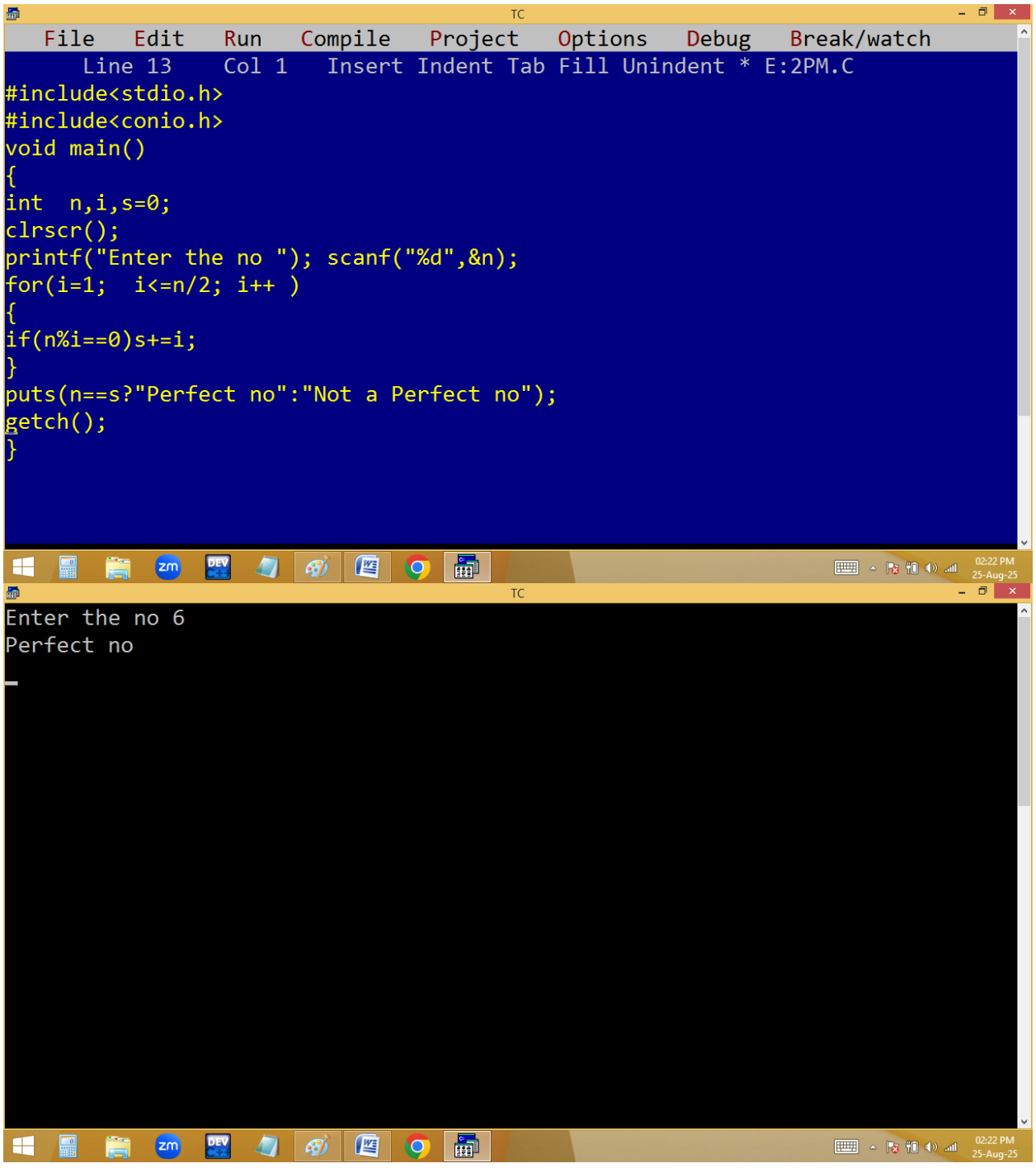
Finding perfect no or not?

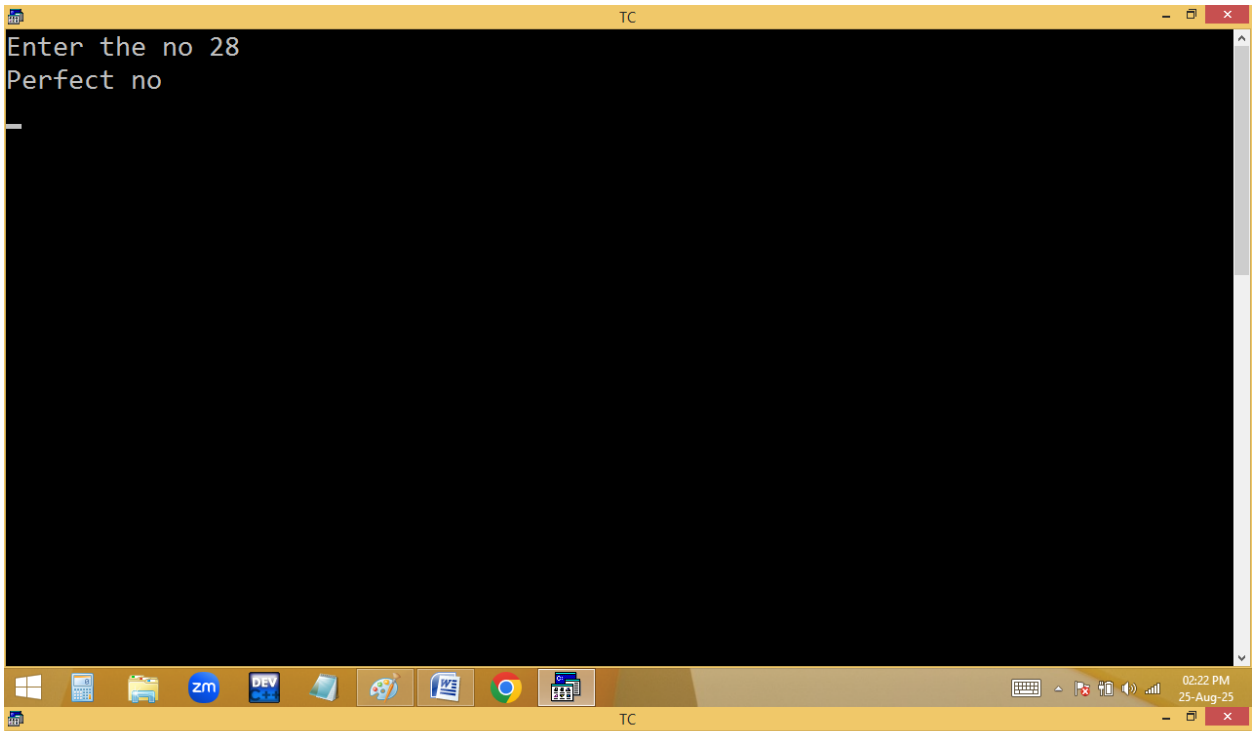
Sum of factors is equal to given no

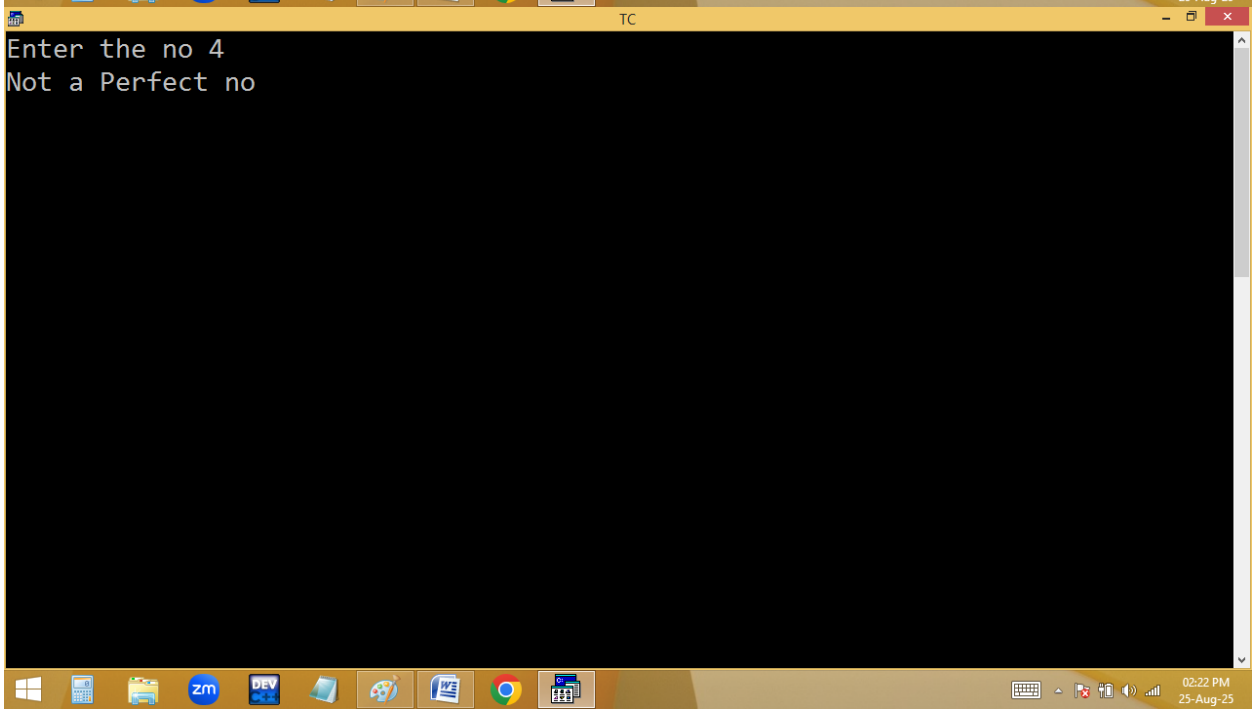
6 factors sum is 1+2+3=6

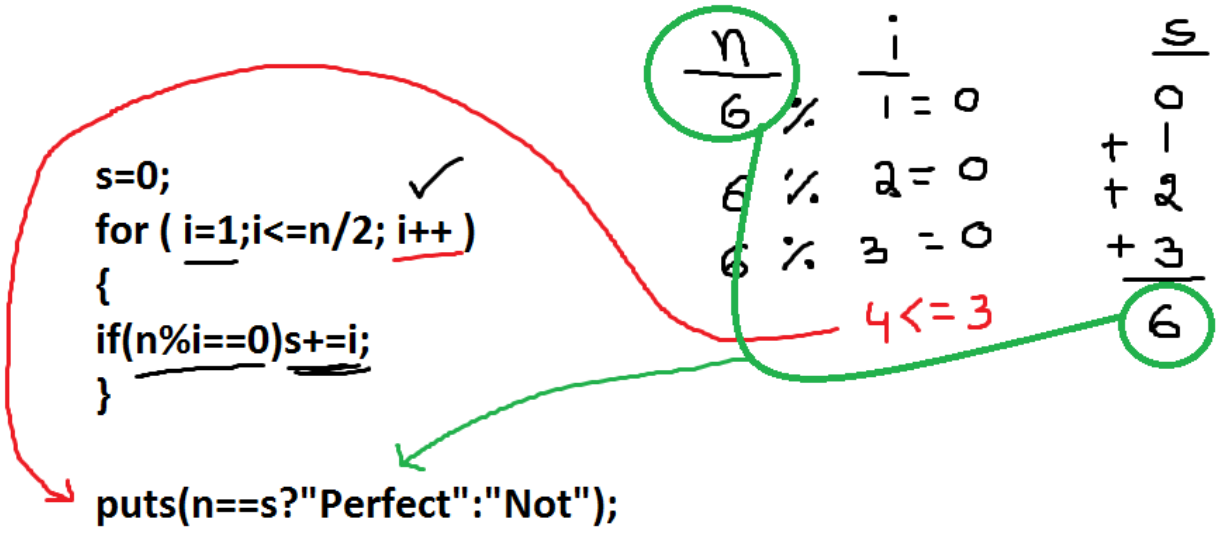
28 factors sum is 1+2+4+7+14=28

4 factors are 1+2=3 ← not a perfect no


TC
File Edit Run Compile Project Options Debug Break/watch
Line 13 Col 1 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int n,i,s=0;
clrscr();
printf("Enter the no "); scanf("%d",&n);
for(i=1; i<=n/2; i++)
{
if(n%i==0)s+=i;
}
puts(n==s?"Perfect no":"Not a Perfect no");
getch();
}
02:22 PM
25-Aug-25
TC
Enter the no 6
Perfect no
02:22 PM
25-Aug-25


