**Compound assignment / short hand operators**:

+=, -=, *=, %=, /=, <<=, >>=,.....

Eg:

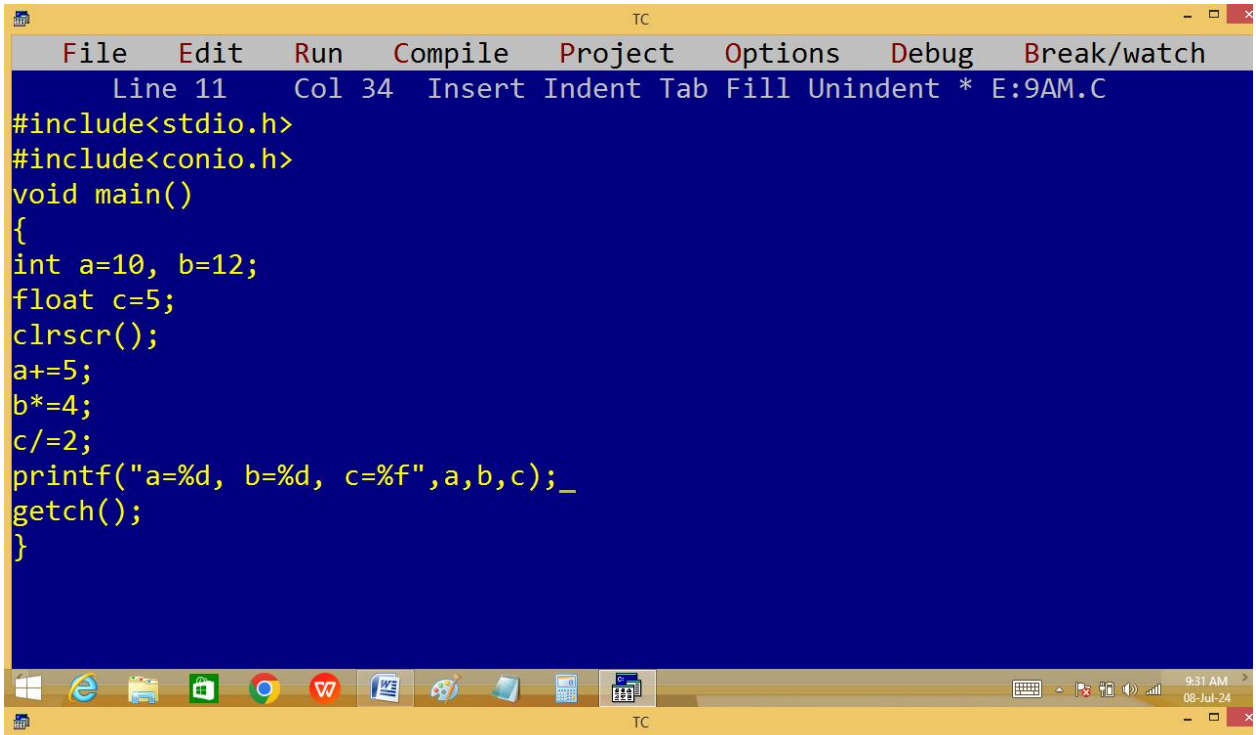
int a=10, b=12;

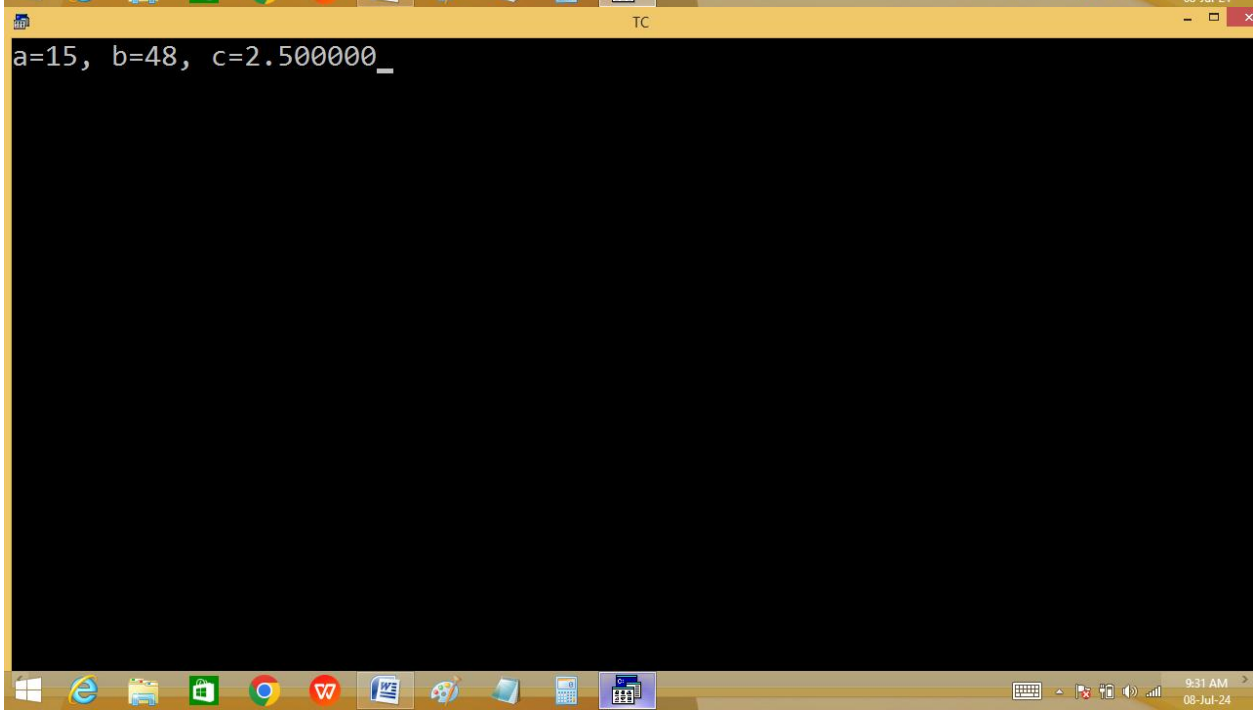
float c=5;

