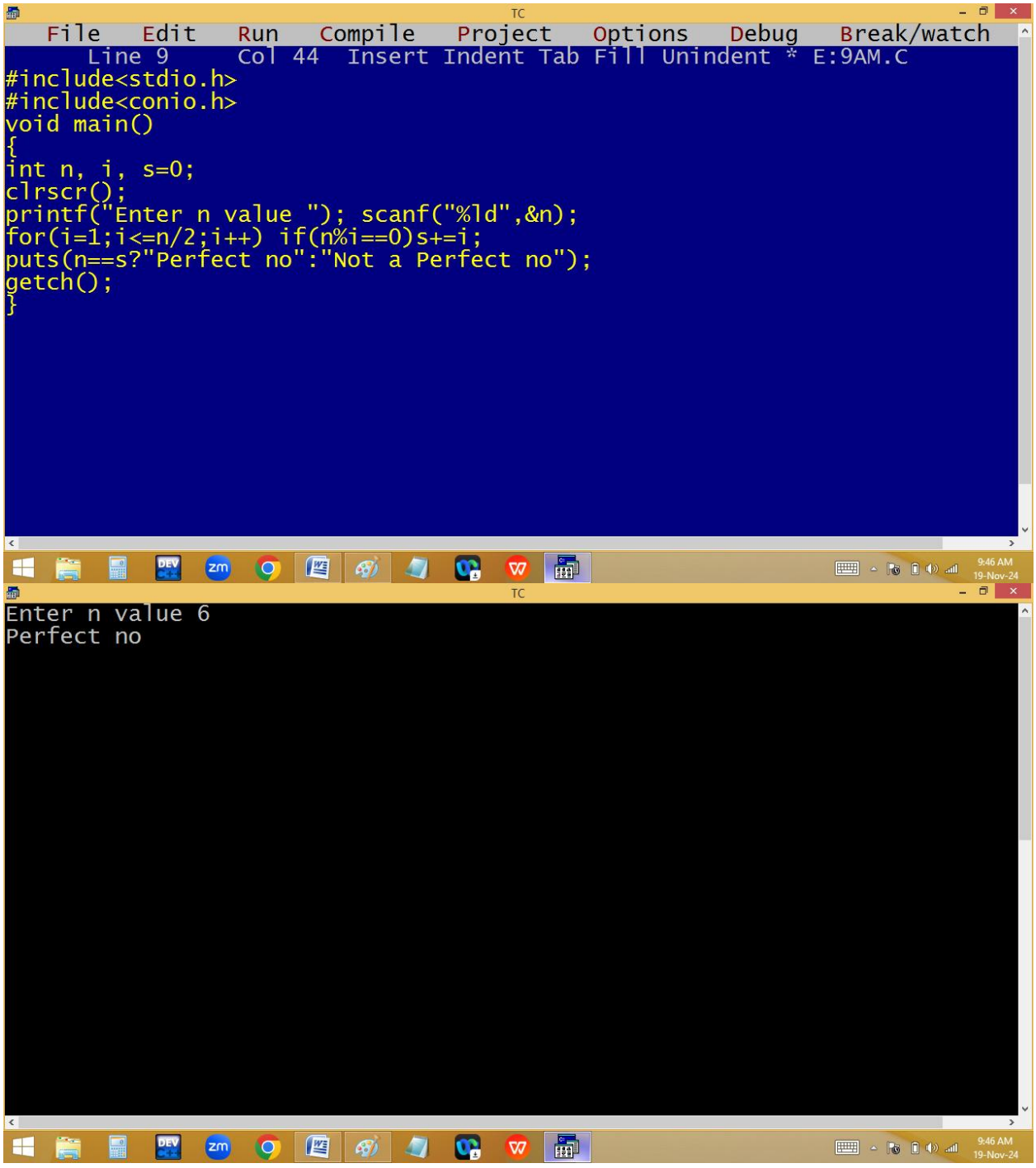
6%4=2

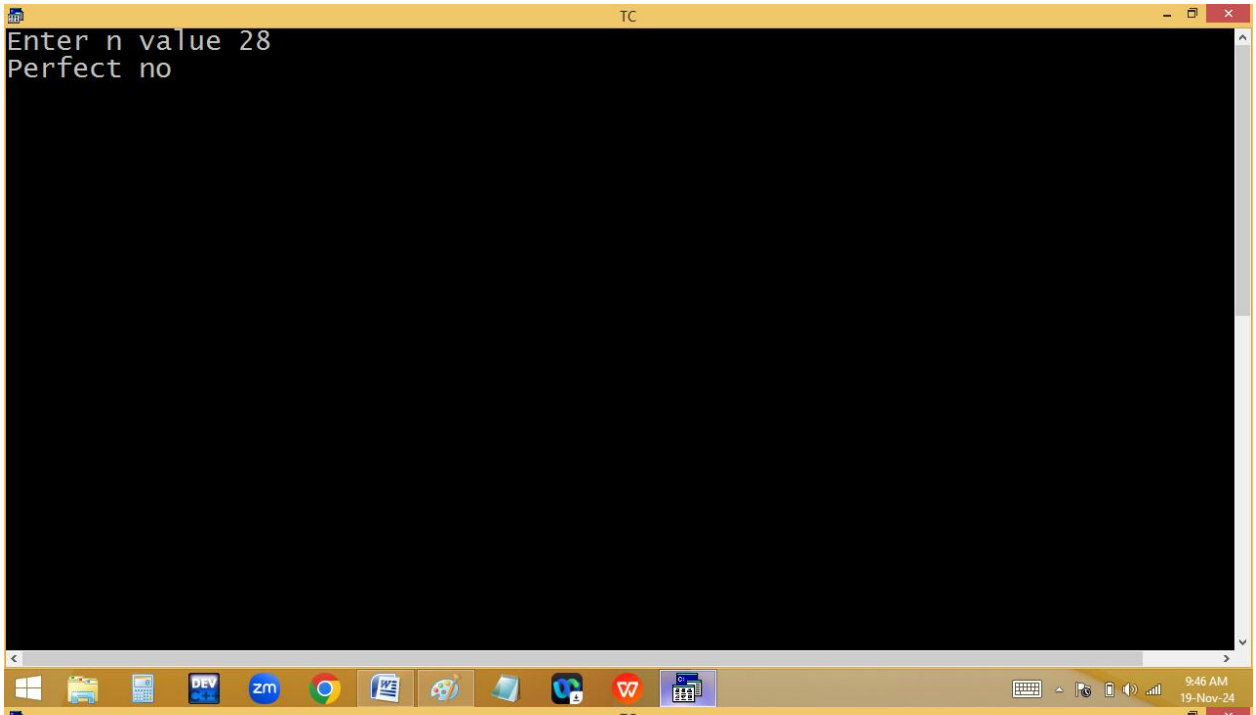
6%5=1

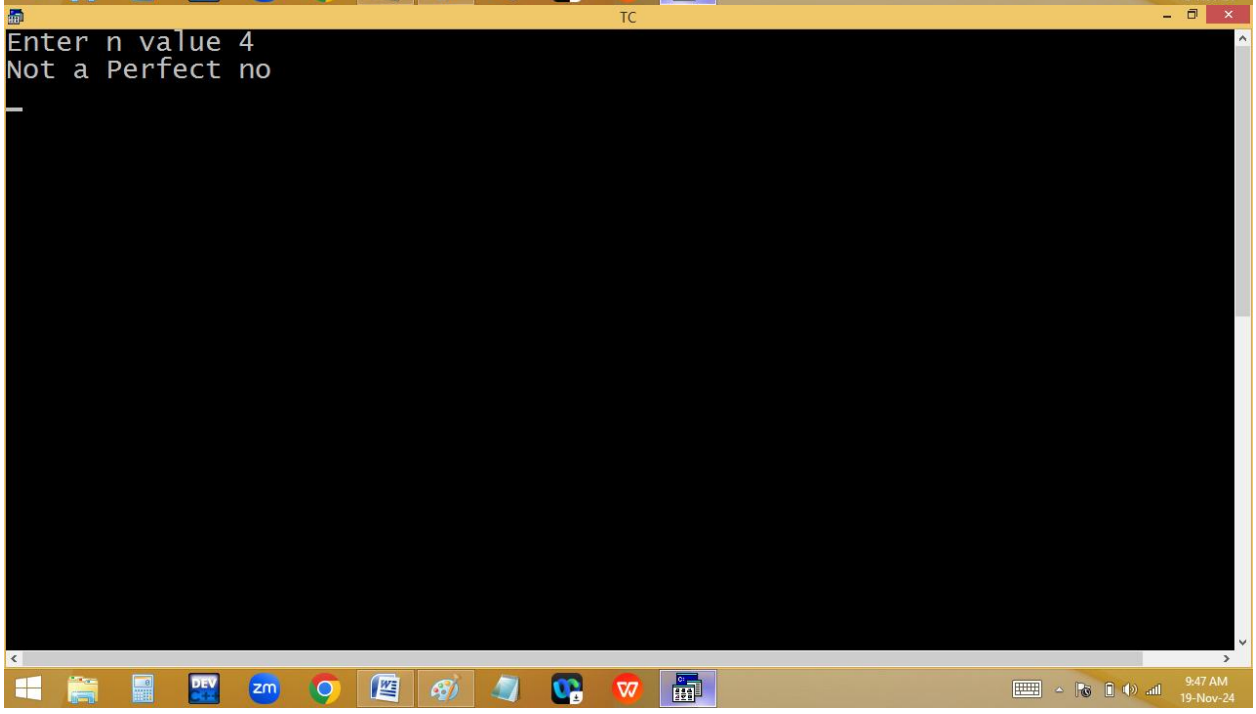
~~6%6=0~~

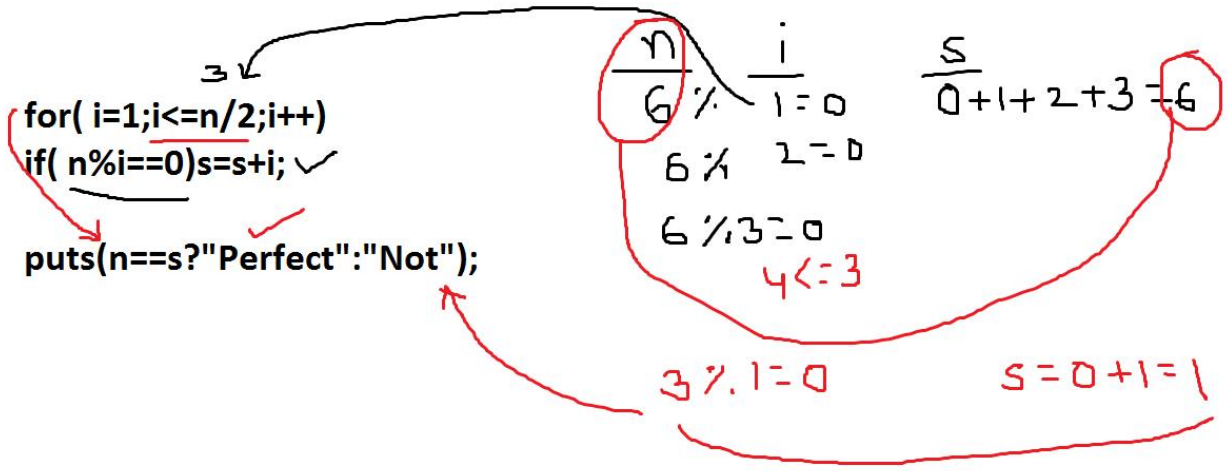
1+2+3=6




TC
File Edit Run Compile Project Options Debug Break/watch
Line 9 Col 44 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int n, i, s=0;
clrscr();
printf("Enter n value "); scanf("%ld",&n);
for(i=1;i<=n/2;i++) if(n%i==0)s+=i;
puts(n==s?"Perfect no":"Not a Perfect no");
getch();
}
TC
Enter n value 6
Perfect no