TC
Enter the no 28
Perfect no
02:22 PM
25-Aug-25


TC
Enter the no 4
Not a Perfect no
02:22 PM
25-Aug-25



Finding prime/ composite no?

When a no is having only 2 factors then it is a prime

Or

The no divisible with 1 and itself only is a prime.

1%1=0 ← composite no

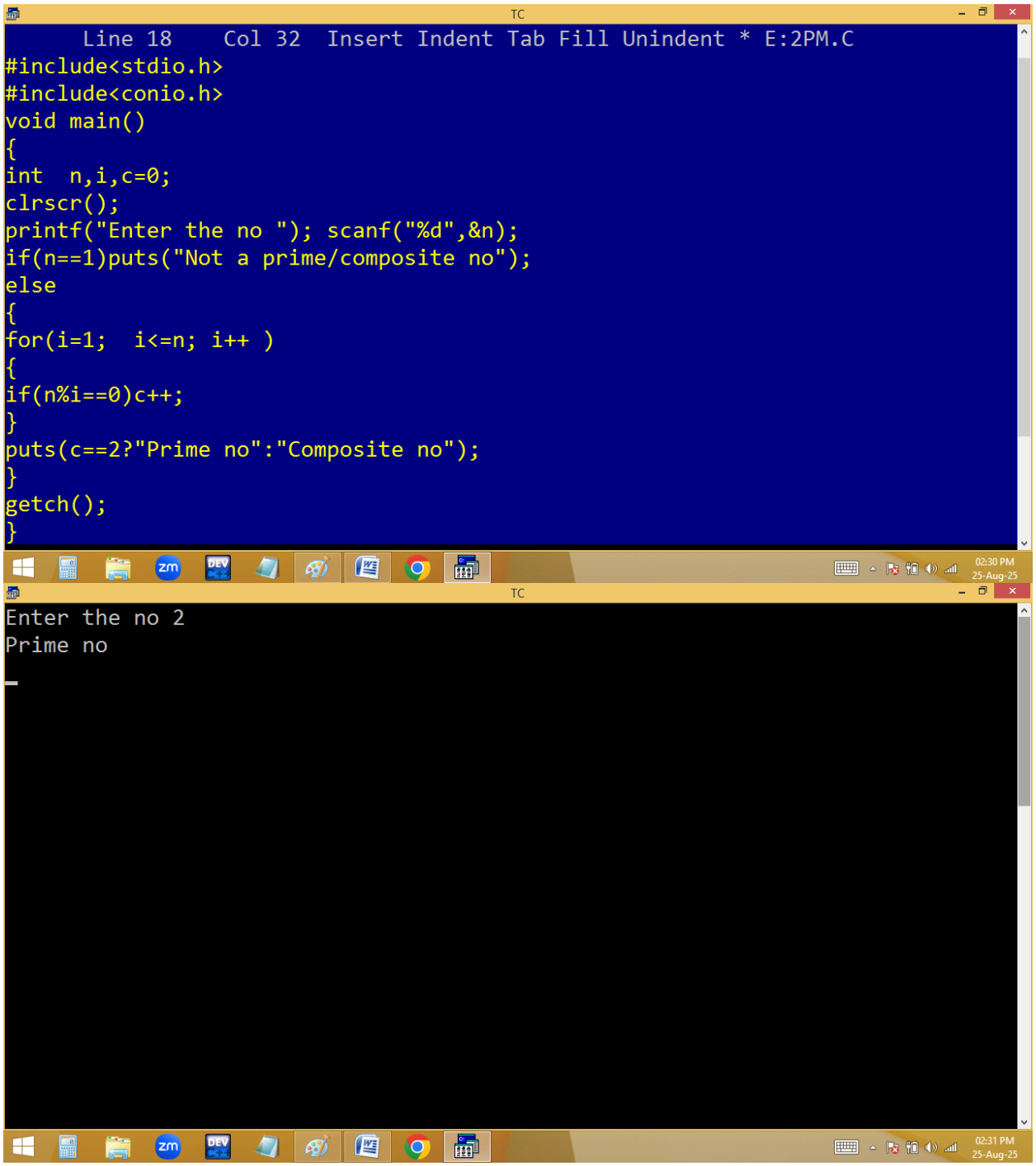
1%1=0

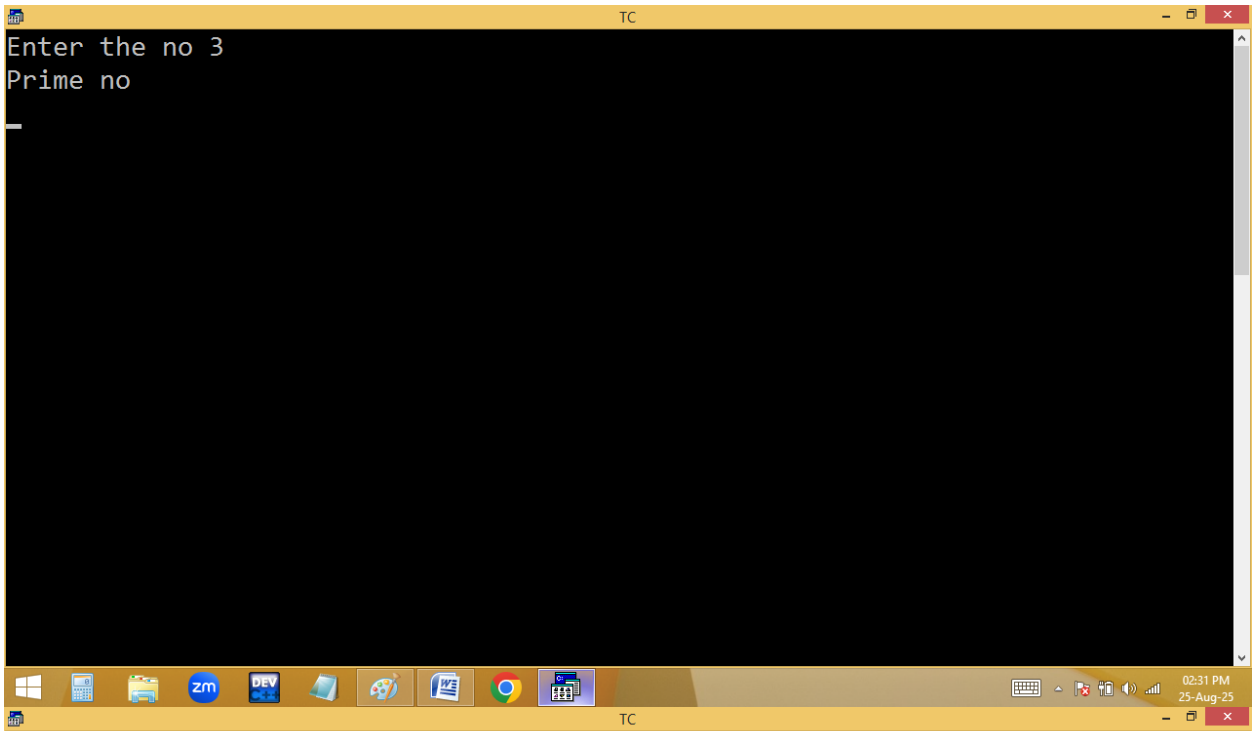
1%1=0 ← prime no

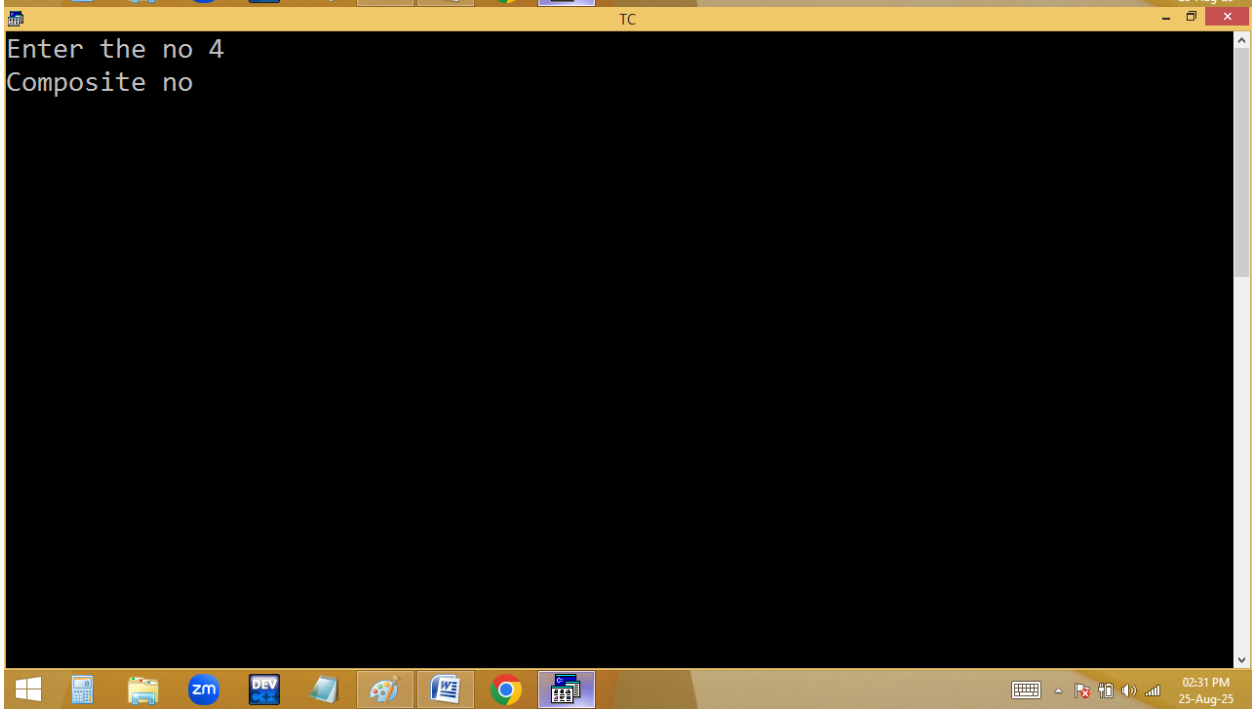