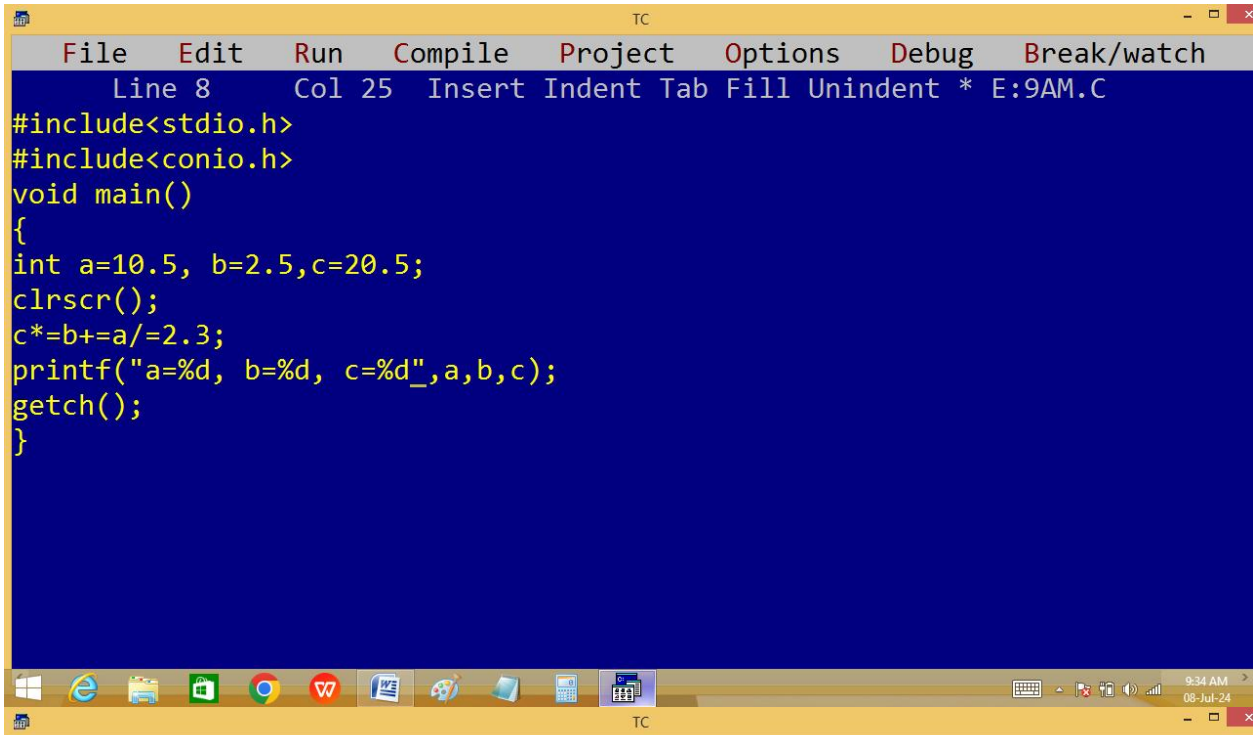
a+=5;  i.e.  a=a+5➔a=10+5=15

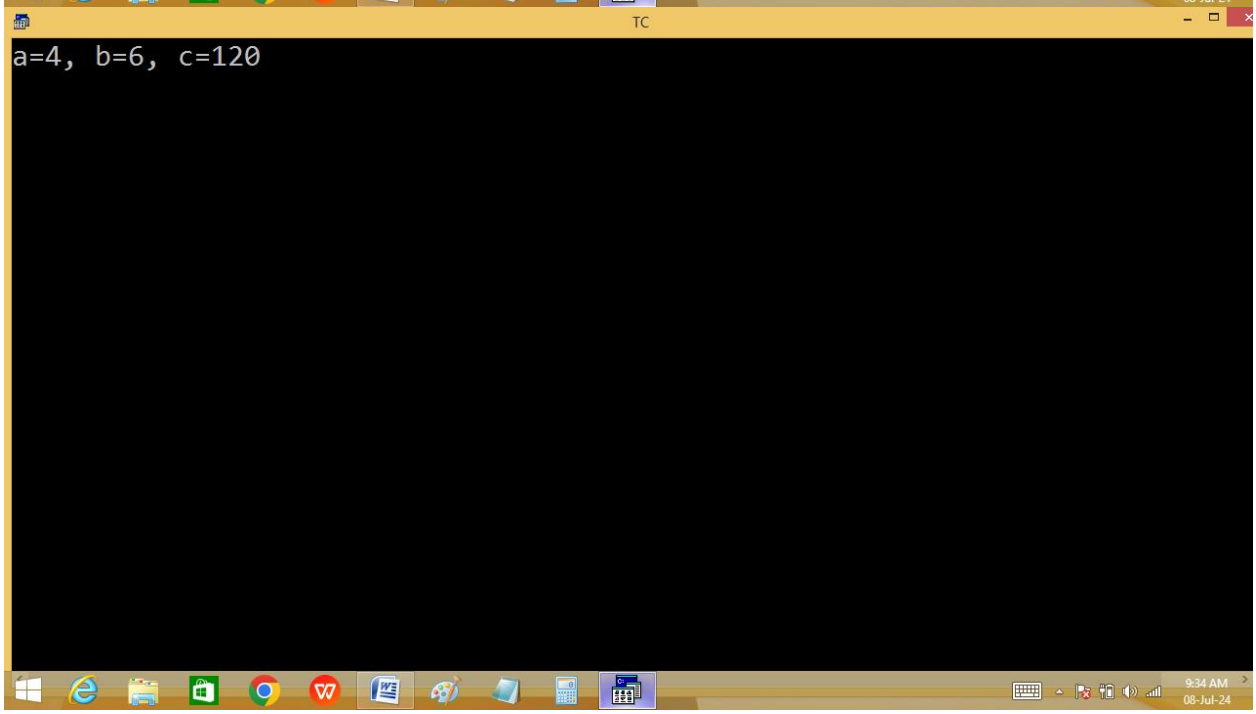
b*=4; i.e. b=b*4 ➔ b=12*4=48

c/=2; i.e. c=c/2 ➔ c=c/2➔2.500000


TC
File Edit Run Compile Project Options Debug Break/watch
Line 11 Col 34 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int a=10, b=12;
float c=5;
clrscr();
a+=5;
b*=4;
c/=2;
printf("a=%d, b=%d, c=%f",a,b,c);_
getch();
}


TC
a=15, b=48, c=2.500000_



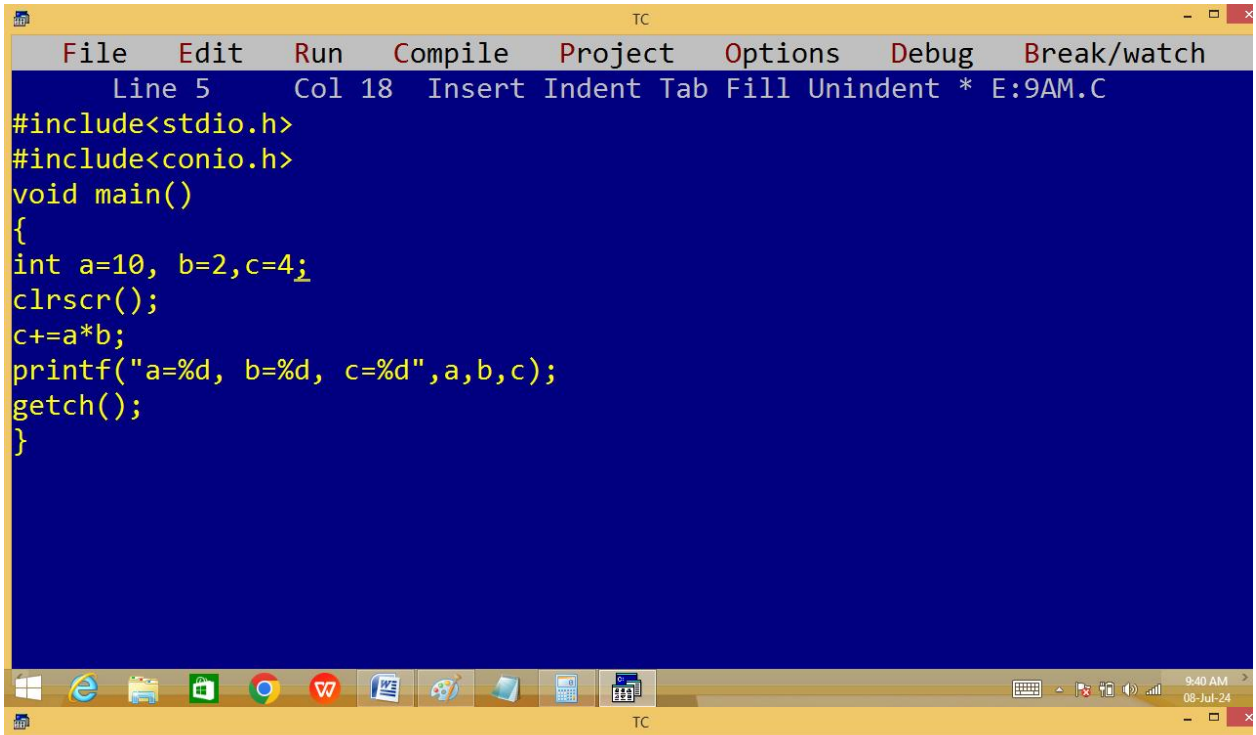

a=10 b=2 c=20

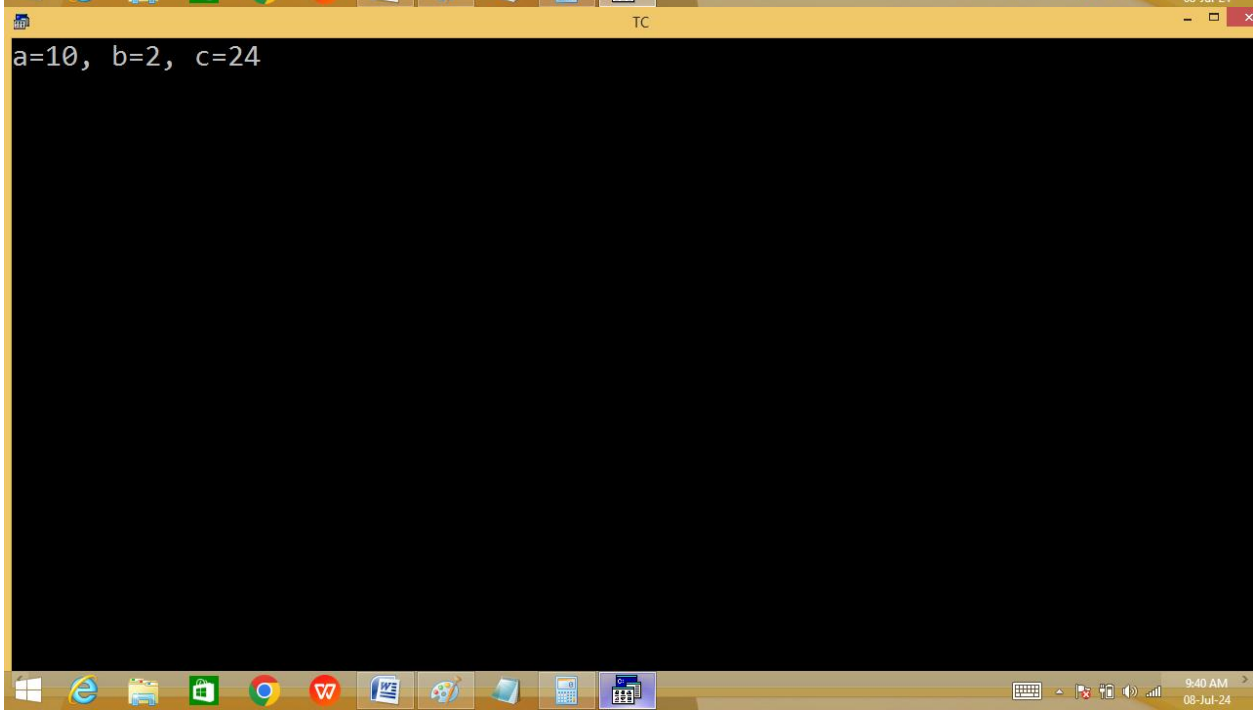
c*=b+=a/=2.3;