TC
Enter n value 28
Perfect no
9:46 AM
19-Nov-24


TC
Enter n value 4
Not a Perfect no
9:47 AM
19-Nov-24



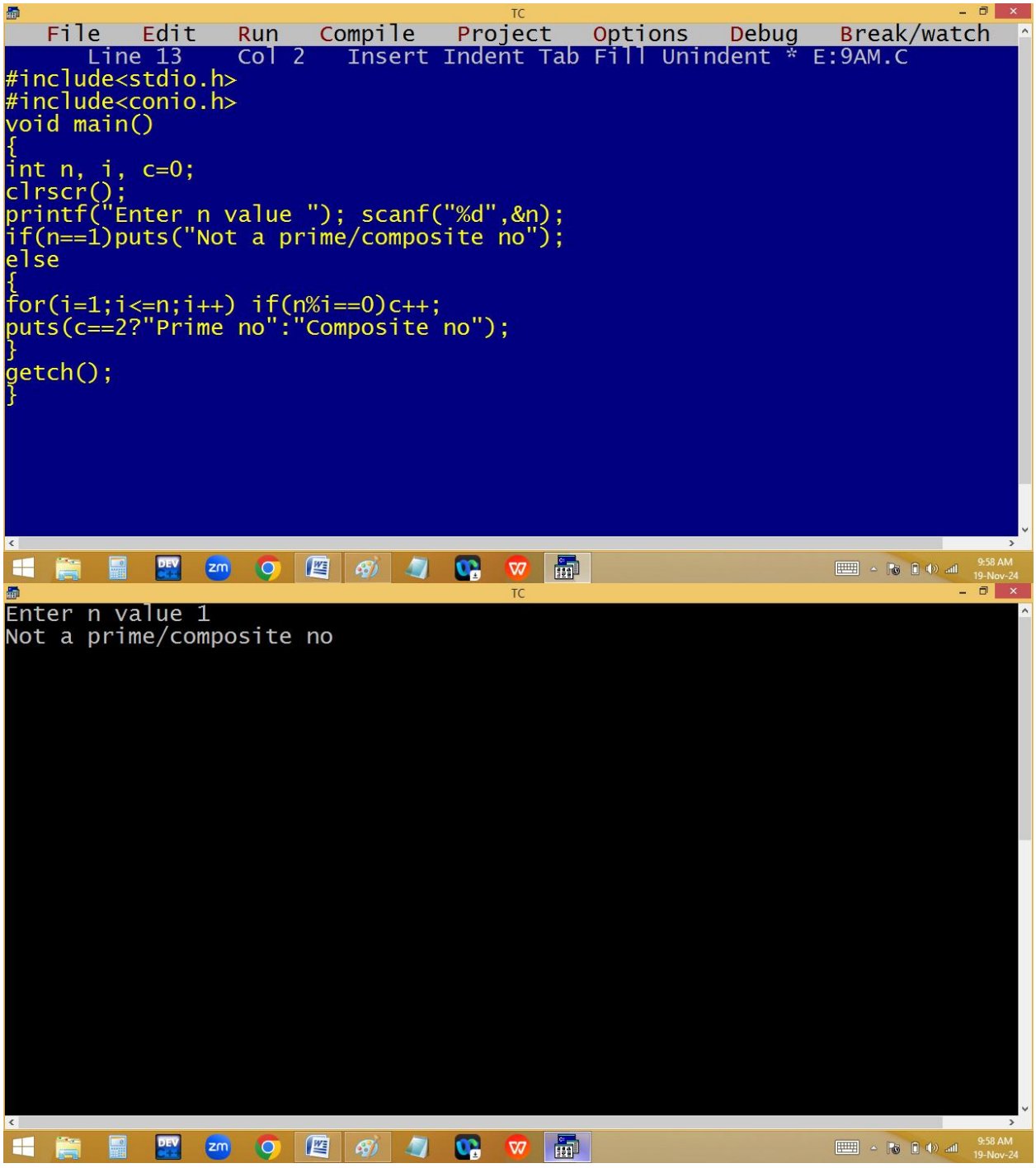

**Finding prime/composite no: When a no is having 2 factors it is a prime / the no divisible with 1 and itself is called prime.**

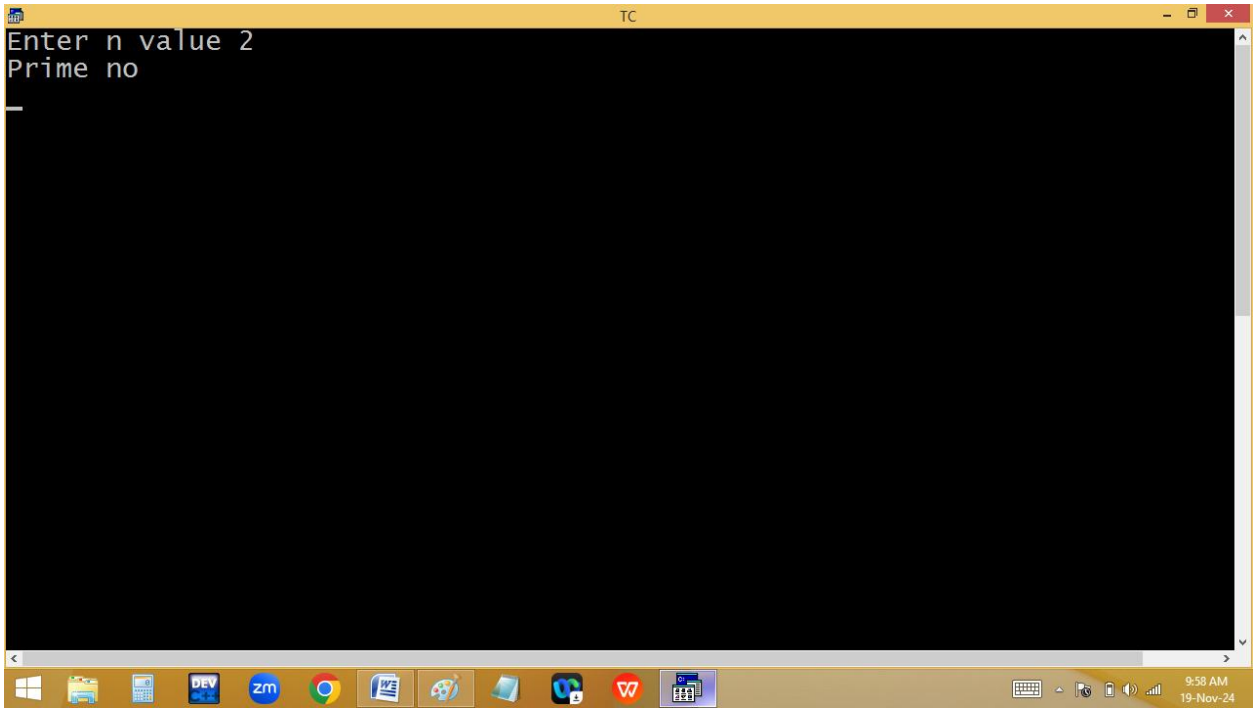
**2 factors are 1 and 2 → 2 factors ← prime**

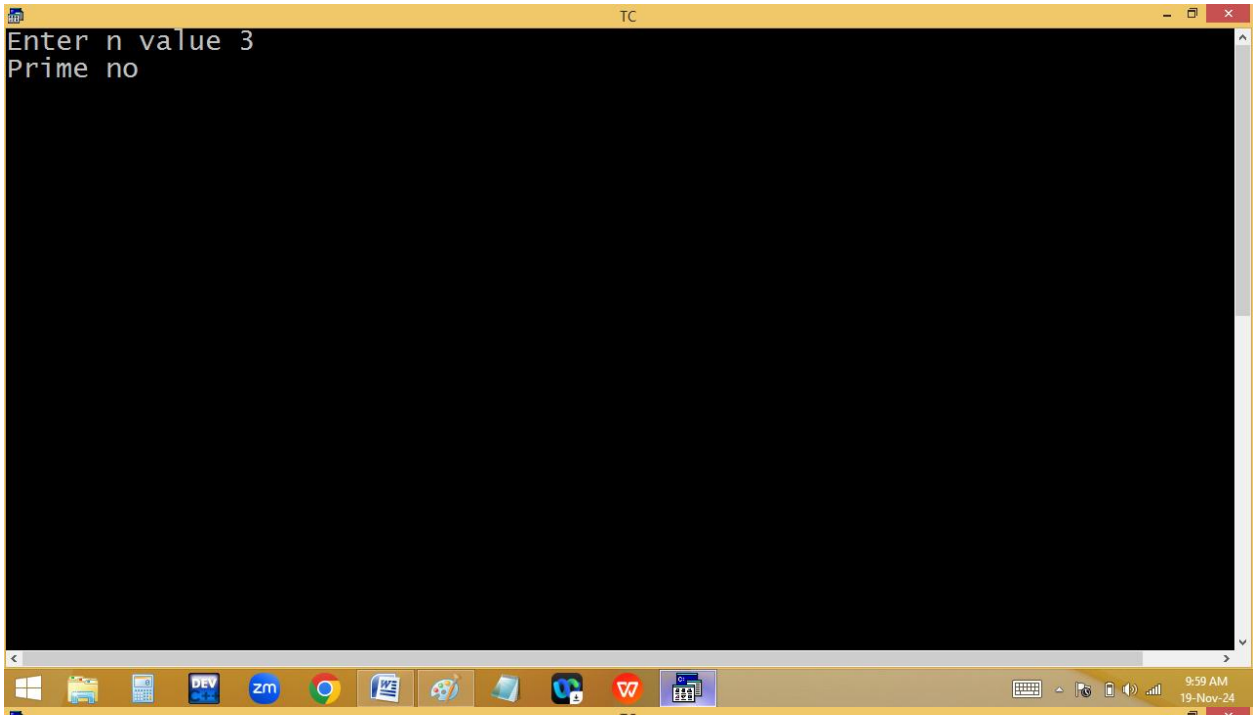
**3 factors are 1 and 3 → 2 factors ← prime**