2 factors are 1, 2

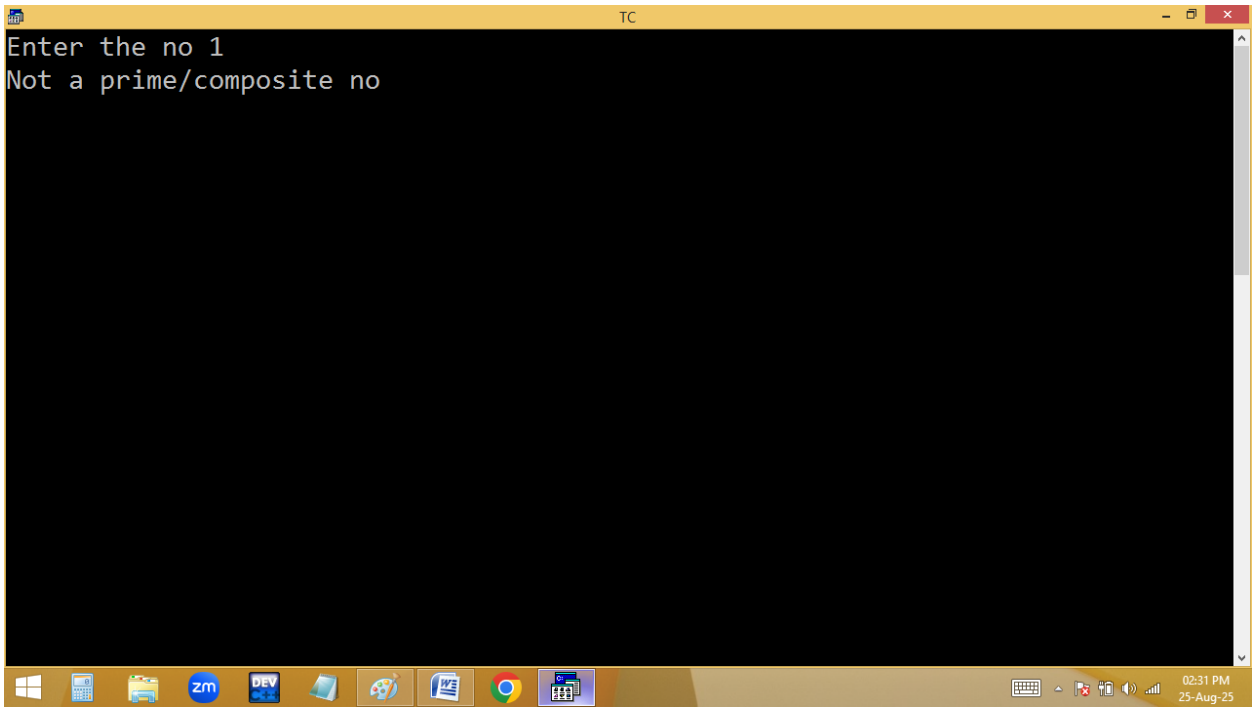
3 factors are 1, 3

4 factors are 1, 2, 4 ← composite no




TC
Enter the no 3
Prime no
02:31 PM
25-Aug-25


TC
Enter the no 4
Composite no
02:31 PM
25-Aug-25

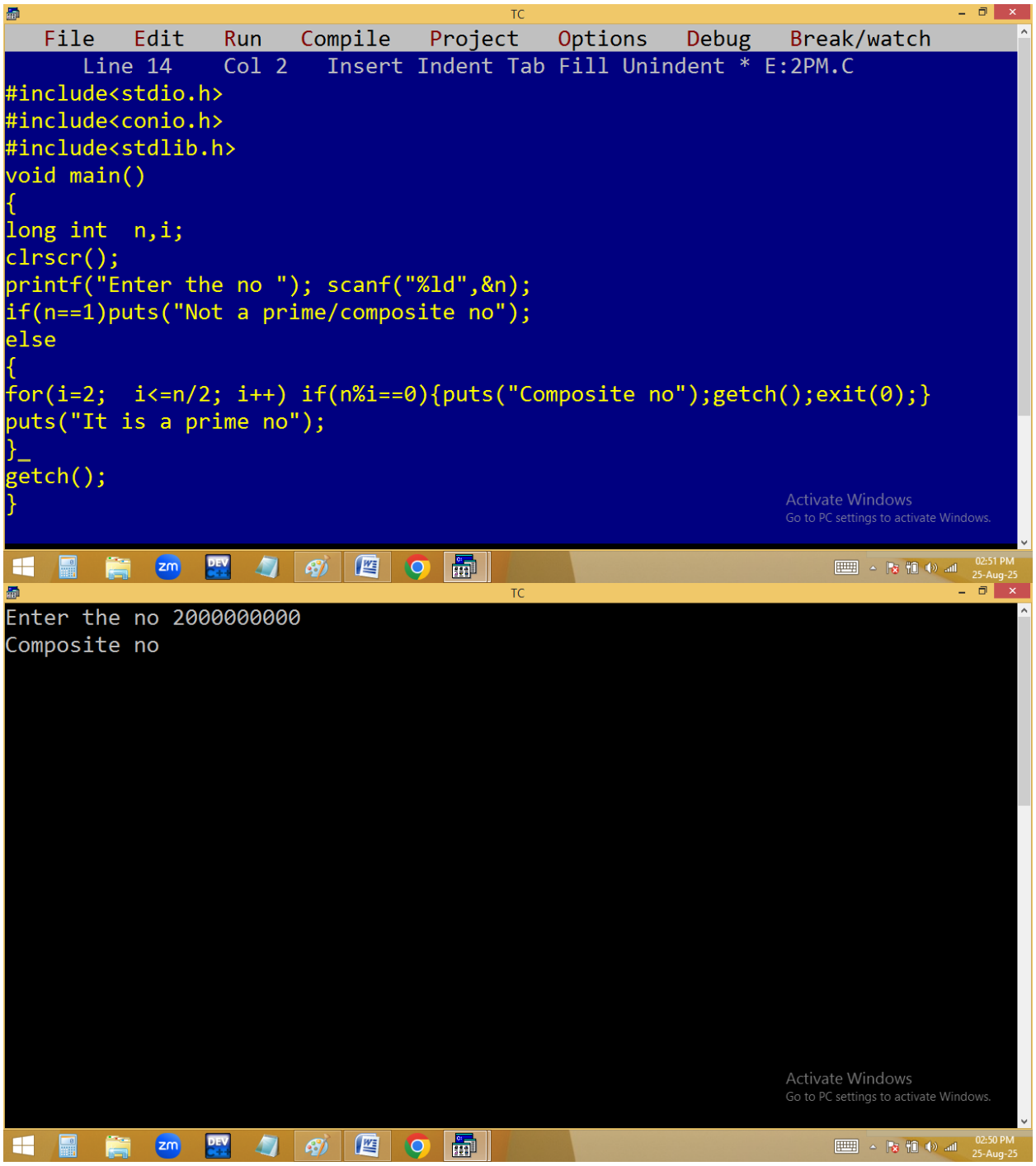


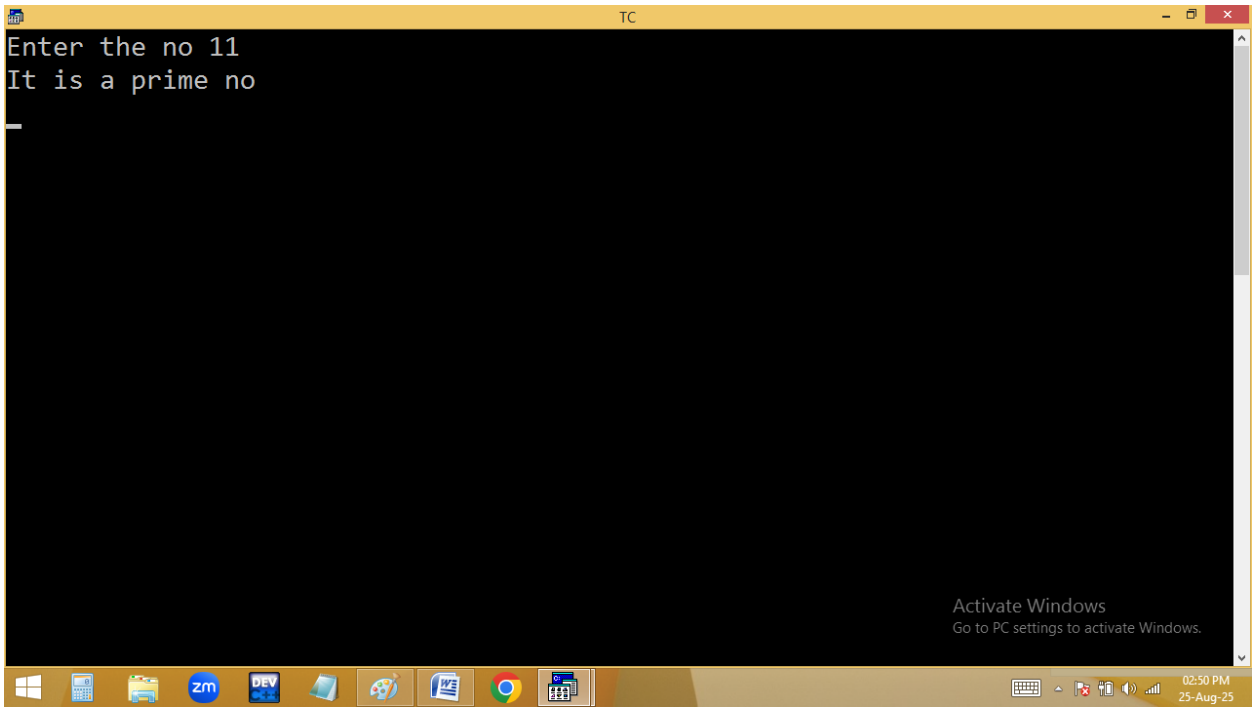

```
c =0;
for ( i=1;i<=n   ; i++ )
{
if(n%i==0) c++;
}

puts(c==2?" prime ":"Not");
```