a/=2.3 ==> 10/2.3=4.24

b+=a ==> 2+4=6

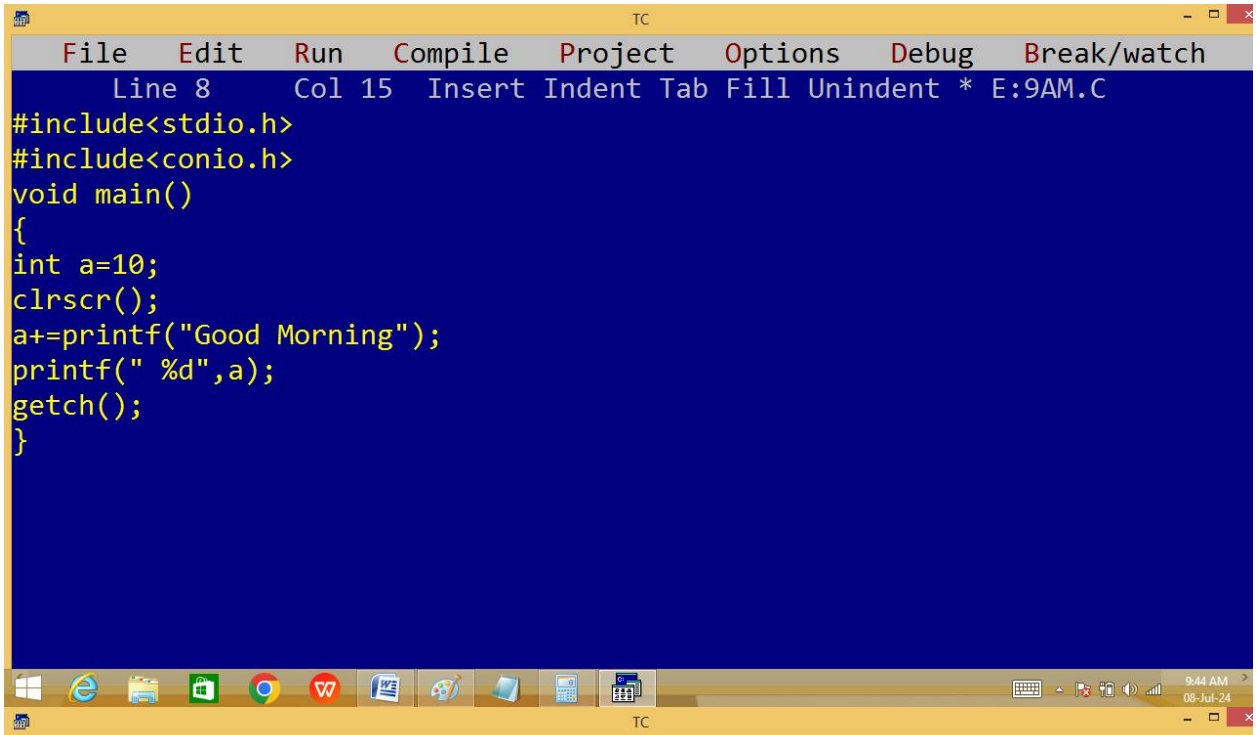
c*=b ==> 20*6=120

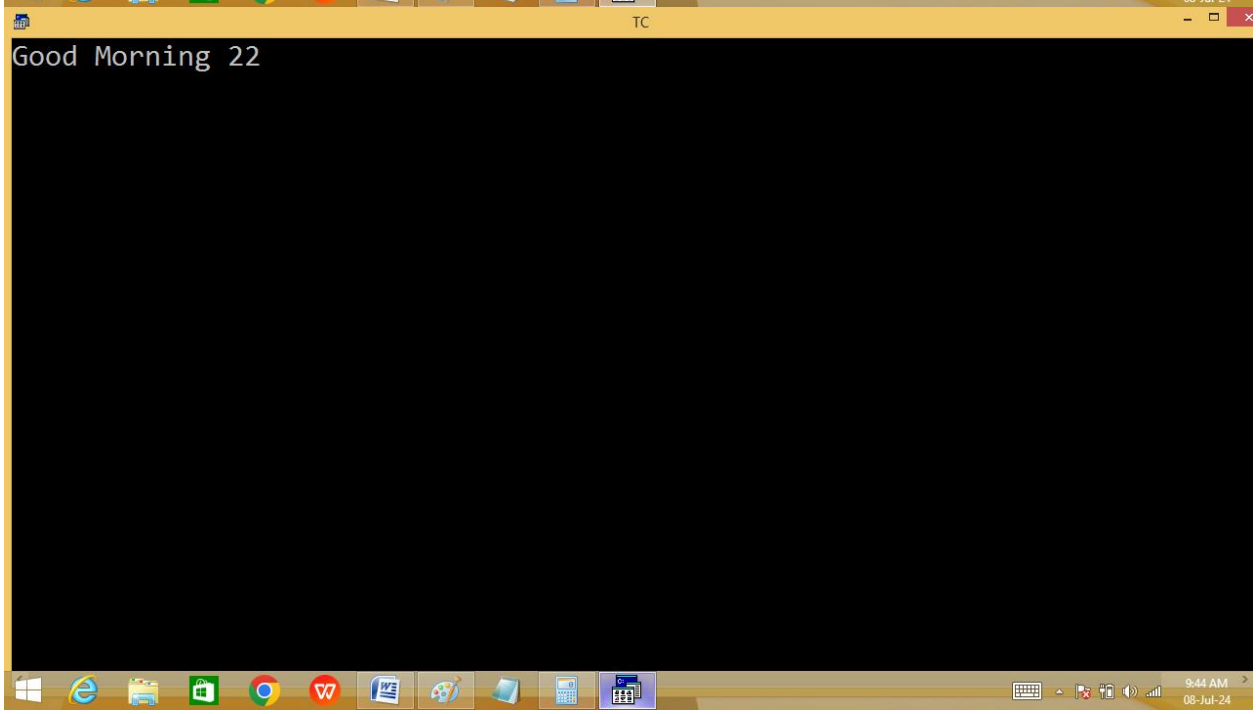


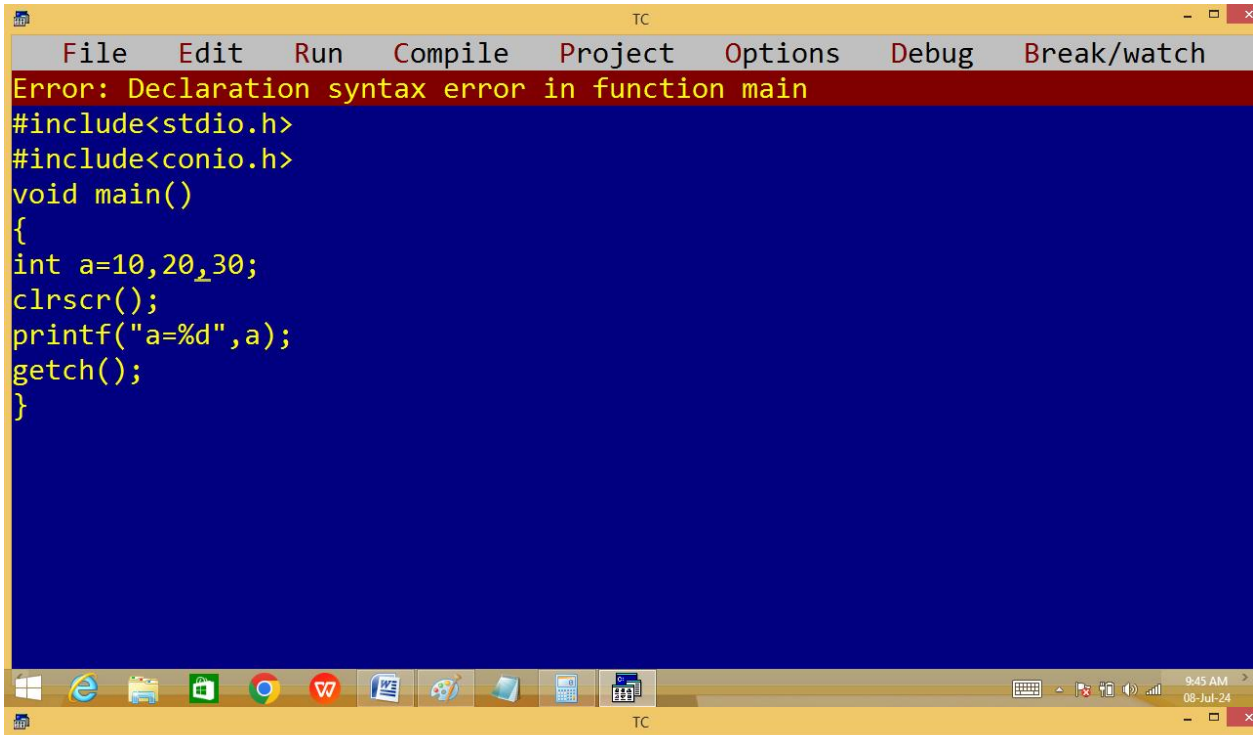

**a=10 b=2 c=4**

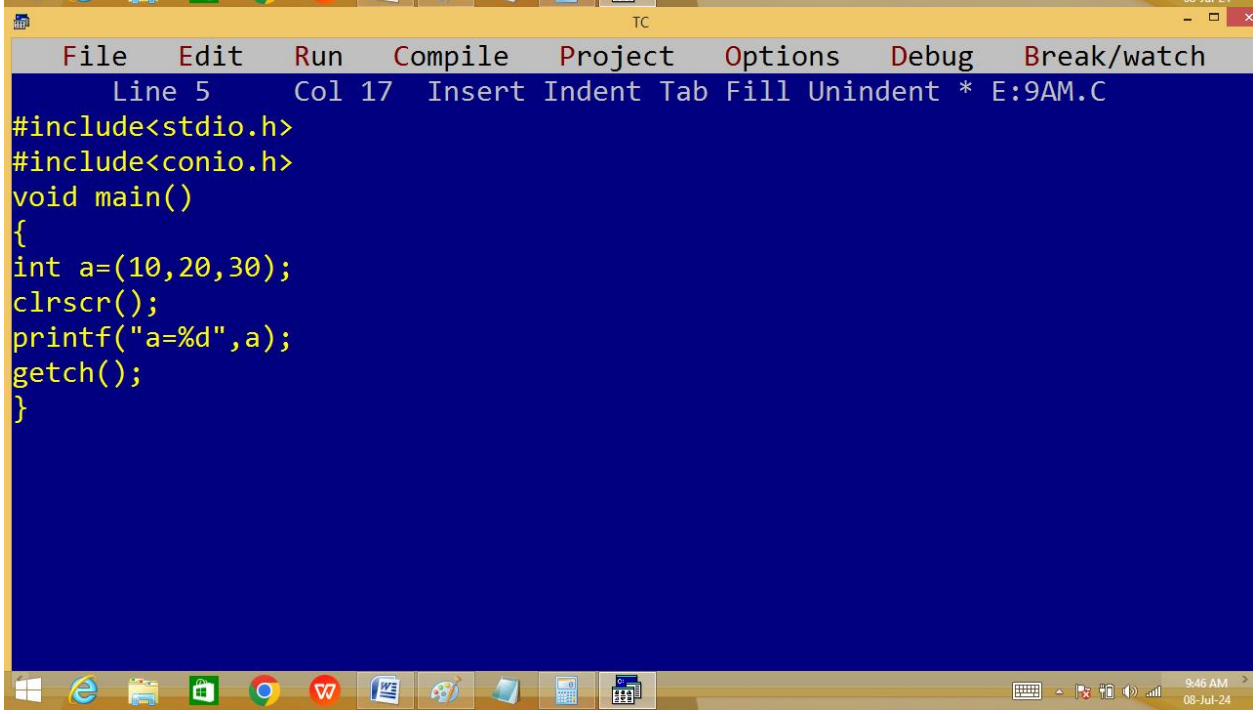
**c+= a*b ==> c = c + a*b ==> 4 + 10*2 ==> 4+20=24**

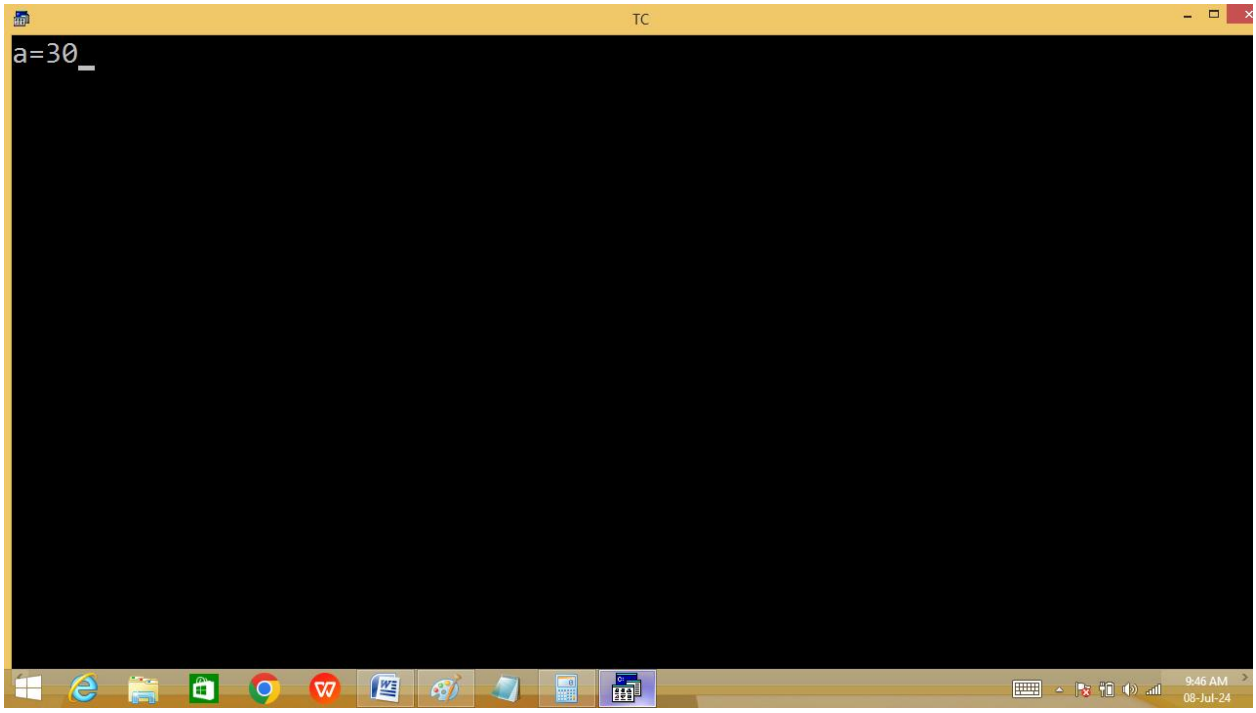

TC
File Edit Run Compile Project Options Debug Break/watch
Line 8 Col 15 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int a=10;
clrscr();
a+=printf("Good Morning");
printf(" %d",a);
getch();
}