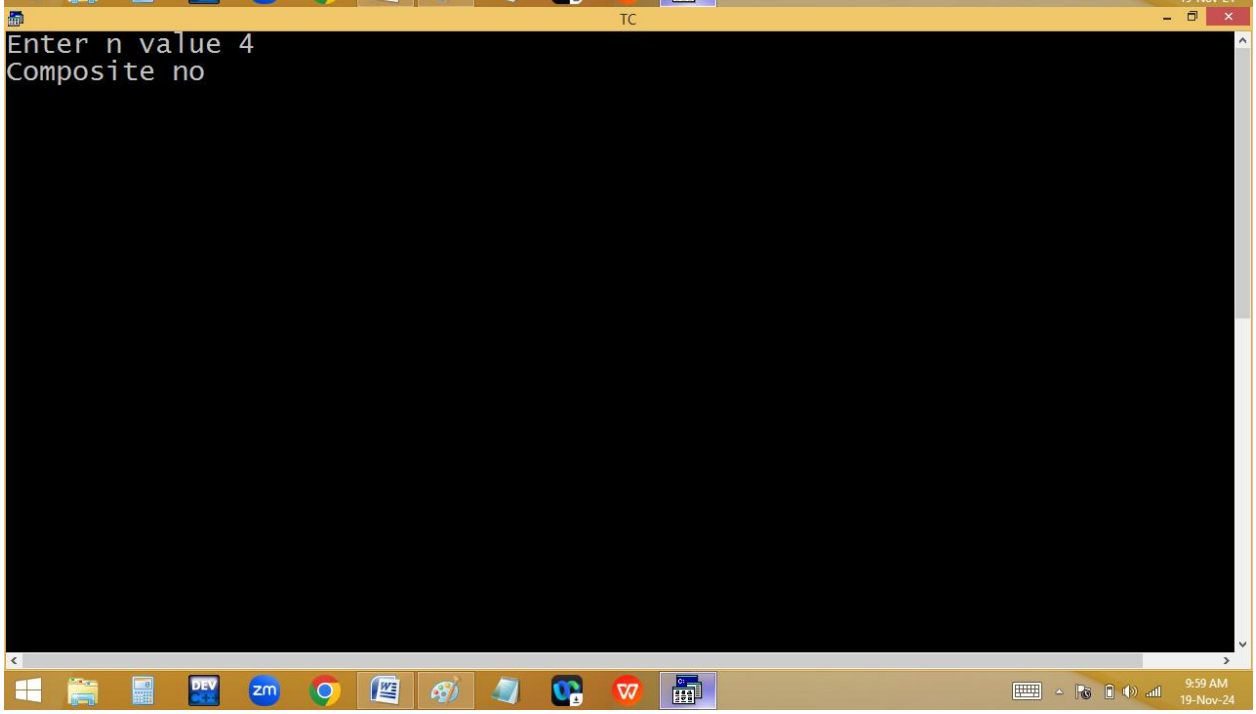
**4 factors are 1, 2, 4 → 3 factors ← composite no**

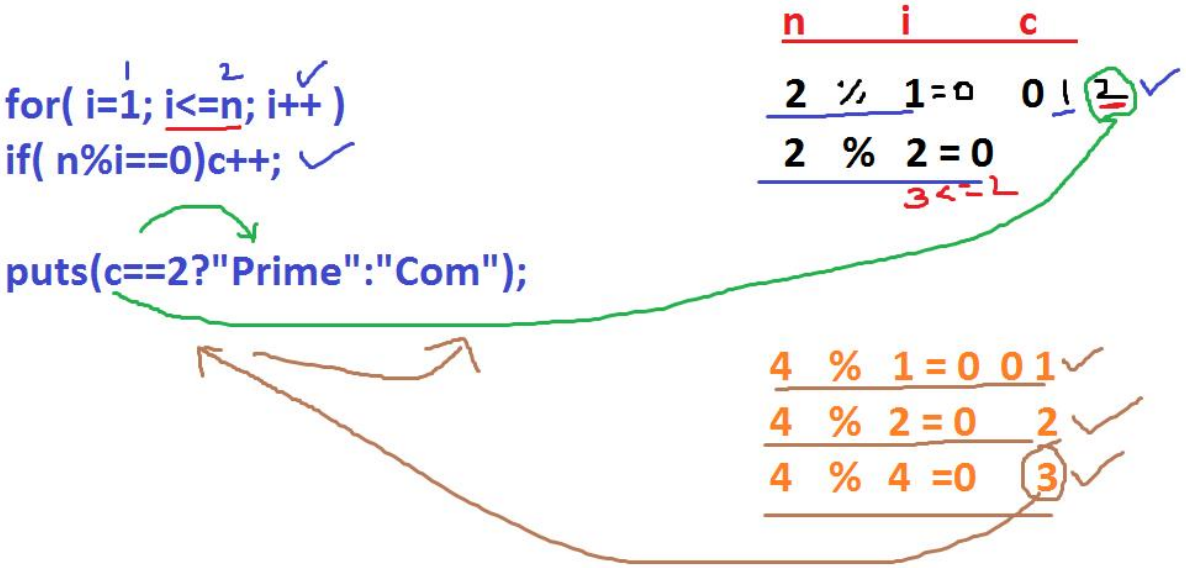
**1 divisible with 1 and itself also → not a prime/composite no**


TC
File Edit Run Compile Project Options Debug Break/watch
Line 13 Col 2 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int n, i, c=0;
clrscr();
printf("Enter n value "); scanf("%d",&n);
if(n==1)puts("Not a prime/composite no");
else
{
for(i=1;i<=n;i++) if(n%i==0)c++;
puts(c==2?"Prime no":"Composite no");
}
getch();
}
TC
Enter n value 1
Not a prime/composite no