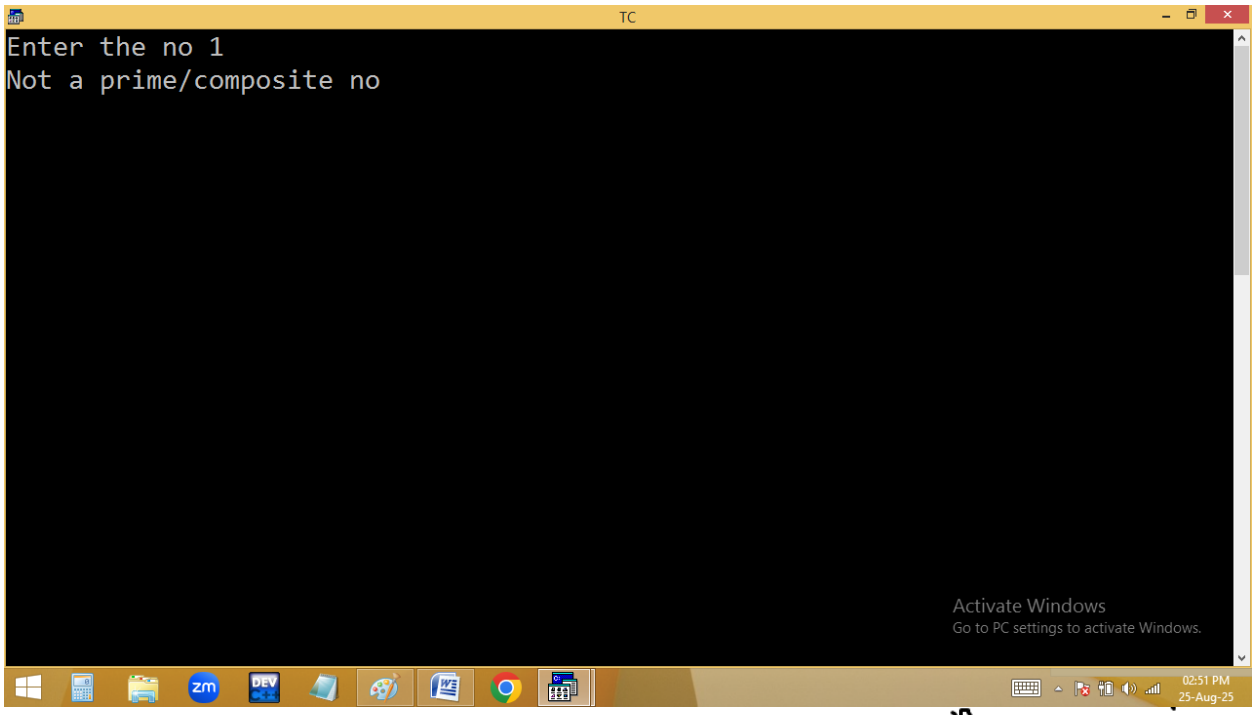
n	i	c
6	1 = 0	1
6	2 = 0	2
6	3 = 0	3
6	6 = 0	4

n	i	c
5	1=0	0
5	2=1	1
5	3=2	2
5	4=1	
5	5=0	

Method2:


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>
#include<stdlib.h>
void main()
{
long int n,i;
clrscr();
printf("Enter the 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();exit(0);}
puts("It is a prime no");
}_
getch();
}
Activate Windows
Go to PC settings to activate Windows.
02:51 PM
25-Aug-25
TC
Enter the no 2000000000
Composite no
Activate Windows
Go to PC settings to activate Windows.
02:50 PM
25-Aug-25


TC
Enter the no 11
It is a prime no
Activate Windows
Go to PC settings to activate Windows.
02:50 PM
25-Aug-25



10 ==> ~~1~~ 2 5 ~~10~~

100 ==> ~~1~~ 2 4 5 10 20 25 50 ~~100~~

5 ==> ~~1~~ ~~5~~

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

n / i

2000000000 % 2 = 0

11 % 2 = 1

11 % 3 = 2

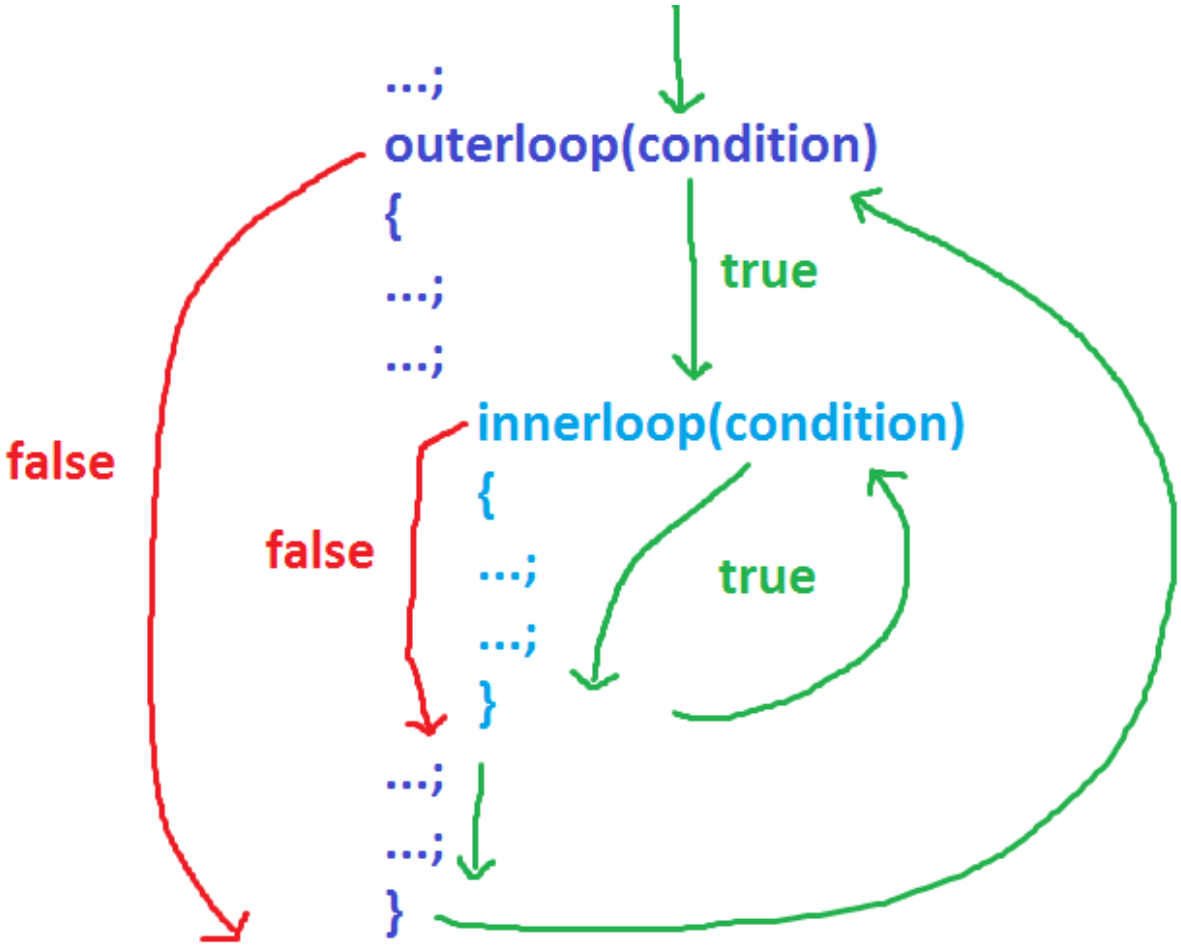
11 % 4 = 3

11 % 5 = 1

6

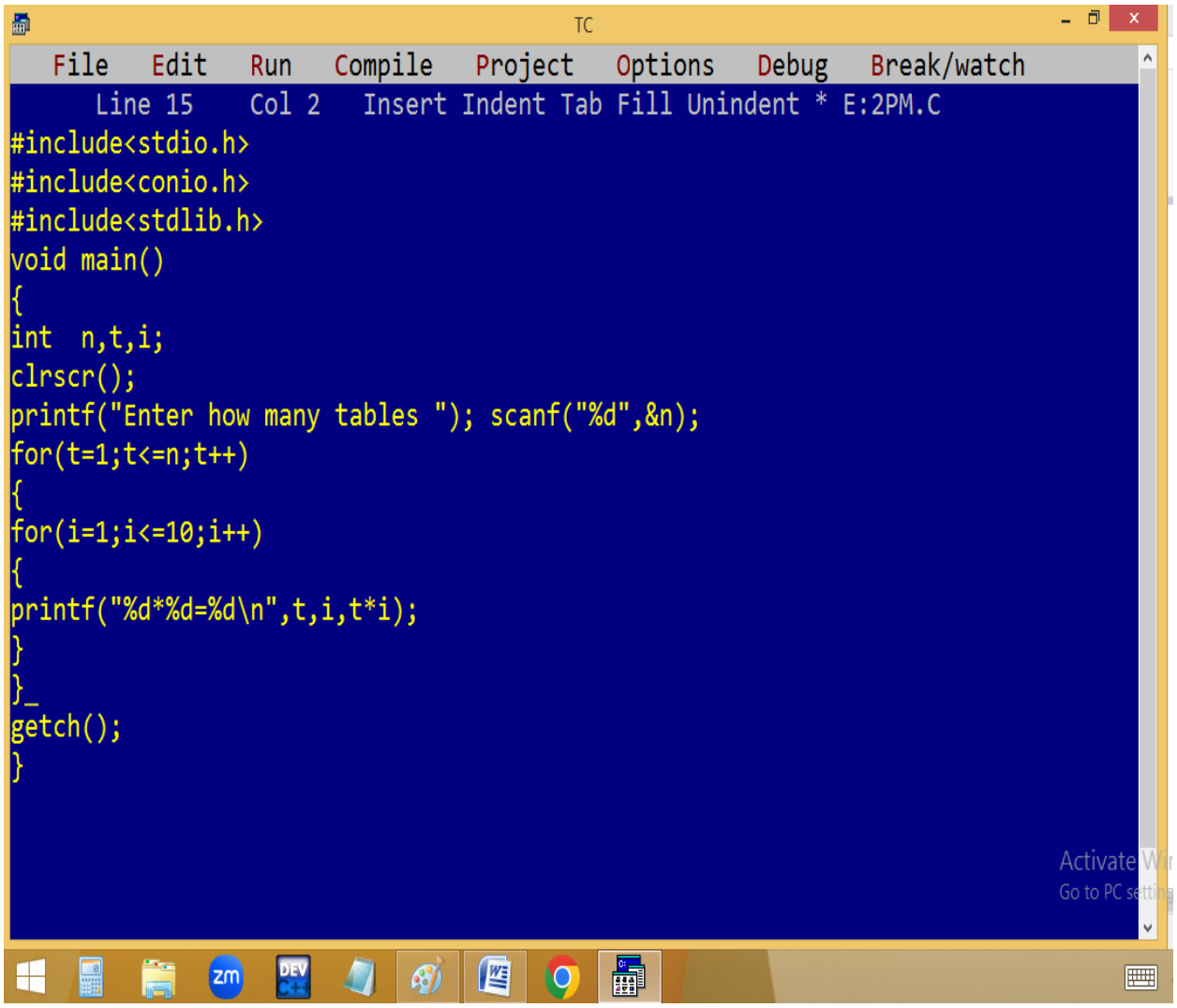
Nested loops:

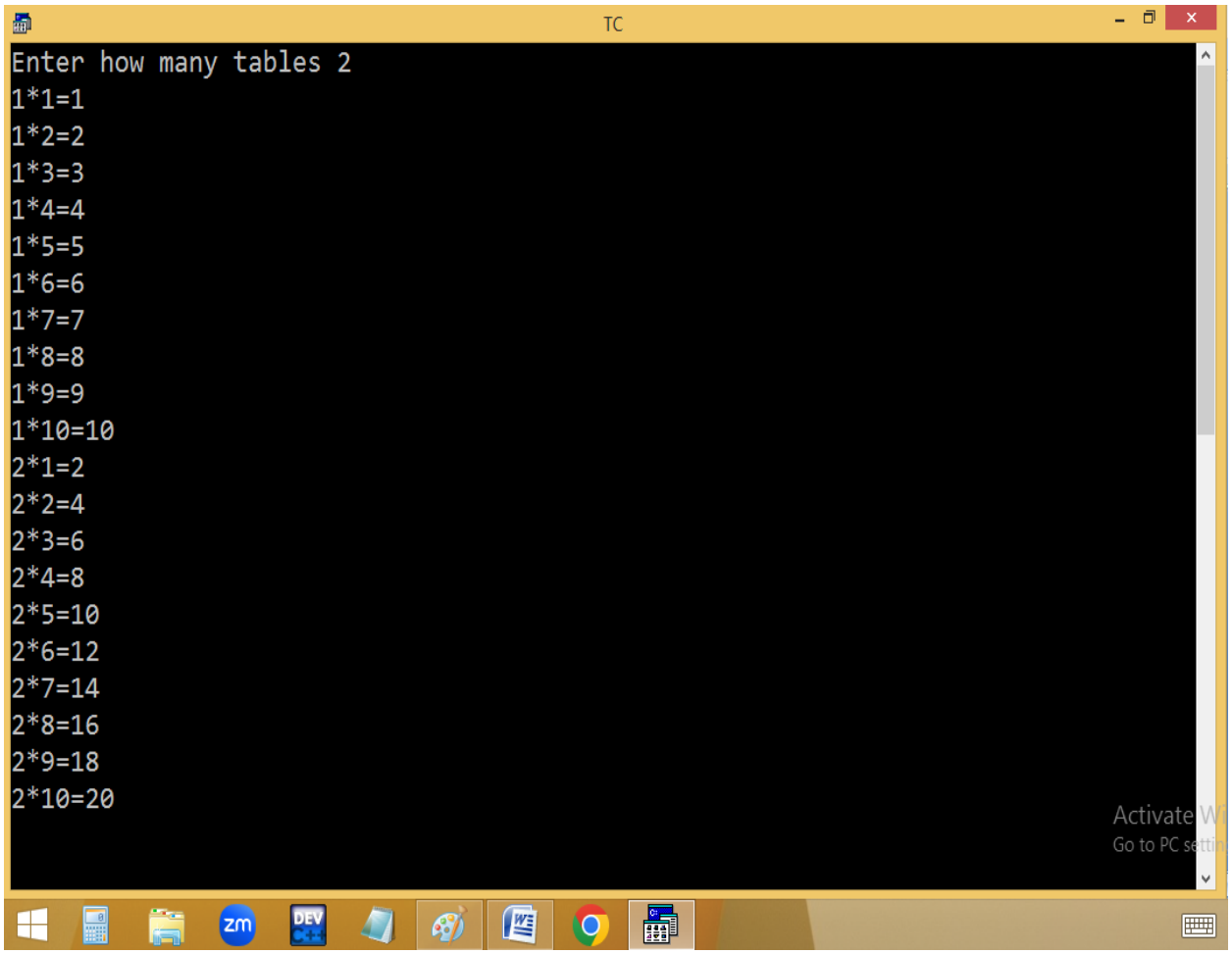
Loop within loop is called nested loop.



Printing 1..n tables?

Print 1..3 tables


TC
File Edit Run Compile Project Options Debug Break/watch
Line 15 Col 2 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
void main()
{
int n,t,i;
clrscr();
printf("Enter how many tables "); scanf("%d",&n);
for(t=1;t<=n;t++)
{
for(i=1;i<=10;i++)
{
printf("%d*%d=%d\n",t,i,t*i);
}
}
getch();
}
Activate Wi
Go to PC setti

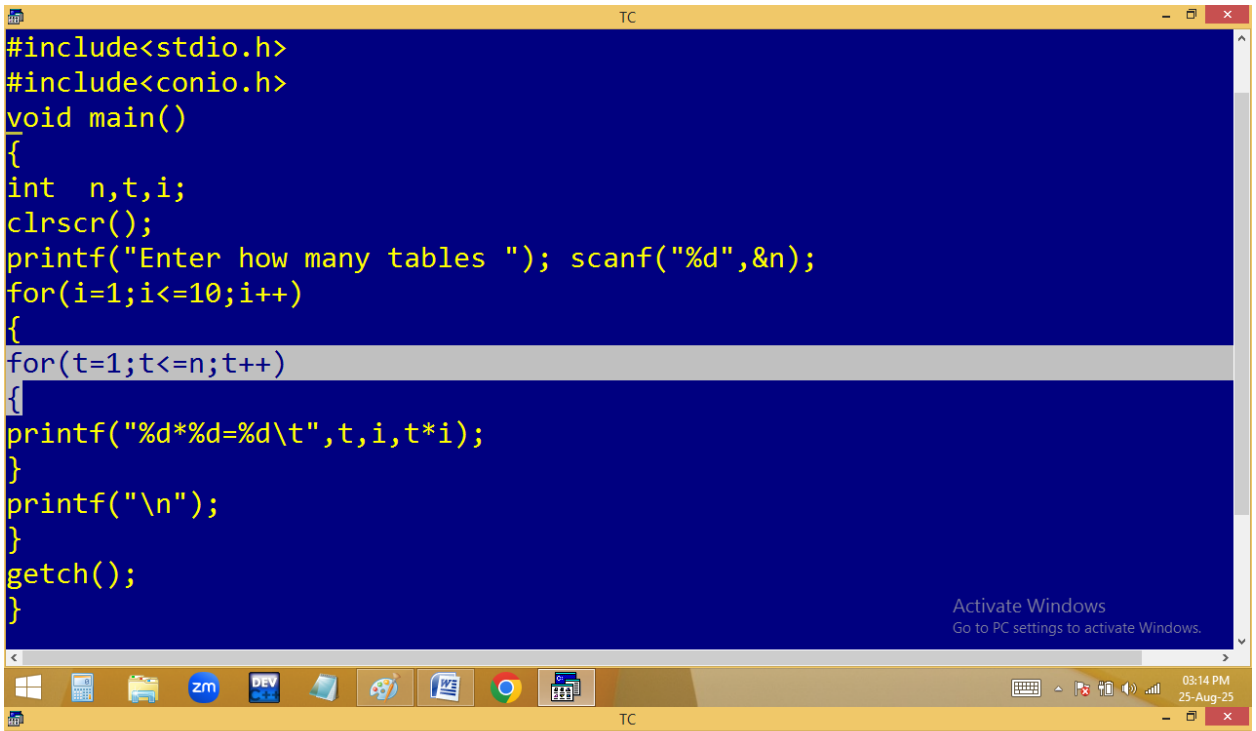


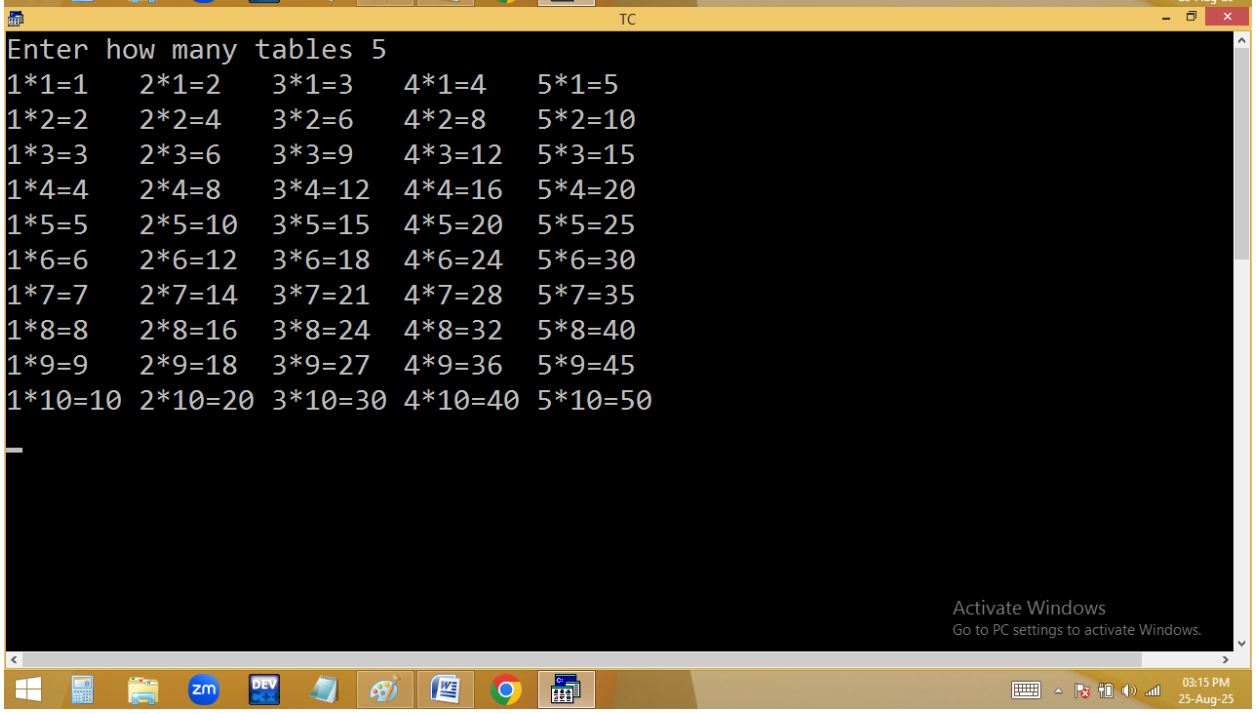

```
for( t=1; t<=3; t++ )
{
for( i=1; i<=10; i++ )
{
p( t * i );
}
}
```

10 times

* 3 times = 30 times

Side by side:

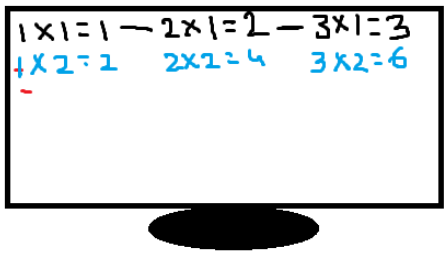

TC
#include<stdio.h>
#include<conio.h>
void main()
{
int n,t,i;
clrscr();
printf("Enter how many tables "); scanf("%d",&n);
for(i=1;i<=10;i++)
{
for(t=1;t<=n;t++)
{
printf("%d*%d=%d\t",t,i,t*i);
}
printf("\n");
}
getch();
}
Activate Windows
Go to PC settings to activate Windows.
03:14 PM
25-Aug-25