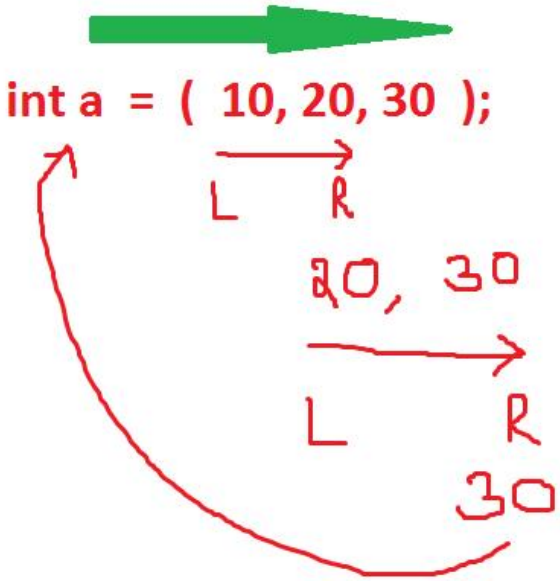

TC
Good Morning 22

## () and , separators:

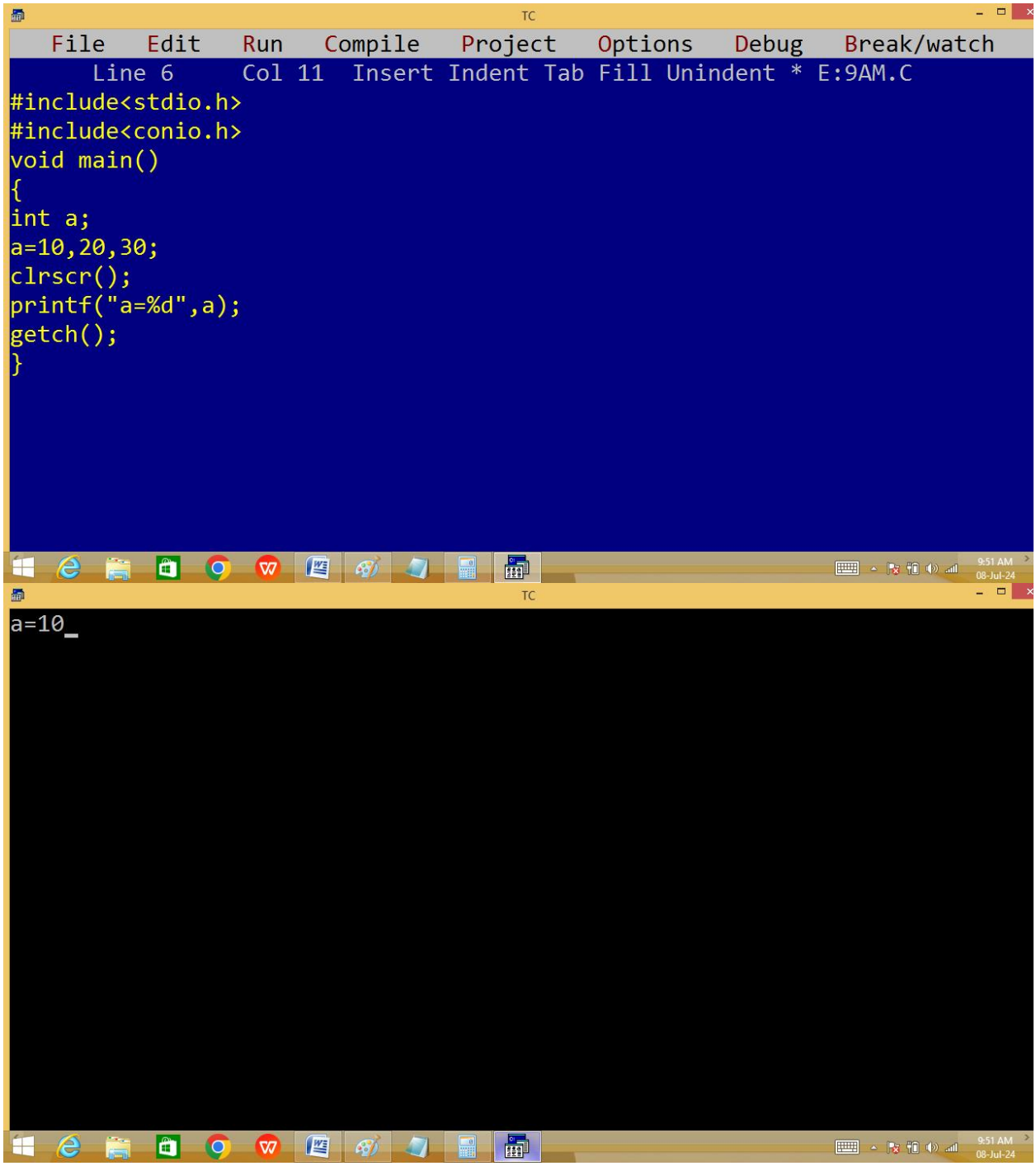

TC
File Edit Run Compile Project Options Debug Break/watch
Error: Declaration syntax error in function main
#include<stdio.h>
#include<conio.h>
void main()
{
int a=10,20,30;
clrscr();
printf("a=%d",a);
getch();
}
9:45 AM
08-Jul-24


TC
File Edit Run Compile Project Options Debug Break/watch
Line 5 Col 17 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int a=(10,20,30);
clrscr();
printf("a=%d",a);
getch();
}
9:46 AM
08-Jul-24



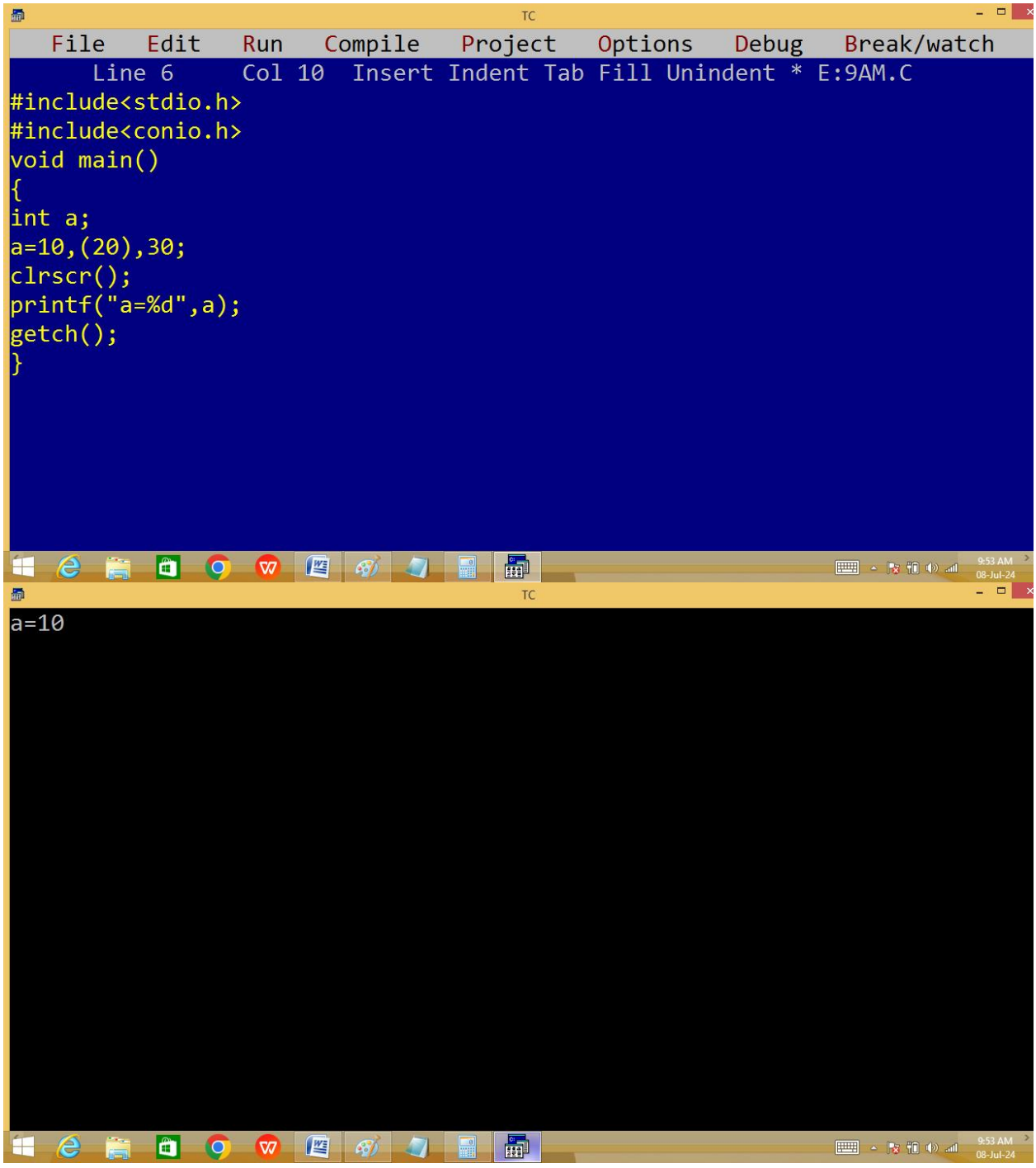




a=10;
a=20;
a=30;
printf(a);