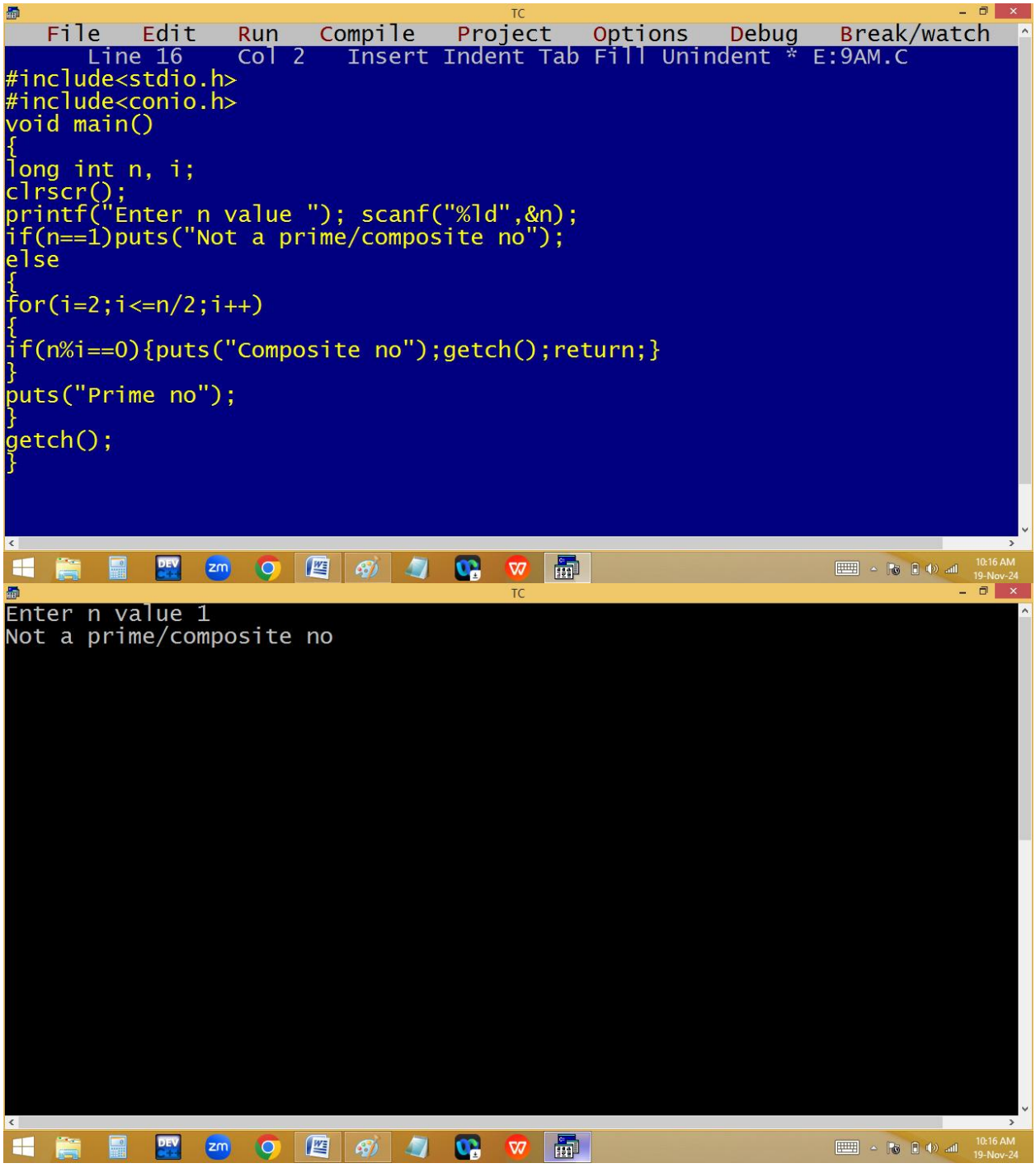

TC
Enter n value 2
Prime no
9:58 AM
19-Nov-24

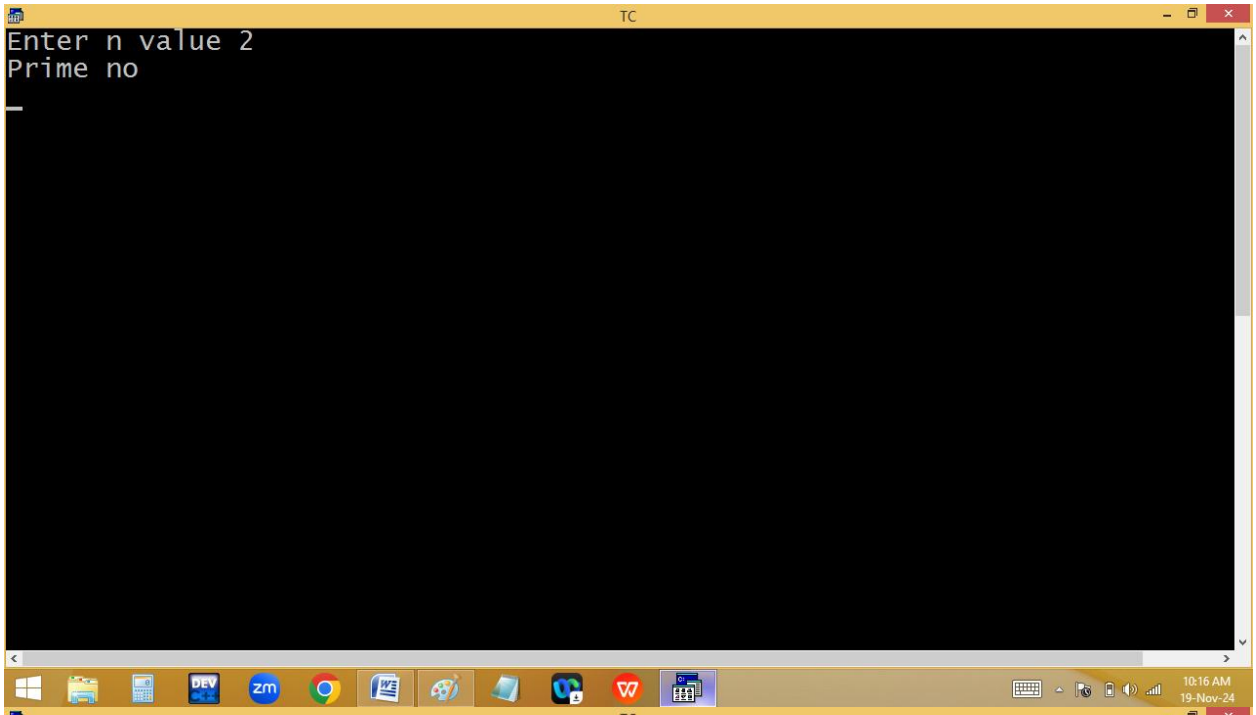

TC
Enter n value 3
Prime no
9:59 AM
19-Nov-24

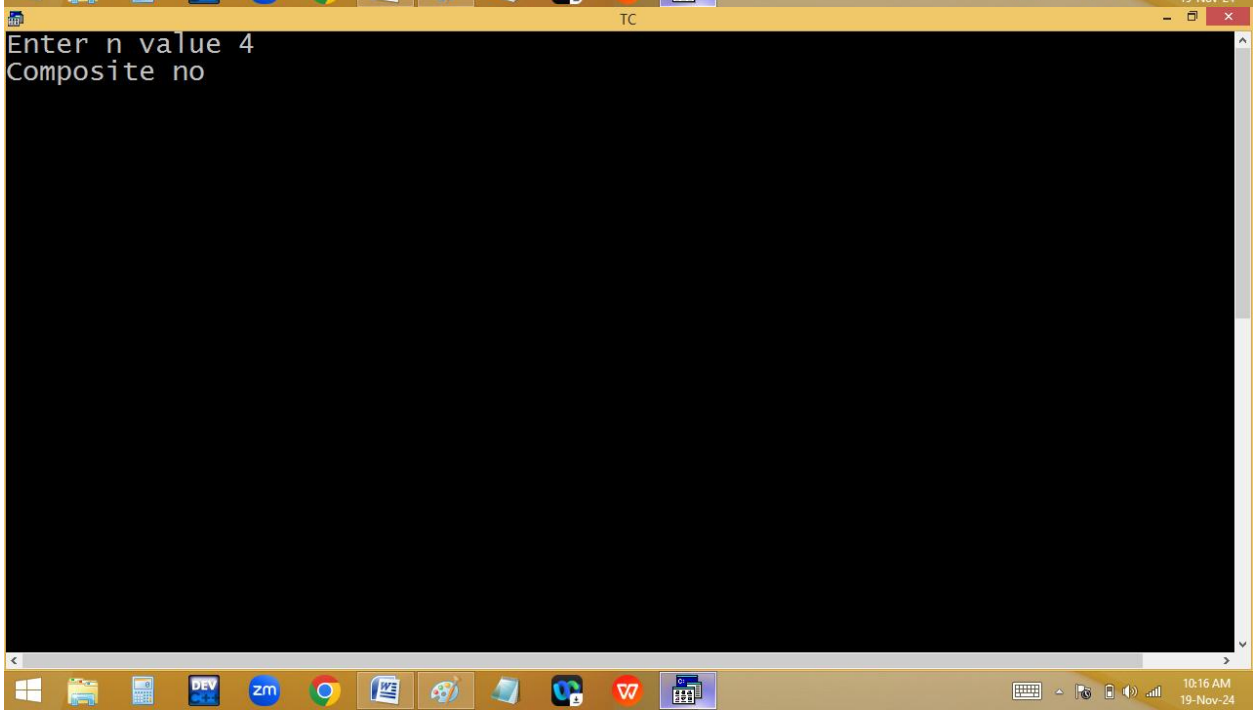

TC
Enter n value 4
Composite no
9:59 AM
19-Nov-24

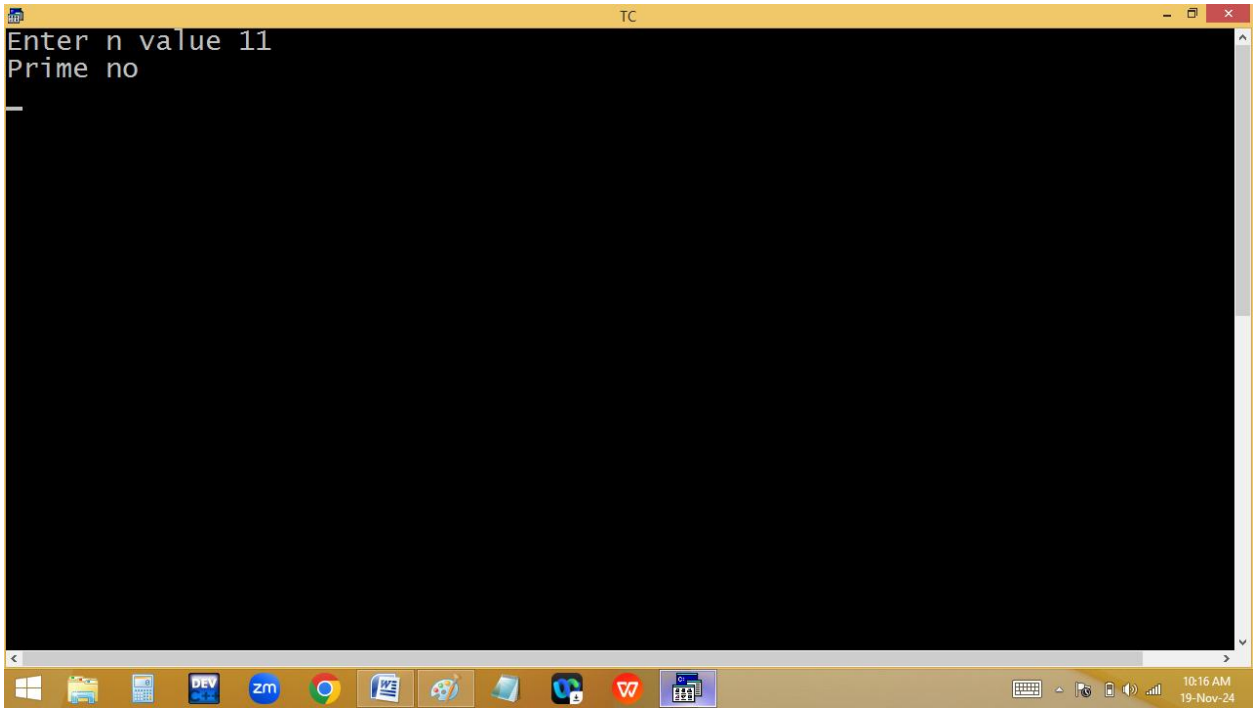

for( i=1; i<=n; i++ )
if( n%i==0)c++;
puts(c==2?"Prime":"Com");
n i c
2 % 1=0 0 1