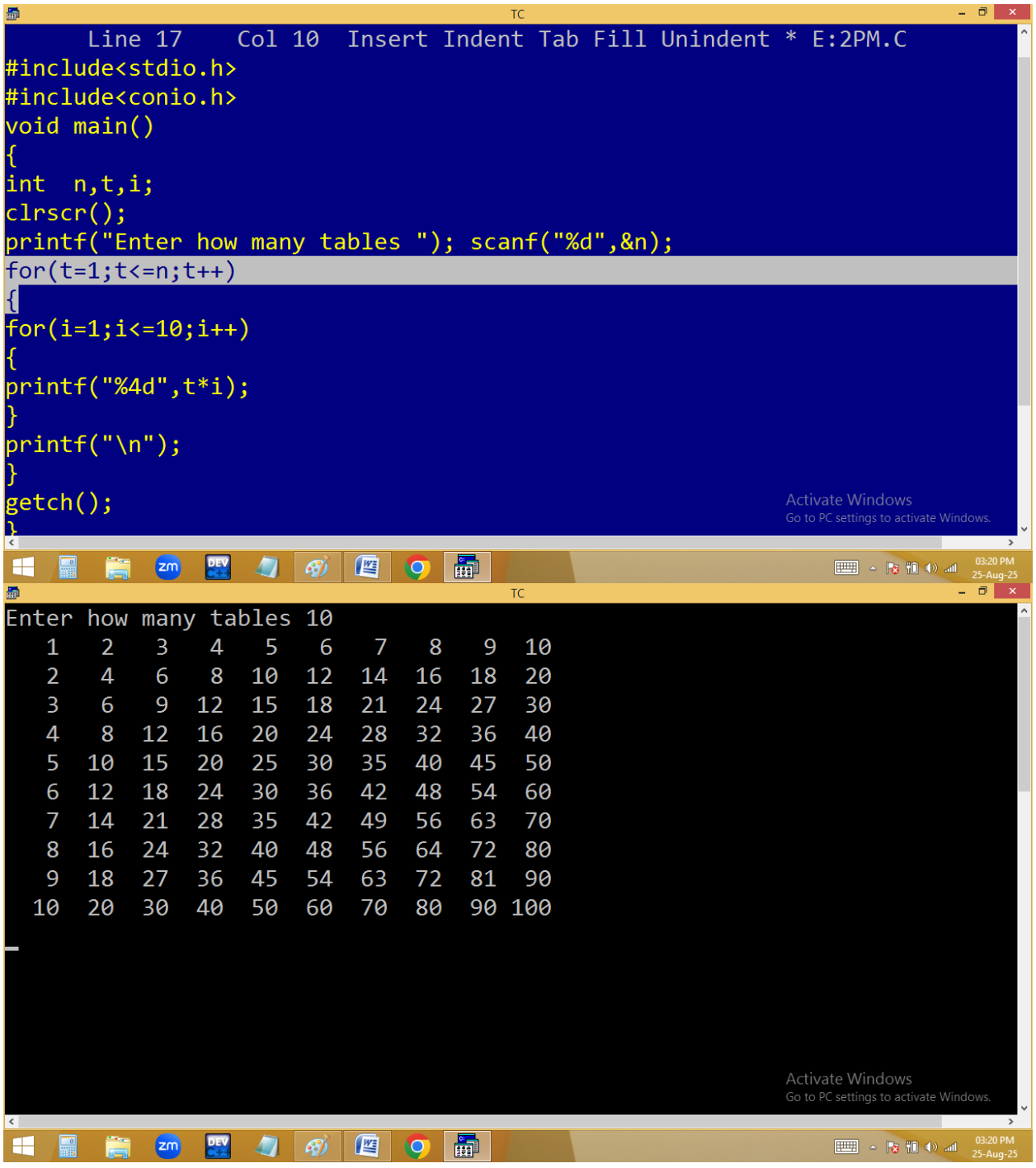

TC
Enter how many tables 5
1*1=1 2*1=2 3*1=3 4*1=4 5*1=5
1*2=2 2*2=4 3*2=6 4*2=8 5*2=10
1*3=3 2*3=6 3*3=9 4*3=12 5*3=15
1*4=4 2*4=8 3*4=12 4*4=16 5*4=20
1*5=5 2*5=10 3*5=15 4*5=20 5*5=25
1*6=6 2*6=12 3*6=18 4*6=24 5*6=30
1*7=7 2*7=14 3*7=21 4*7=28 5*7=35
1*8=8 2*8=16 3*8=24 4*8=32 5*8=40
1*9=9 2*9=18 3*9=27 4*9=36 5*9=45
1*10=10 2*10=20 3*10=30 4*10=40 5*10=50
Activate Windows
Go to PC settings to activate Windows.
03:15 PM
25-Aug-25

```
for( i=1; i<=10; i++ )
{
for( t=1; t<=3; t++ )
{
p( "t*i\t");
}
p("\n");
}
```

n / 3

t				i
1	2	3	4	1
1	2	3	4	2
				3
				:
1	2	3	4	10

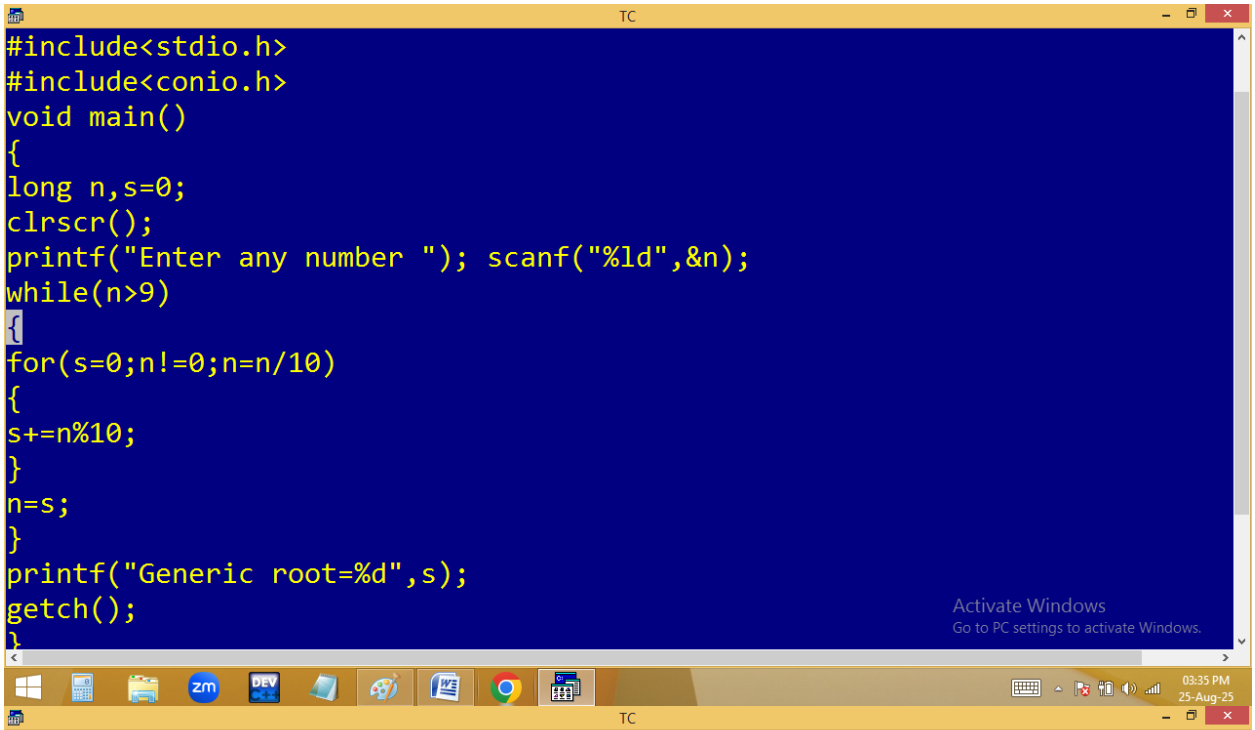


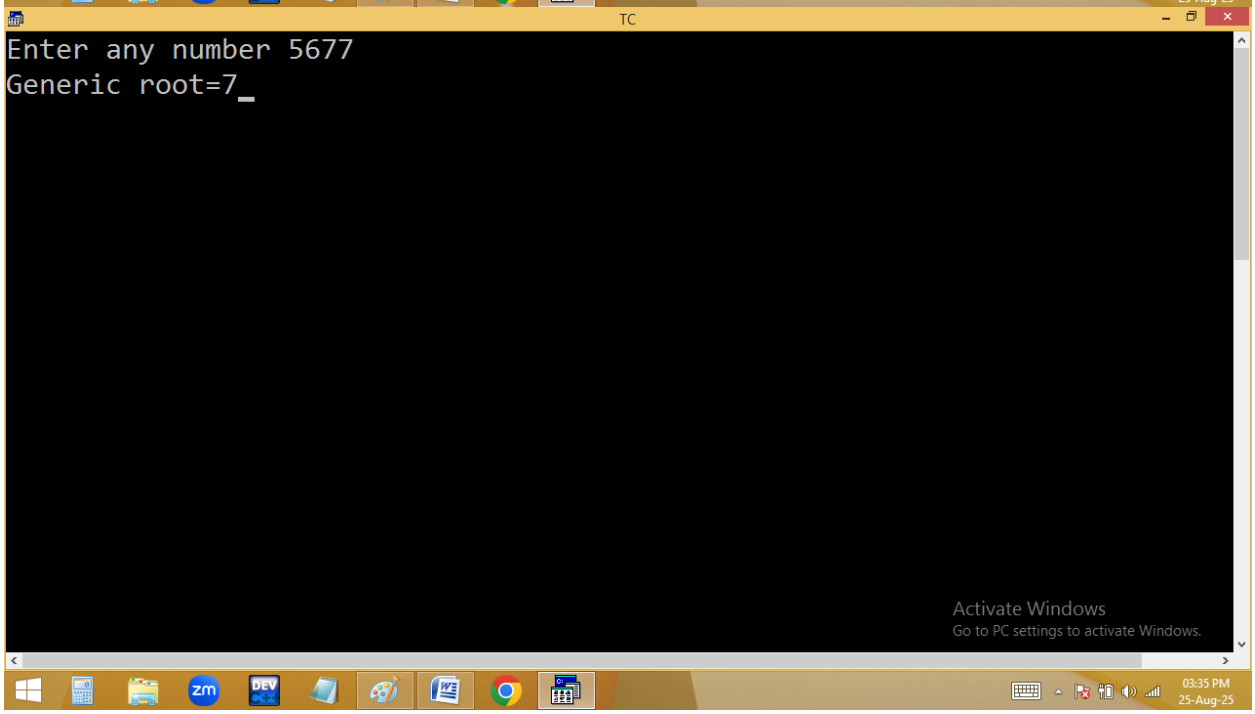

TC
Line 17 Col 10 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int n,t,i;
clrscr();
printf("Enter how many tables "); scanf("%d",&n);
for(t=1;t<=n;t++)
{
for(i=1;i<=10;i++)
{
printf("%4d",t*i);
}
printf("\n");
}
getch();
}
Activate Windows
Go to PC settings to activate Windows.
03:20 PM
25-Aug-25
TC
Enter how many tables 10
1 2 3 4 5 6 7 8 9 10
2 4 6 8 10 12 14 16 18 20
3 6 9 12 15 18 21 24 27 30
4 8 12 16 20 24 28 32 36 40
5 10 15 20 25 30 35 40 45 50
6 12 18 24 30 36 42 48 54 60
7 14 21 28 35 42 49 56 63 70
8 16 24 32 40 48 56 64 72 80
9 18 27 36 45 54 63 72 81 90
10 20 30 40 50 60 70 80 90 100
Activate Windows
Go to PC settings to activate Windows.
03:20 PM
25-Aug-25