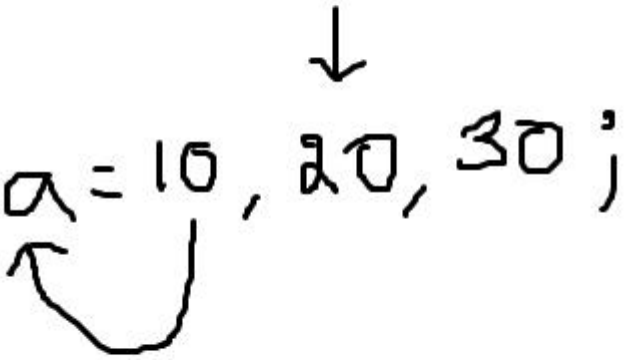



**Note**: = have more priority than , operator.

a = 10, 20, 30;


TC
File Edit Run Compile Project Options Debug Break/watch
Line 6 Col 10 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int a;
a=10,(20),30;
clrscr();
printf("a=%d",a);
getch();
}
TC
a=10

a = 10, (20), 30;




TC

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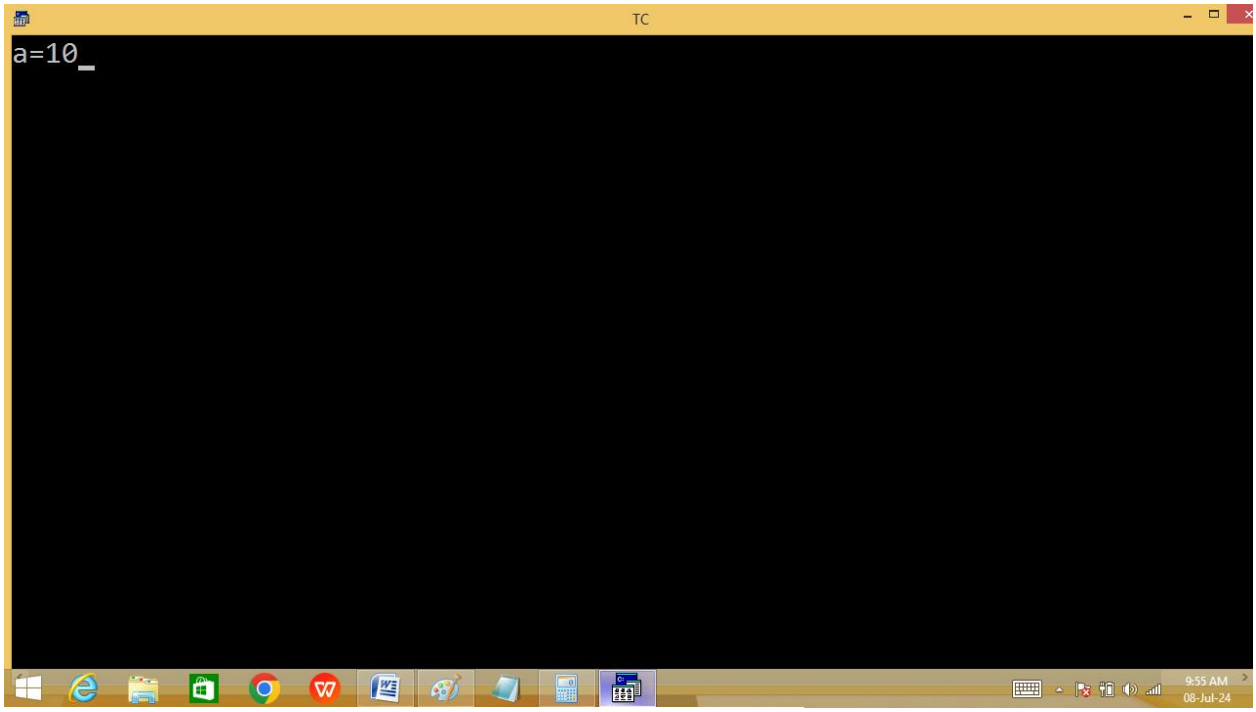
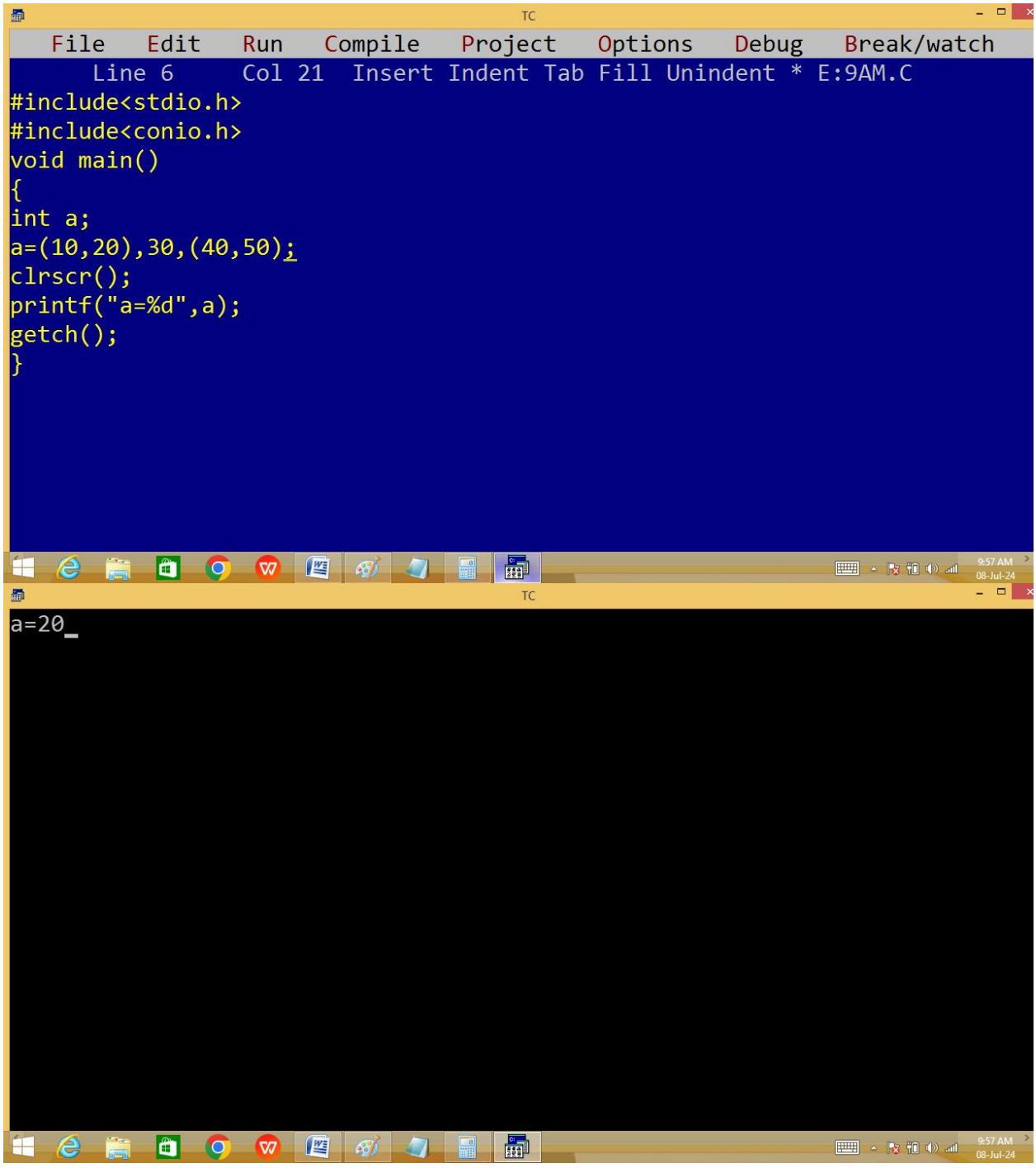
Line 6 Col 13 Insert Indent Tab Fill Unindent * E:9AM.C

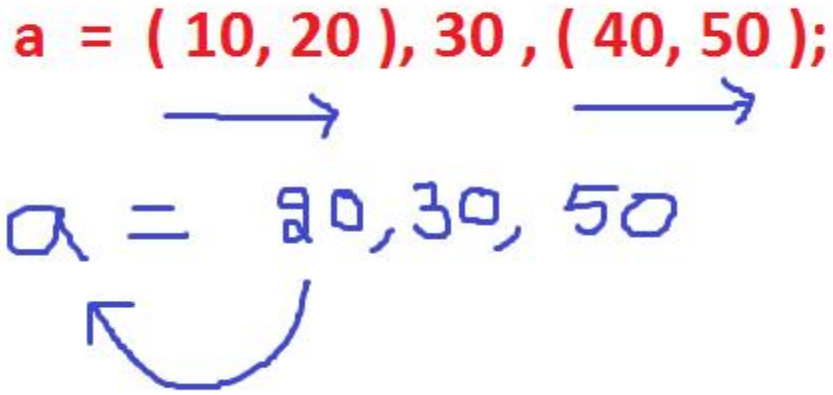
```
#include<stdio.h>
#include<conio.h>
void main()
{
int a;
a=10,(20,30);
clrscr();
printf("a=%d",a);
getch();
}
```




a = 10, (20, 30);

a = 10, 30;


TC
File Edit Run Compile Project Options Debug Break/watch
Line 6 Col 21 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int a;
a=(10,20),30,(40,50);
clrscr();
printf("a=%d",a);
getch();
}
TC
a=20
9:57 AM
08-Jul-24