2 % 2 = 0
3<=2
4 % 1 = 0 0 1
4 % 2 = 0 2
4 % 4 =0 3

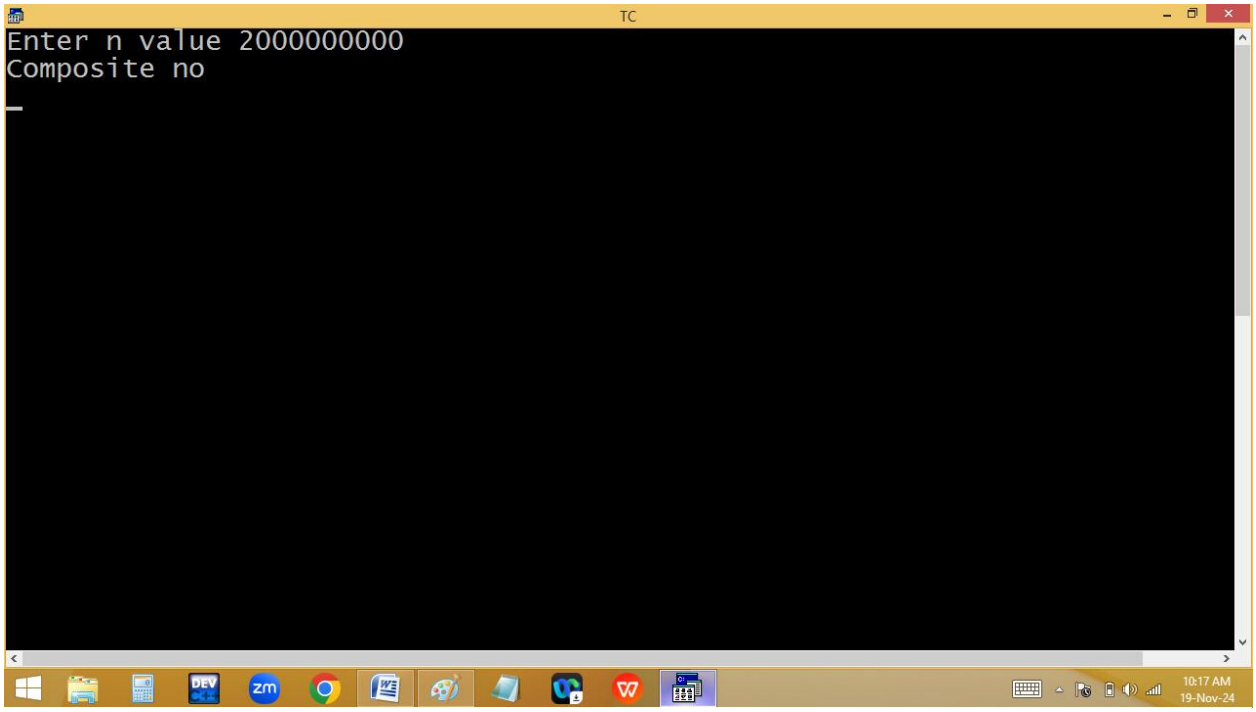
## Method2:


TC
File Edit Run Compile Project Options Debug Break/watch
Line 16 Col 2 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
long int n, i;
clrscr();
printf("Enter n value "); 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();
}
TC
Enter n value 1
Not a prime/composite no