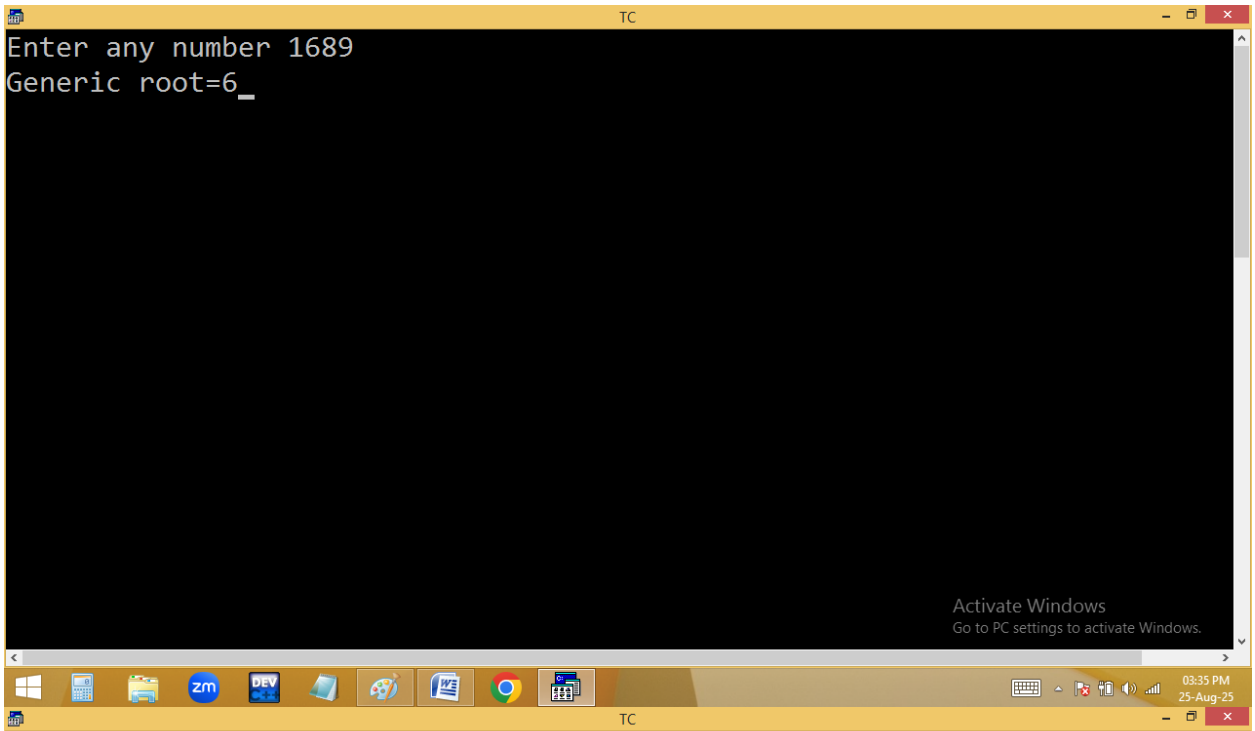
Finding generic root of given no?