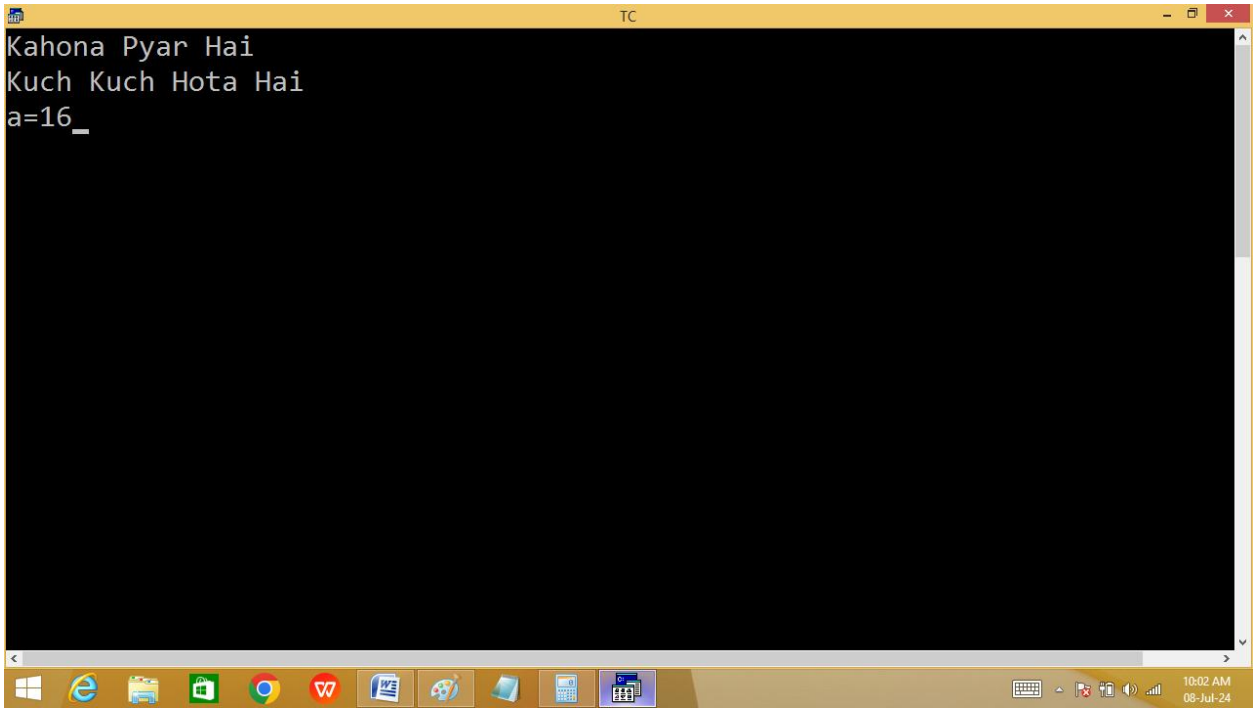


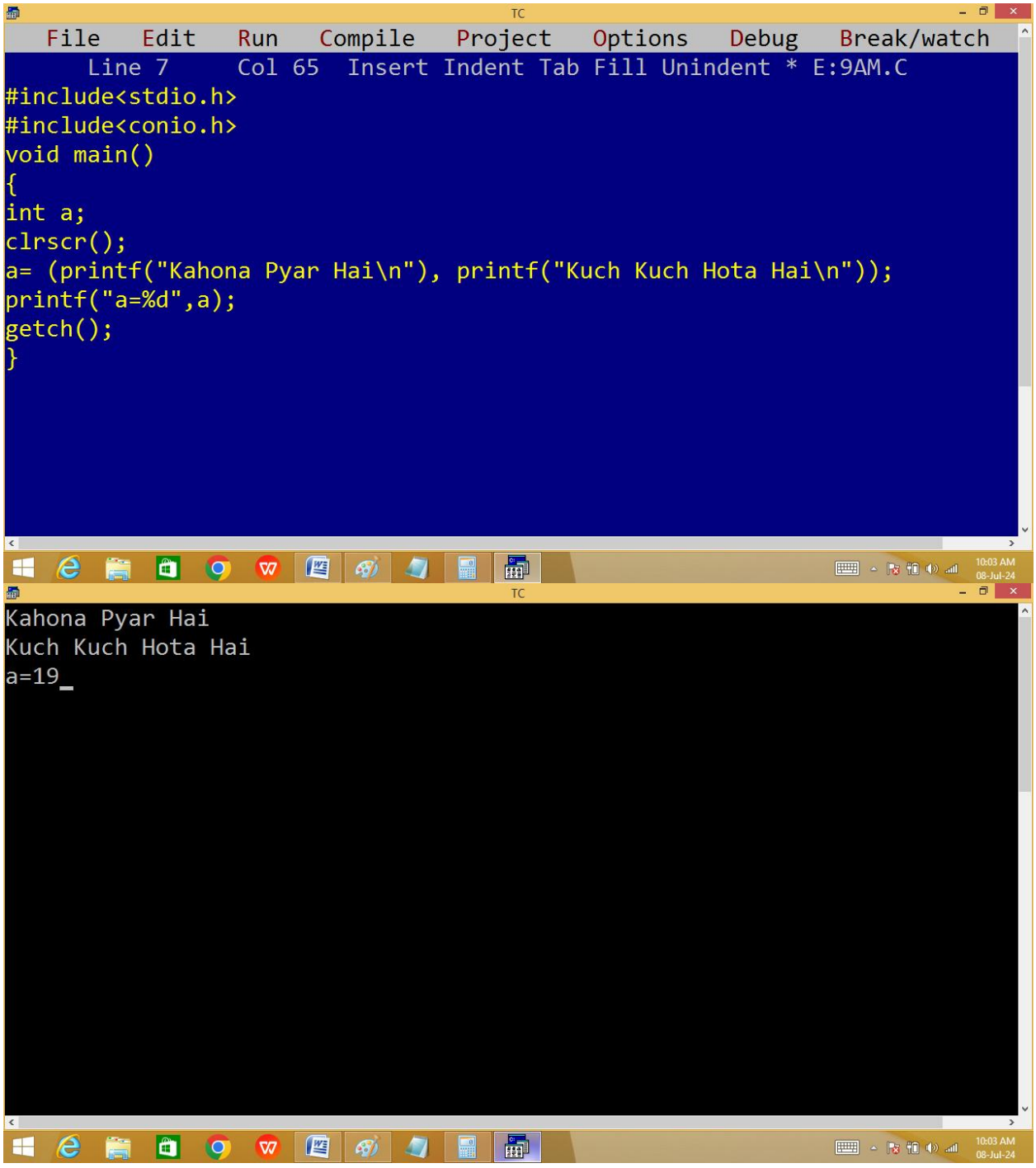

TC

File Edit Run Compile Project Options Debug Break/watch

Line 6 Col 10 Insert Indent Tab Fill Unindent * E:9AM.C

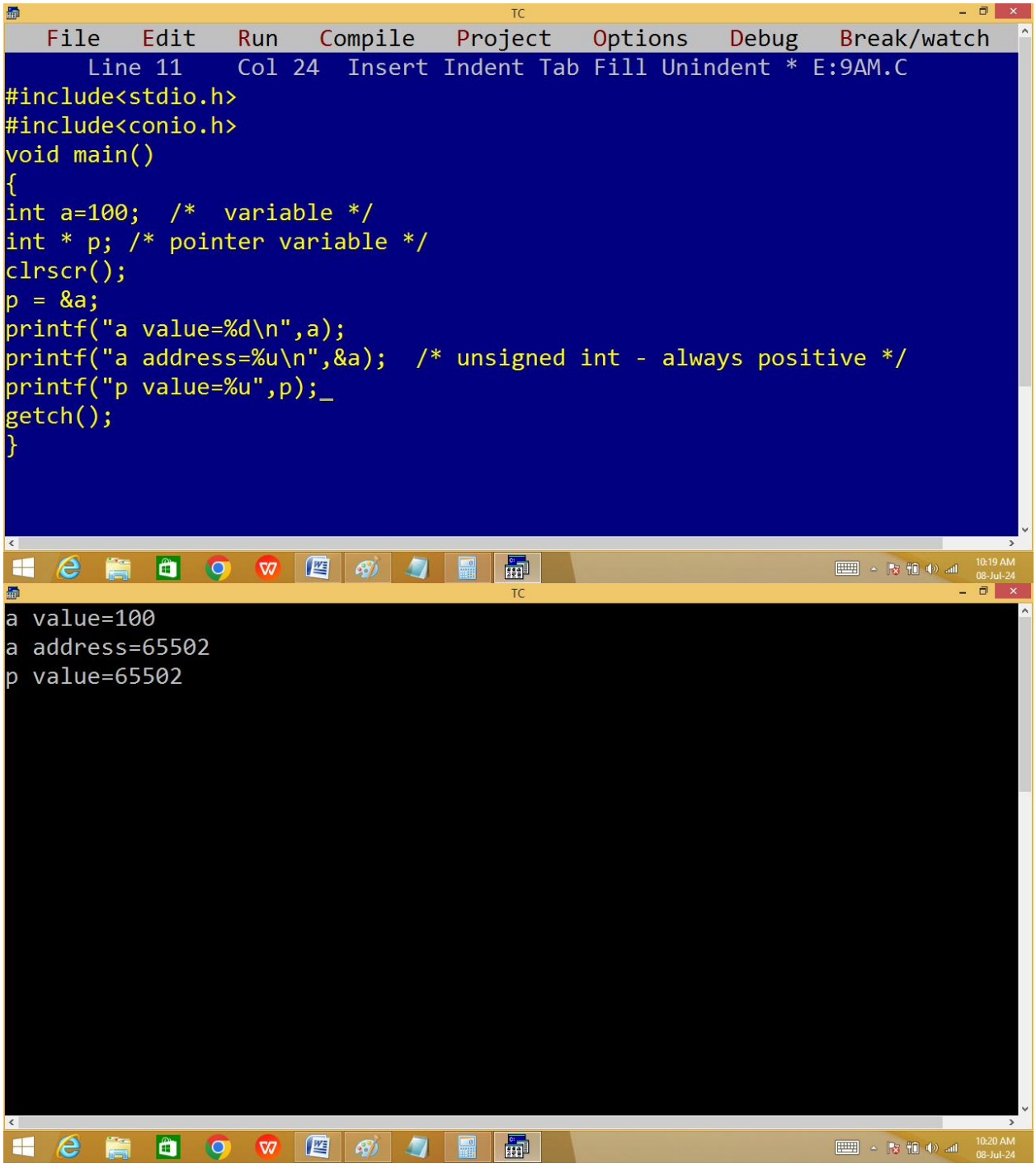
```
#include<stdio.h>
#include<conio.h>
void main()
{
int a;
clrscr();
a= printf("Kahona Pyar Hai\n"), printf("Kuch Kuch Hota Hai\n");
printf("a=%d",a);
getch();
}
```