TC
Enter n value 2
Prime no
10:16 AM
19-Nov-24


TC
Enter n value 4
Composite no
10:16 AM
19-Nov-24


TC
Enter n value 11
Prime no
10:16 AM
19-Nov-24




10 - 1 2 5 10

20 - 1 2 4 5 10 20

100 - 1 2 4 5 10 20 25 50 100

5 - 1 5

```
for( i=2; i<=n/2;i++)
{
if( n%i==0 ) {p(com); return;}
}
p(prime);
```

n

10%2=0

11%2=1

11%3=2

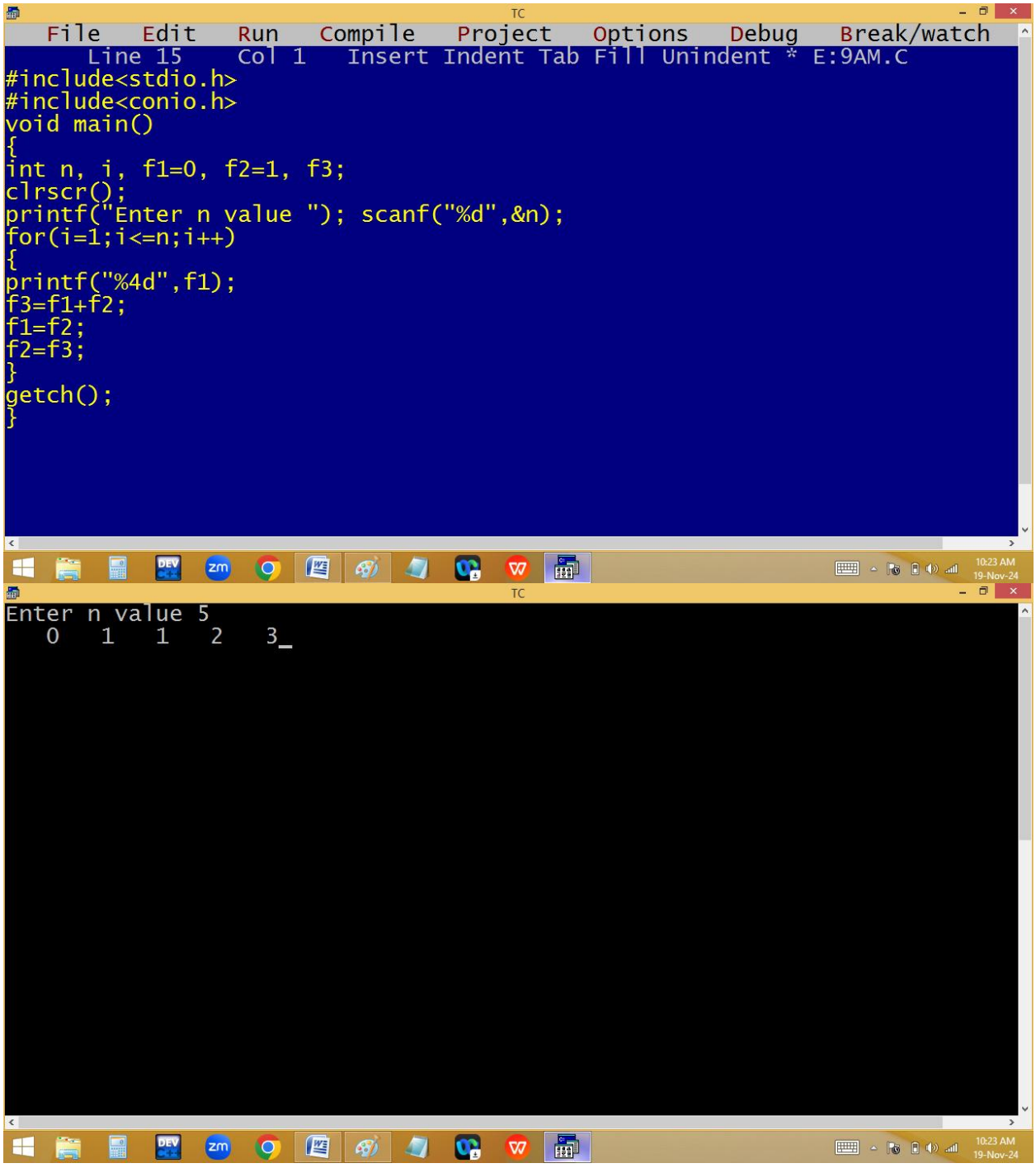
11%4=3

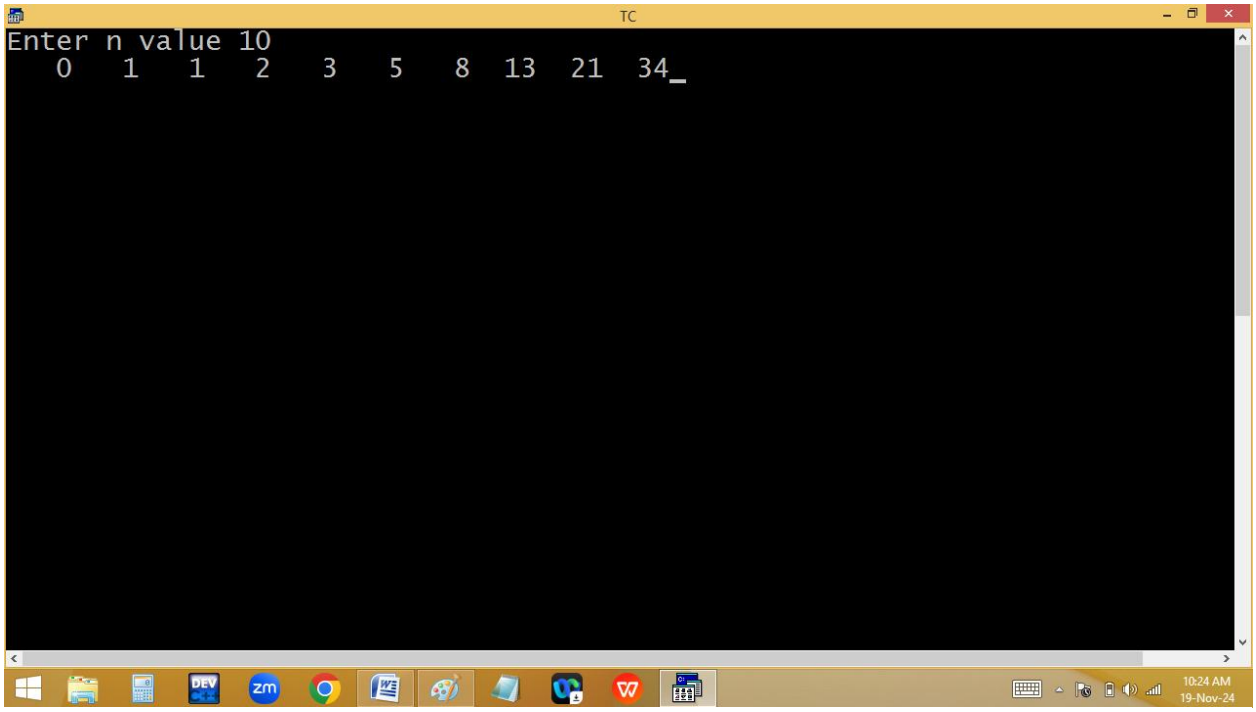
11%5=1

6<=11/2=5

## Fibonacci series:

**n=5 ➔ 0 1 1 2 3**


TC
File Edit Run Compile Project Options Debug Break/watch
Line 15 Col 1 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int n, i, f1=0, f2=1, f3;
clrscr();
printf("Enter n value "); scanf("%d",&n);
for(i=1;i<=n;i++)
{
printf("%4d",f1);
f3=f1+f2;
f1=f2;
f2=f3;
}
getch();
}
TC
Enter n value 5
0 1 1 2 3