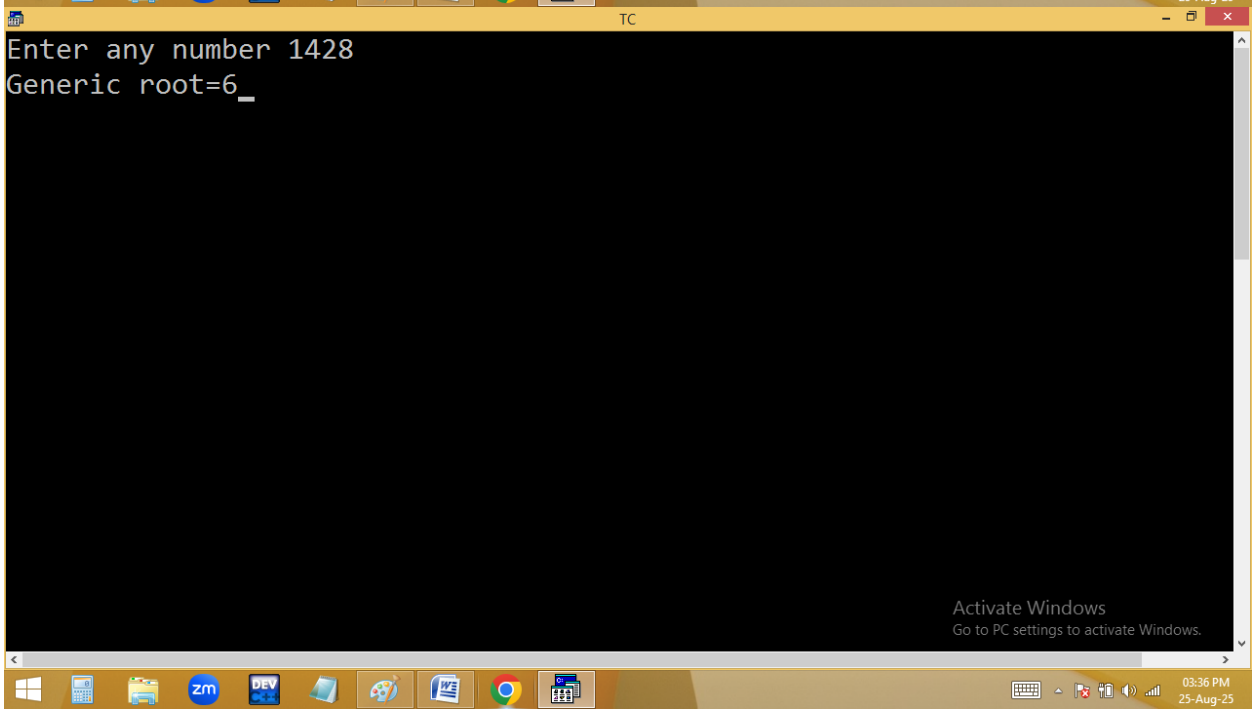
5677 ➔ 5+6+7+7=25 ➔ 2+5=7

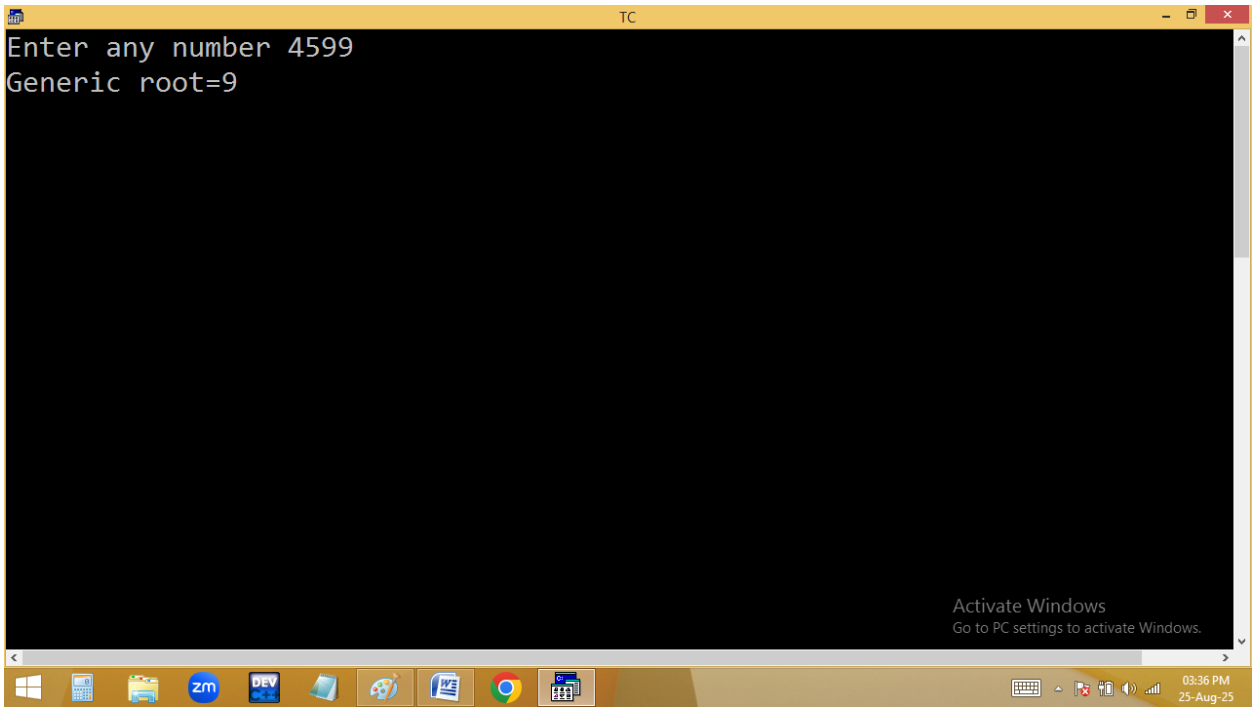
1234 ➔ 1+2+3+4=10 ➔ 1+0 ➔ 1

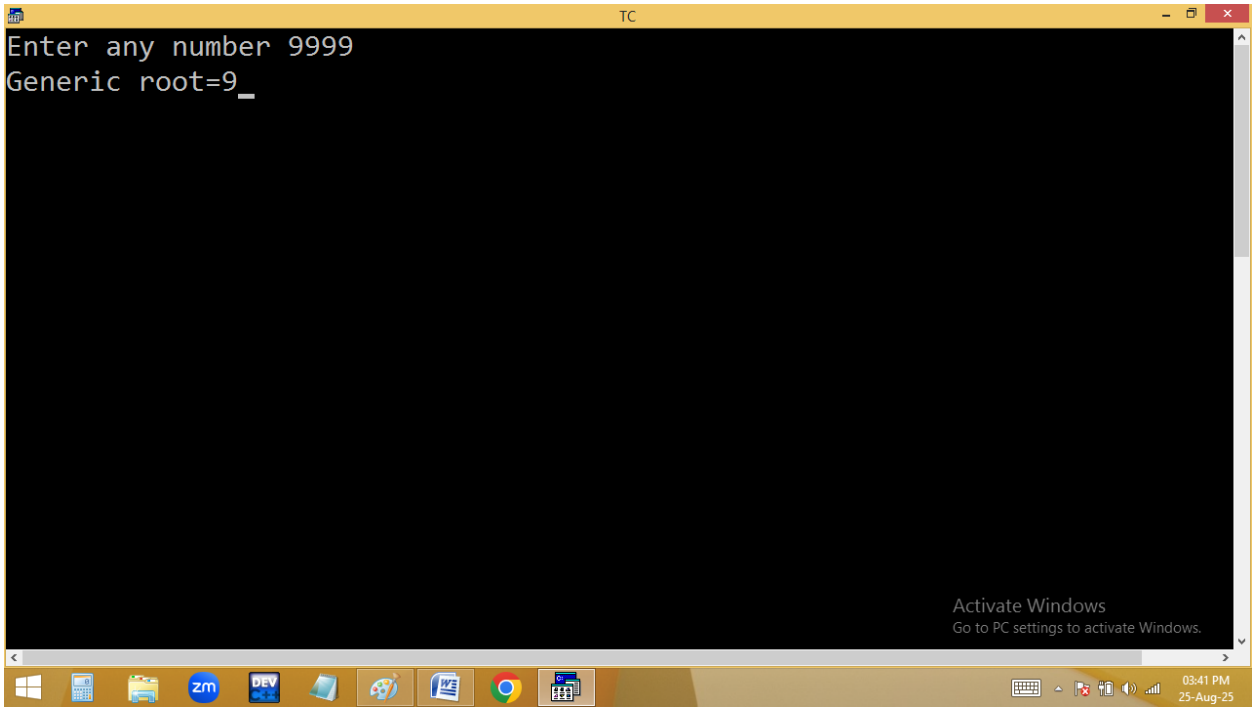




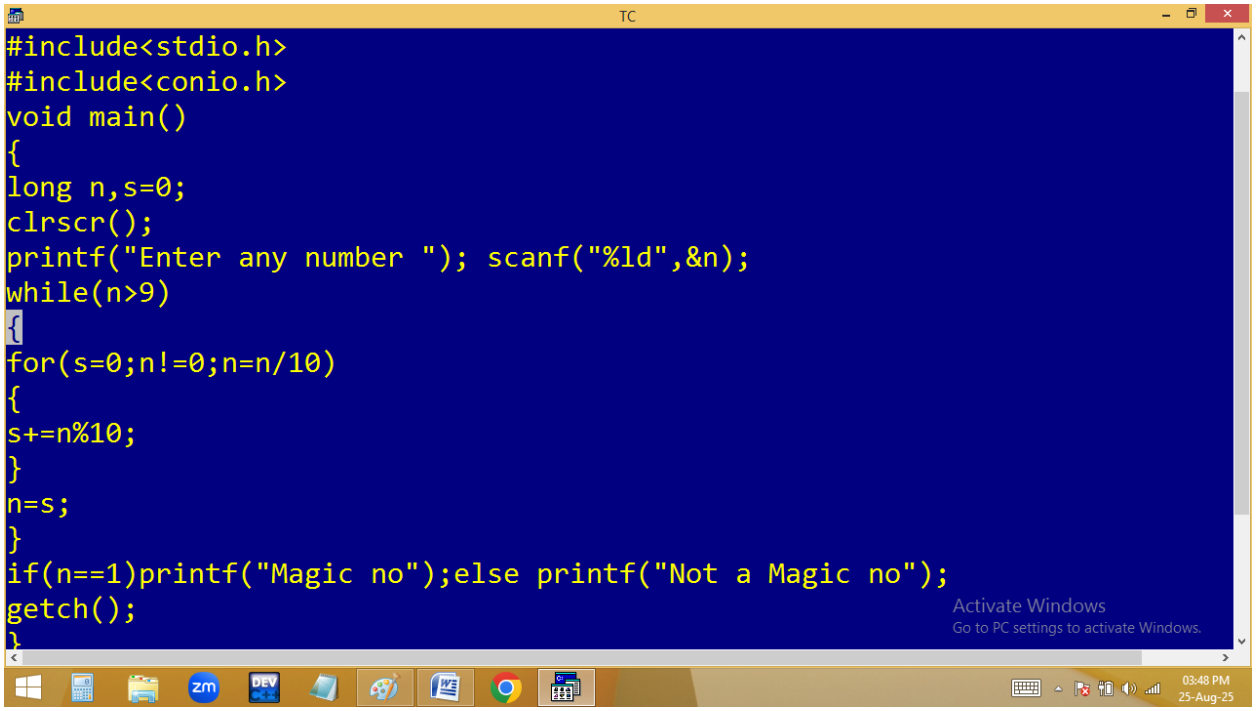

TC
Enter any number 1689
Generic root=6
Activate Windows
Go to PC settings to activate Windows.
03:35 PM
25-Aug-25

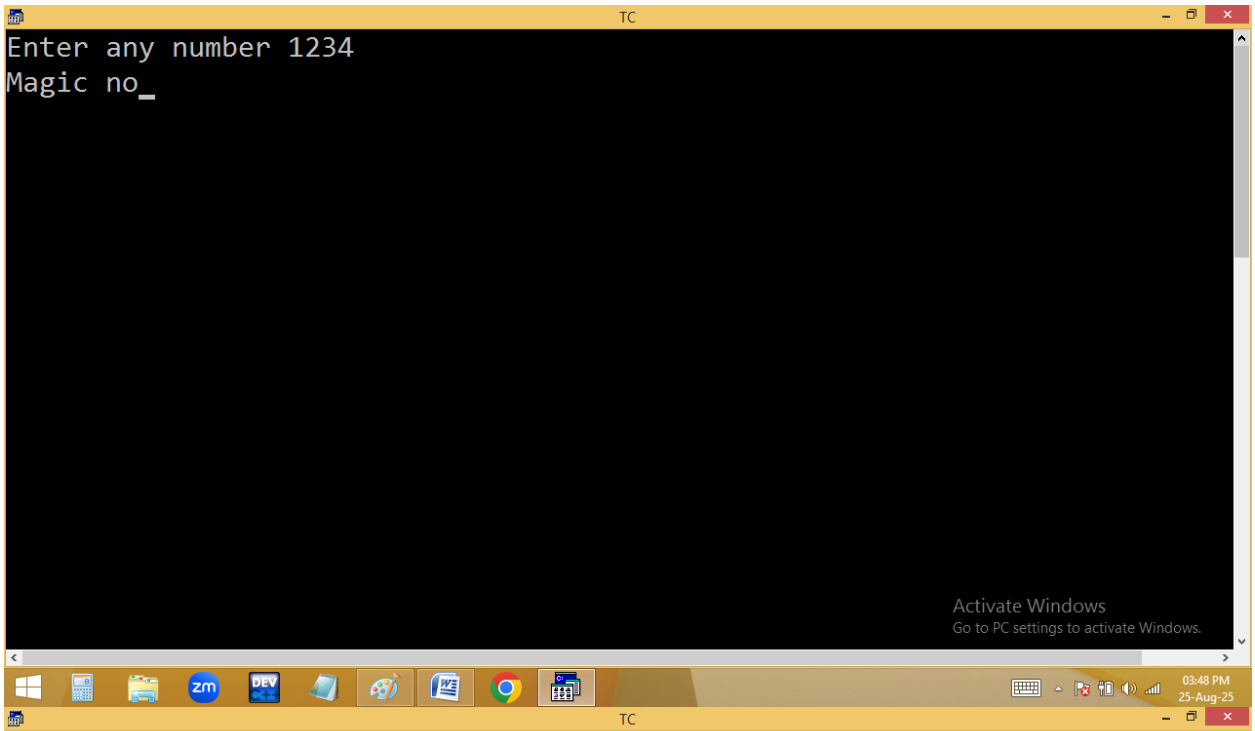

TC
Enter any number 1428
Generic root=6
Activate Windows
Go to PC settings to activate Windows.
03:36 PM
25-Aug-25

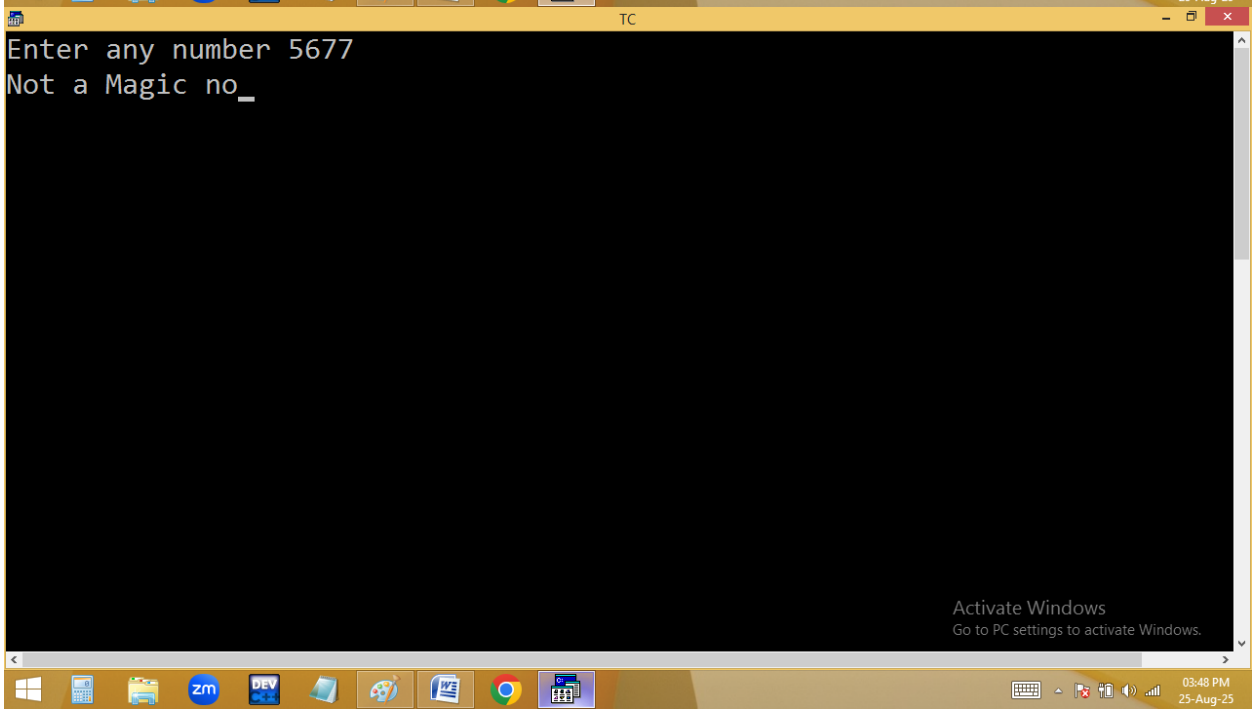

TC
Enter any number 4599
Generic root=9
Activate Windows
Go to PC settings to activate Windows.
03:36 PM
25-Aug-25


TC
Enter any number 9999
Generic root=9
Activate Windows
Go to PC settings to activate Windows.
03:41 PM
25-Aug-25

Finding magic no or not? If the generic root is 1 it is a magic no




TC
Enter any number 1234
Magic no
Activate Windows
Go to PC settings to activate Windows.
03:48 PM
25-Aug-25


TC
Enter any number 5677
Not a Magic no
Activate Windows
Go to PC settings to activate Windows.
03:48 PM
25-Aug-25