TC
Kahona Pyar Hai
Kuch Kuch Hota Hai
a=16
10:02 AM
08-Jul-24

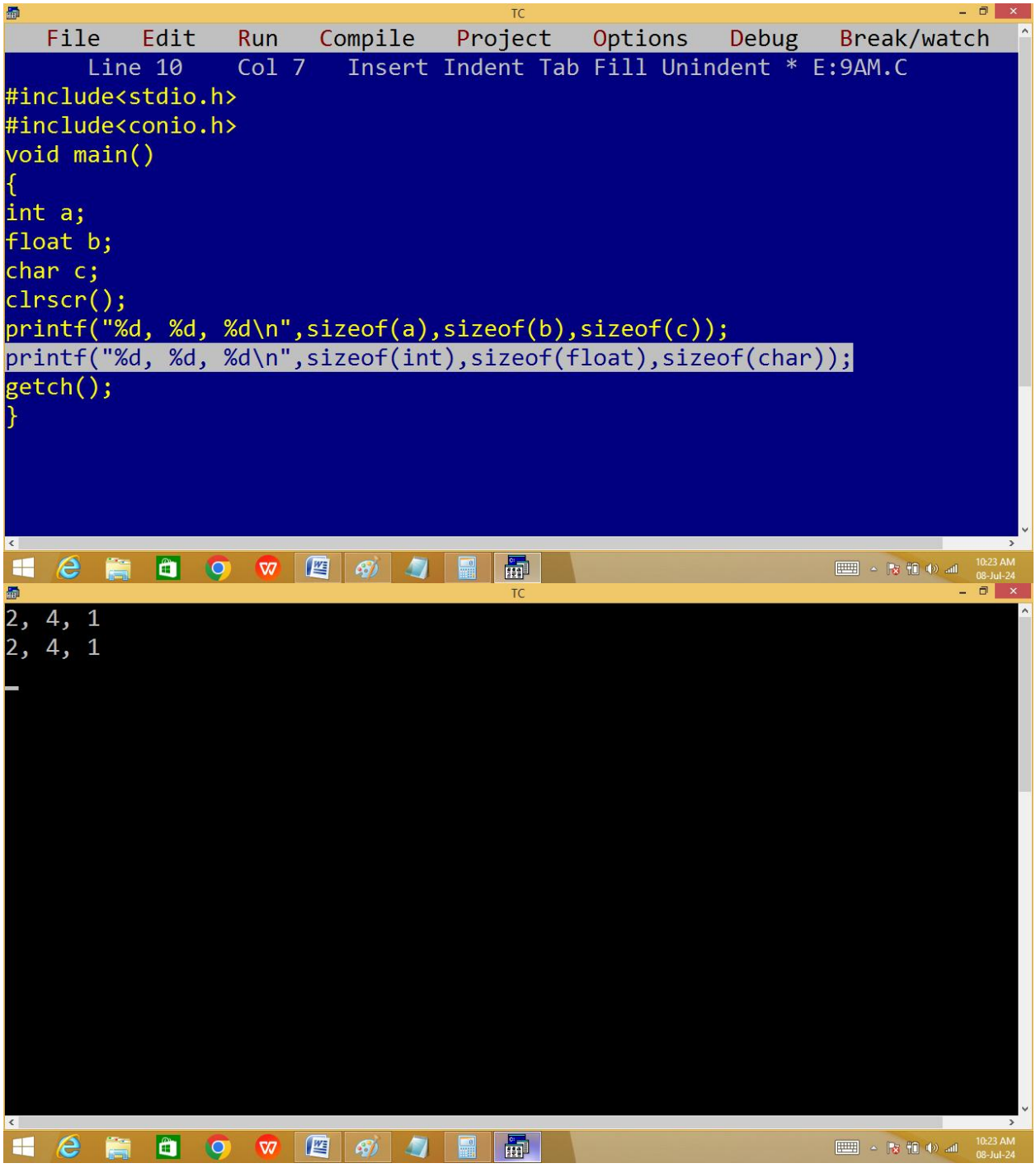


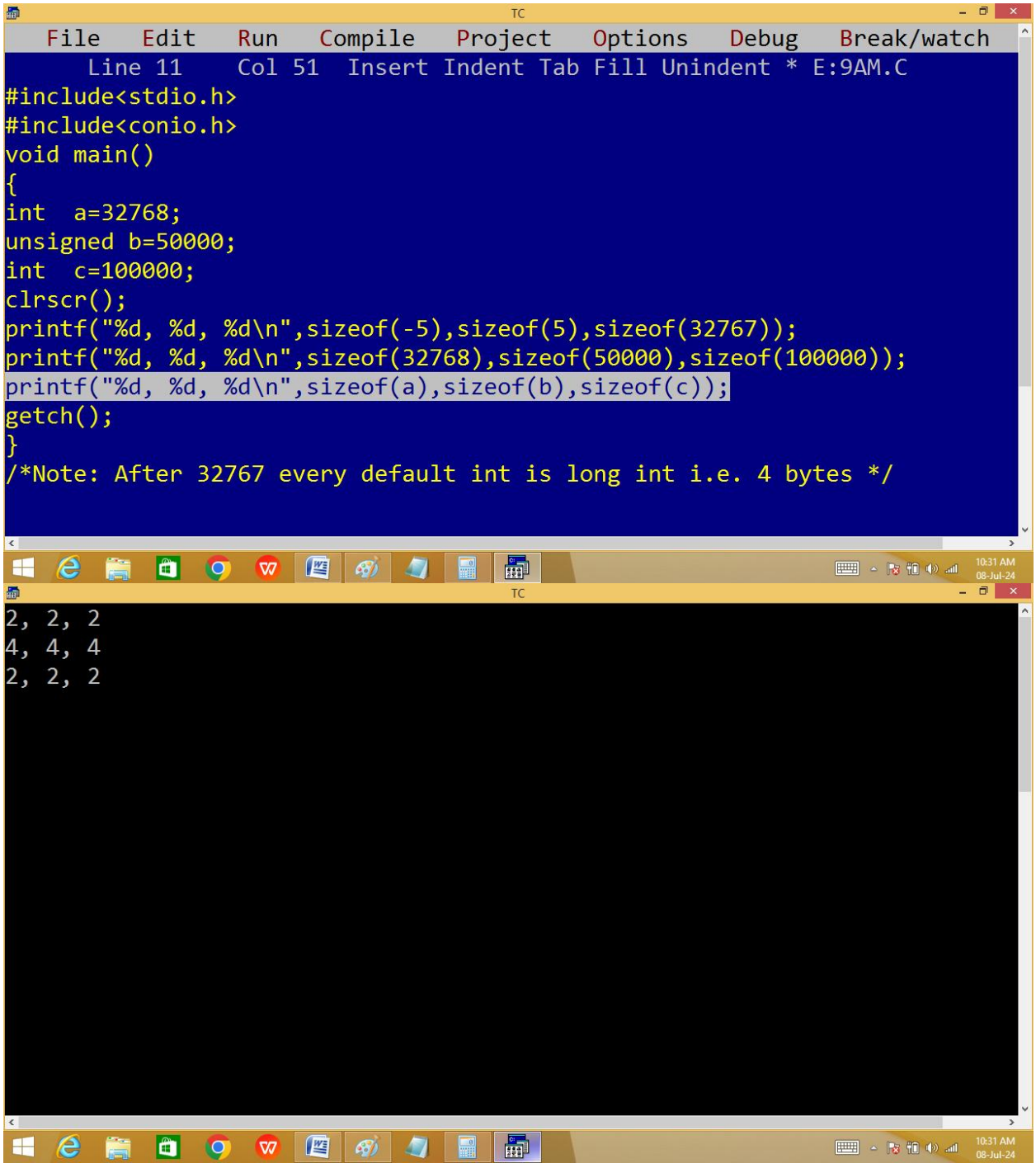

## Address operators:

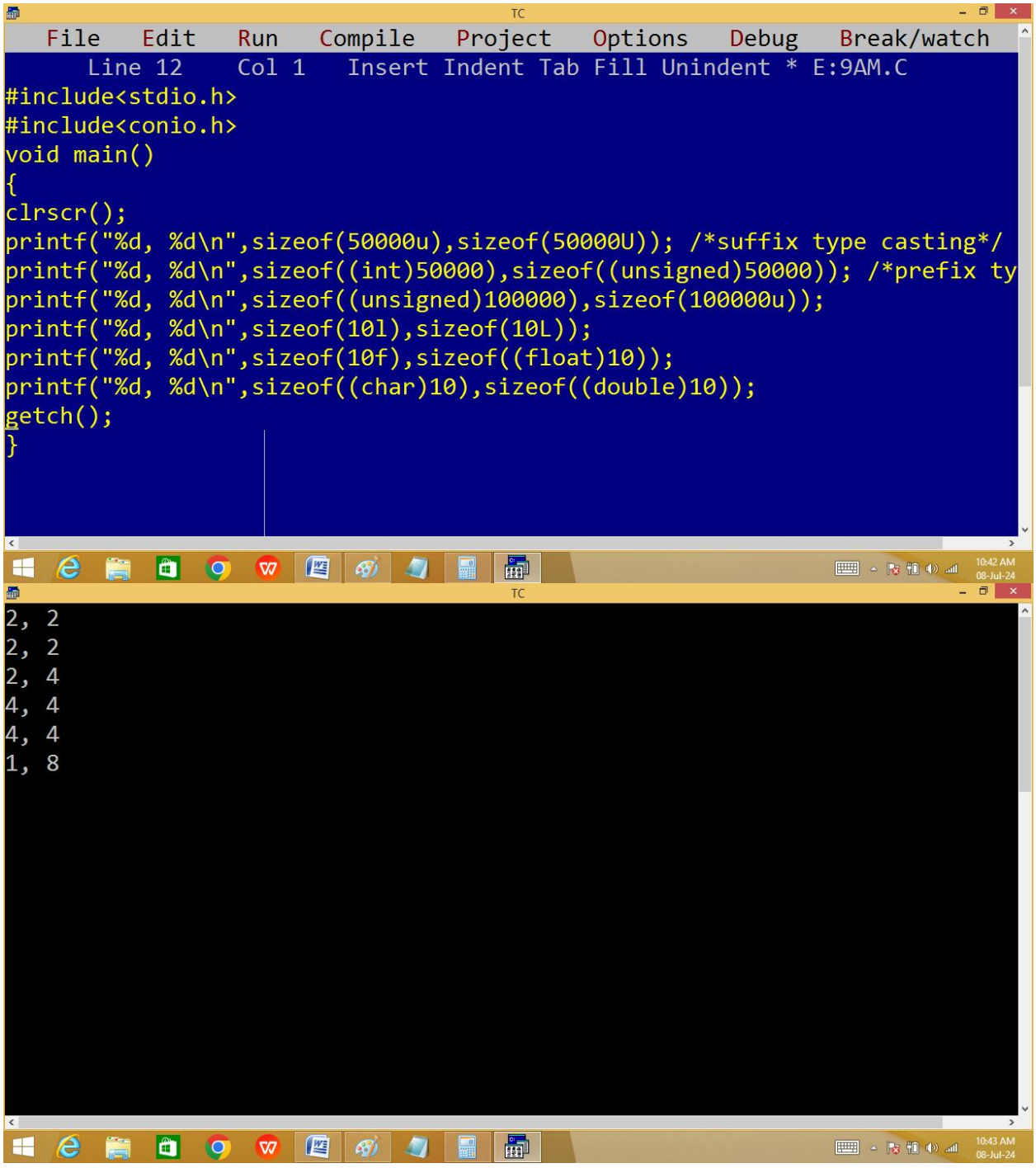
1. & - Address of variable
2. * - pointer – address of another variable