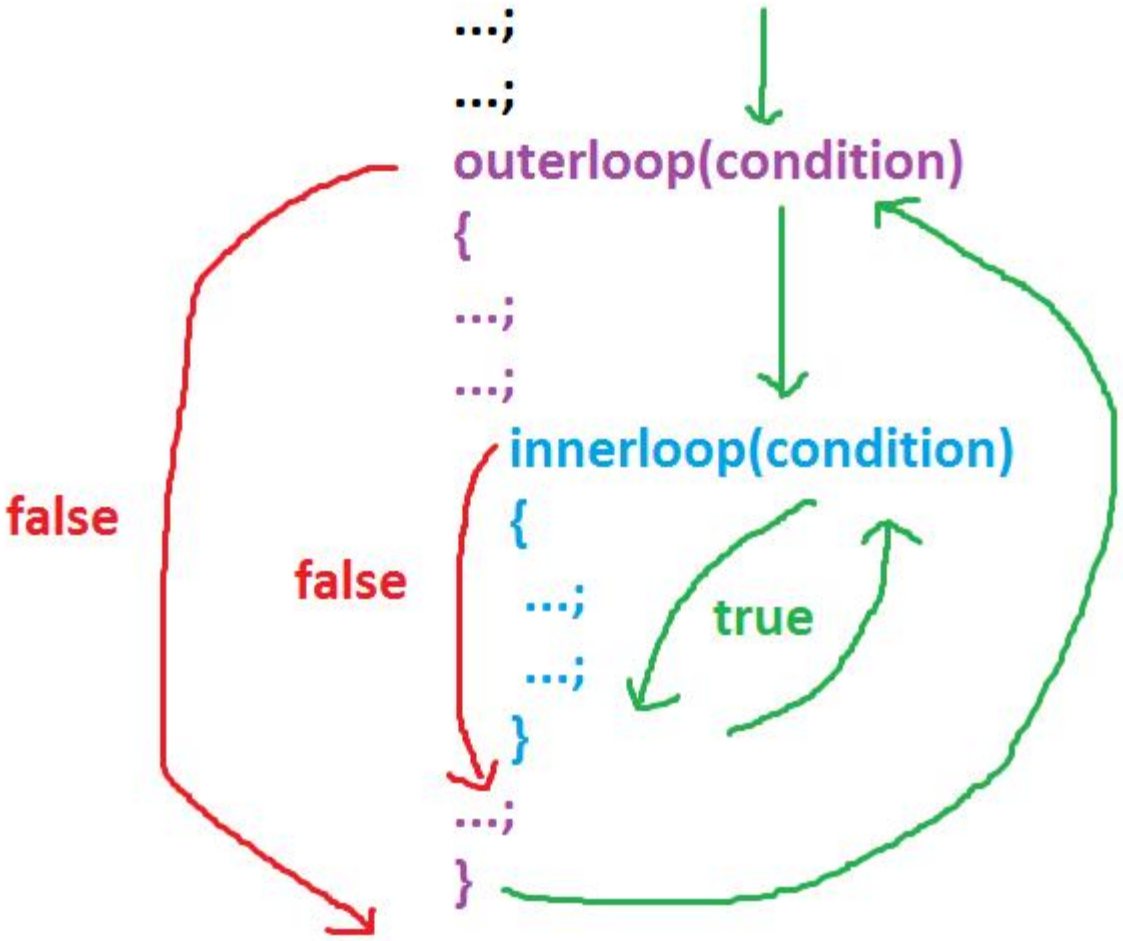

| i<=n |
|---|
| 1 |
| 5 |

| f1 | | f2 | | f3 |
|---|---|---|---|---|
| ✓ 0 | + | 1 | = | 1 |
| ✓ 1 | + | 1 | = | 2 |
| ✓ 1 | + | 2 | = | 3 |
| ✓ 2 | + | 3 | = | 5 |
| ✓ 3 | | 5 | | |

```
for( i=1; i<=n; i++ )
{
p(f1); ✓
f3=f1+f2;
f1=f2; f2=f3;
}
```

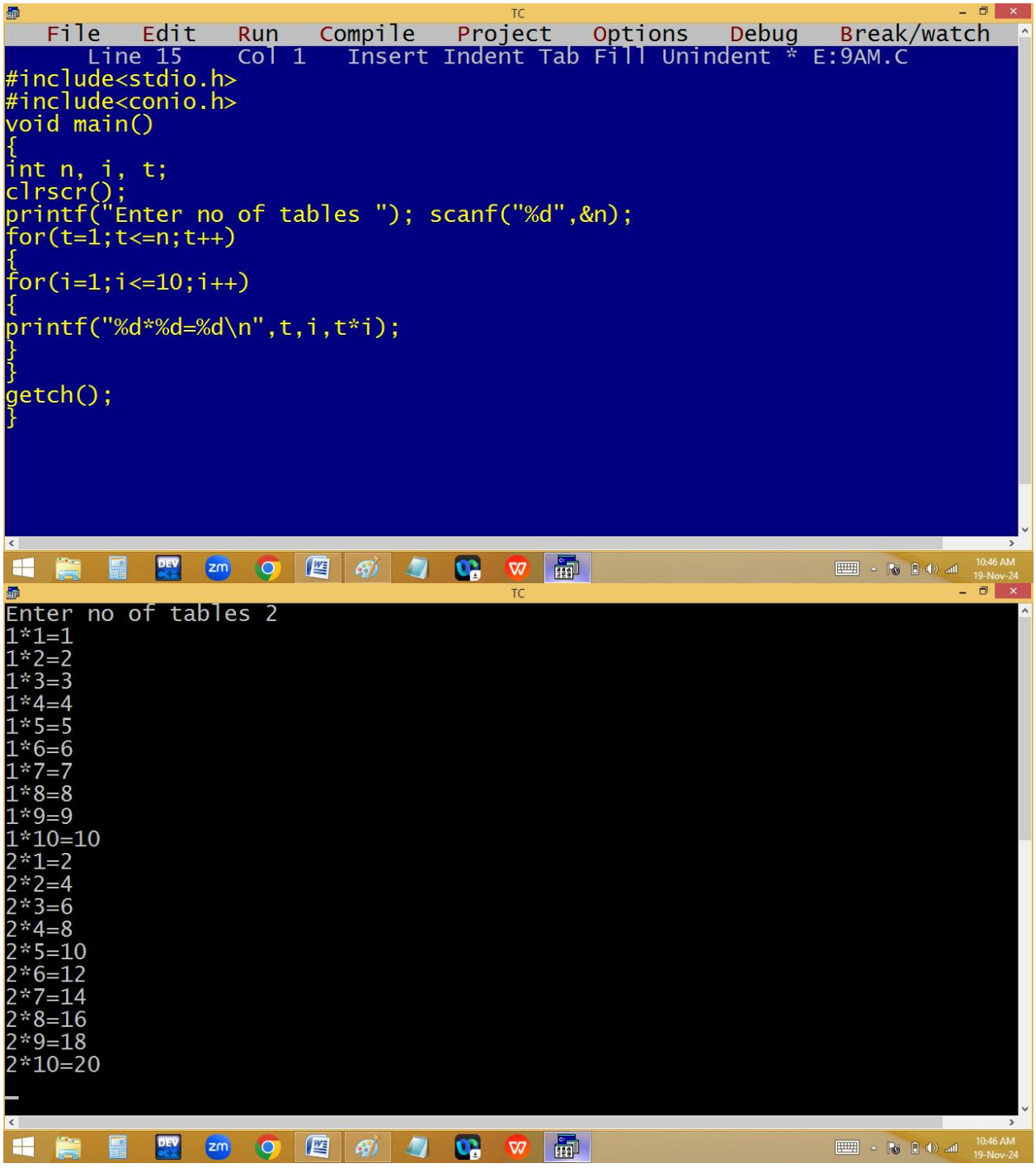
0 1 1 2 3

# Nested loops: Loop within loop




**Printing n tables:**

**3 tables**




# Home work: Tables side by side