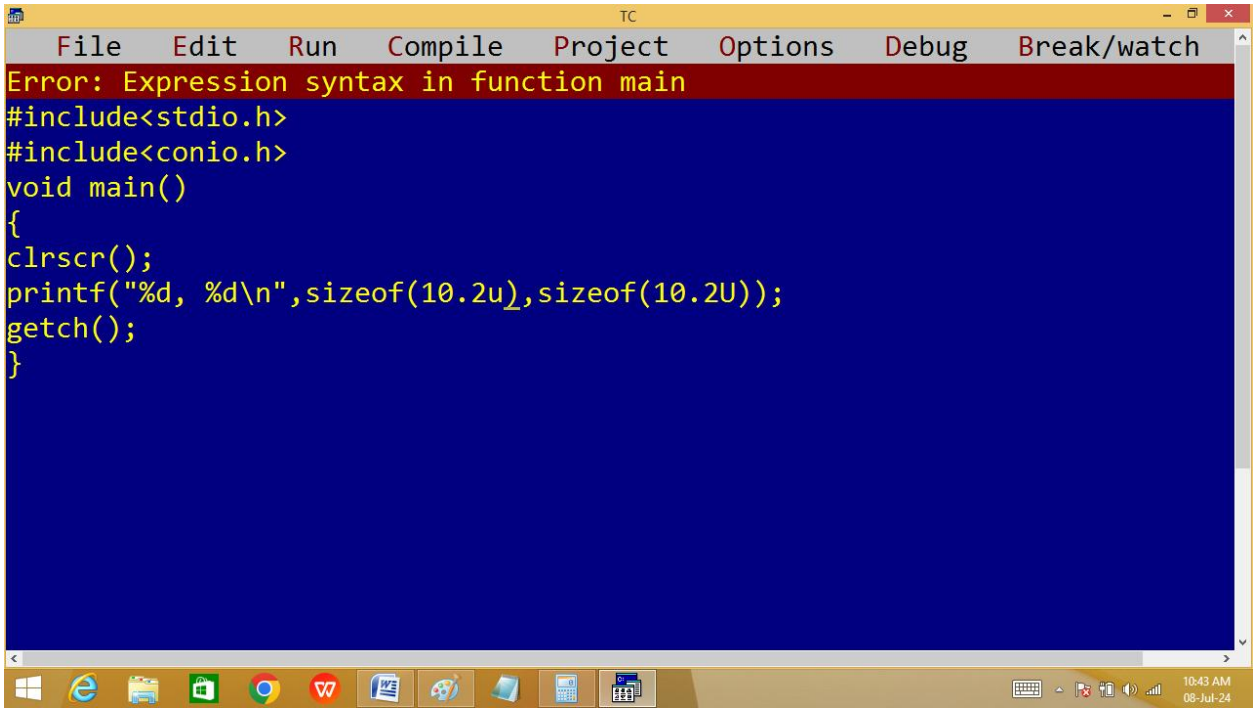


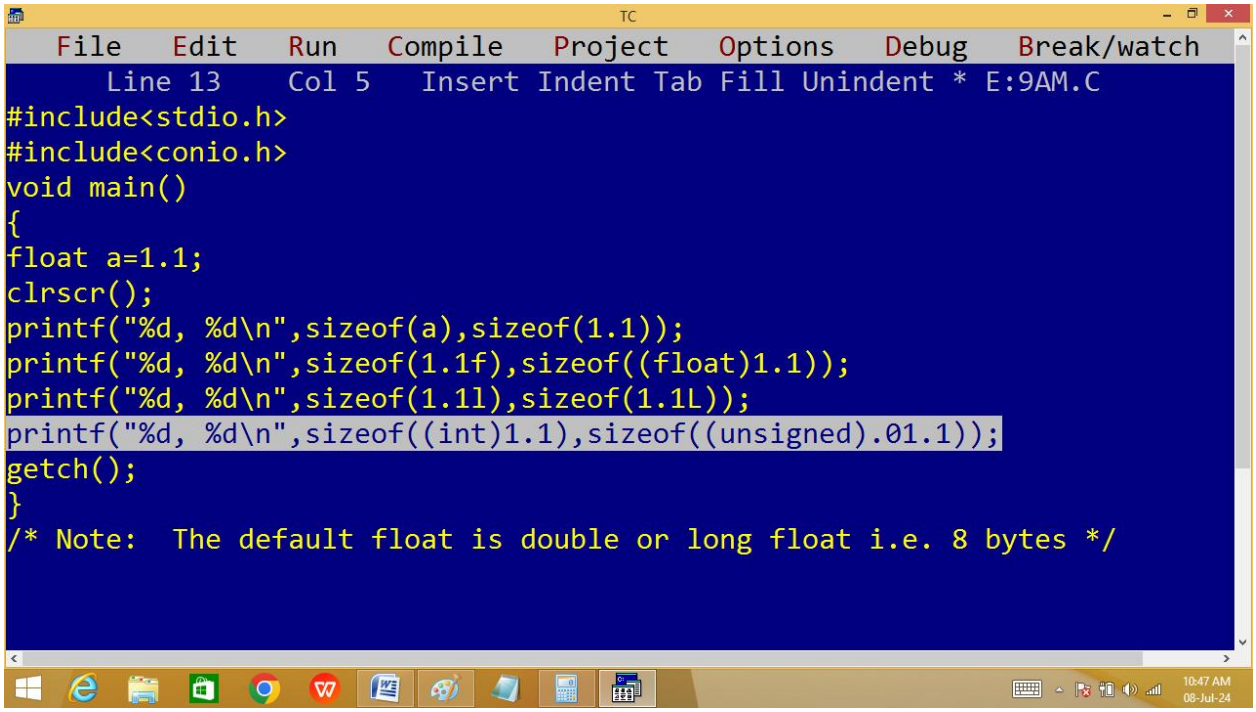

**sizeof( )**: It return the no of bytes taken by a variable / data type / value.

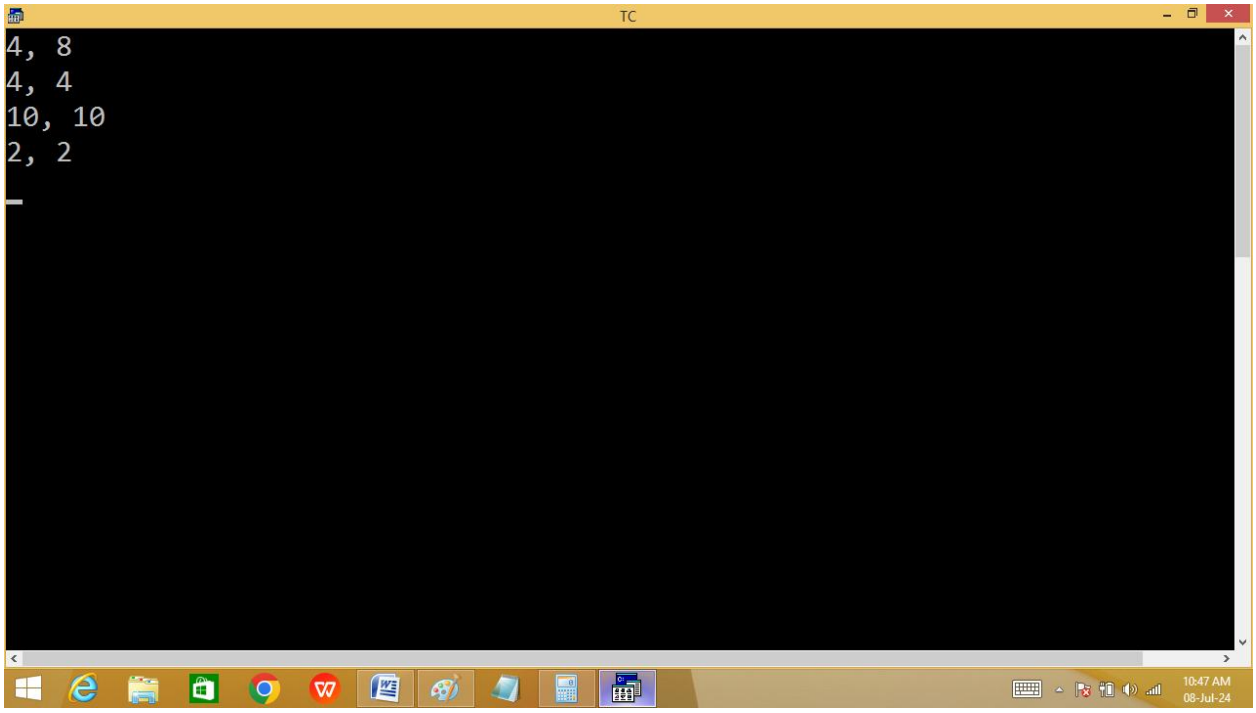

TC
File Edit Run Compile Project Options Debug Break/watch
Line 10 Col 7 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int a;
float b;
char c;
clrscr();
printf("%d, %d, %d\n",sizeof(a),sizeof(b),sizeof(c));
printf("%d, %d, %d\n",sizeof(int),sizeof(float),sizeof(char));
getch();
}
TC
2, 4, 1
2, 4, 1


TC
File Edit Run Compile Project Options Debug Break/watch
Line 11 Col 51 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int a=32768;
unsigned b=50000;
int c=100000;
clrscr();
printf("%d, %d, %d\n",sizeof(-5),sizeof(5),sizeof(32767));
printf("%d, %d, %d\n",sizeof(32768),sizeof(50000),sizeof(100000));
printf("%d, %d, %d\n",sizeof(a),sizeof(b),sizeof(c));
getch();
}
/*Note: After 32767 every default int is long int i.e. 4 bytes */
TC
2, 2, 2
4, 4, 4
2, 2, 2


TC
File Edit Run Compile Project Options Debug Break/watch
Line 12 Col 1 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("%d, %d\n",sizeof(50000u),sizeof(50000U)); /*suffix type casting*/
printf("%d, %d\n",sizeof((int)50000),sizeof((unsigned)50000)); /*prefix ty
printf("%d, %d\n",sizeof((unsigned)100000),sizeof(100000u));
printf("%d, %d\n",sizeof(10l),sizeof(10L));
printf("%d, %d\n",sizeof(10f),sizeof((float)10));
printf("%d, %d\n",sizeof((char)10),sizeof((double)10));
getch();
}
10:42 AM
08-Jul-24
TC
2, 2
2, 2
2, 4
4, 4
4, 4
1, 8
10:43 AM
08-Jul-24


TC
File Edit Run Compile Project Options Debug Break/watch
Error: Expression syntax in function main
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("%d, %d\n",sizeof(10.2u),sizeof(10.2U));
getch();
}


TC
File Edit Run Compile Project Options Debug Break/watch
Line 13 Col 5 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
float a=1.1;
clrscr();
printf("%d, %d\n",sizeof(a),sizeof(1.1));
printf("%d, %d\n",sizeof(1.1f),sizeof((float)1.1));
printf("%d, %d\n",sizeof(1.1l),sizeof(1.1L));
printf("%d, %d\n",sizeof((int)1.1),sizeof((unsigned).01.1));
getch();
}
/* Note: The default float is double or long float i.e. 8 bytes */


TC
4, 8
4, 4
10, 10
2, 2
10:47 AM
08-Jul-24