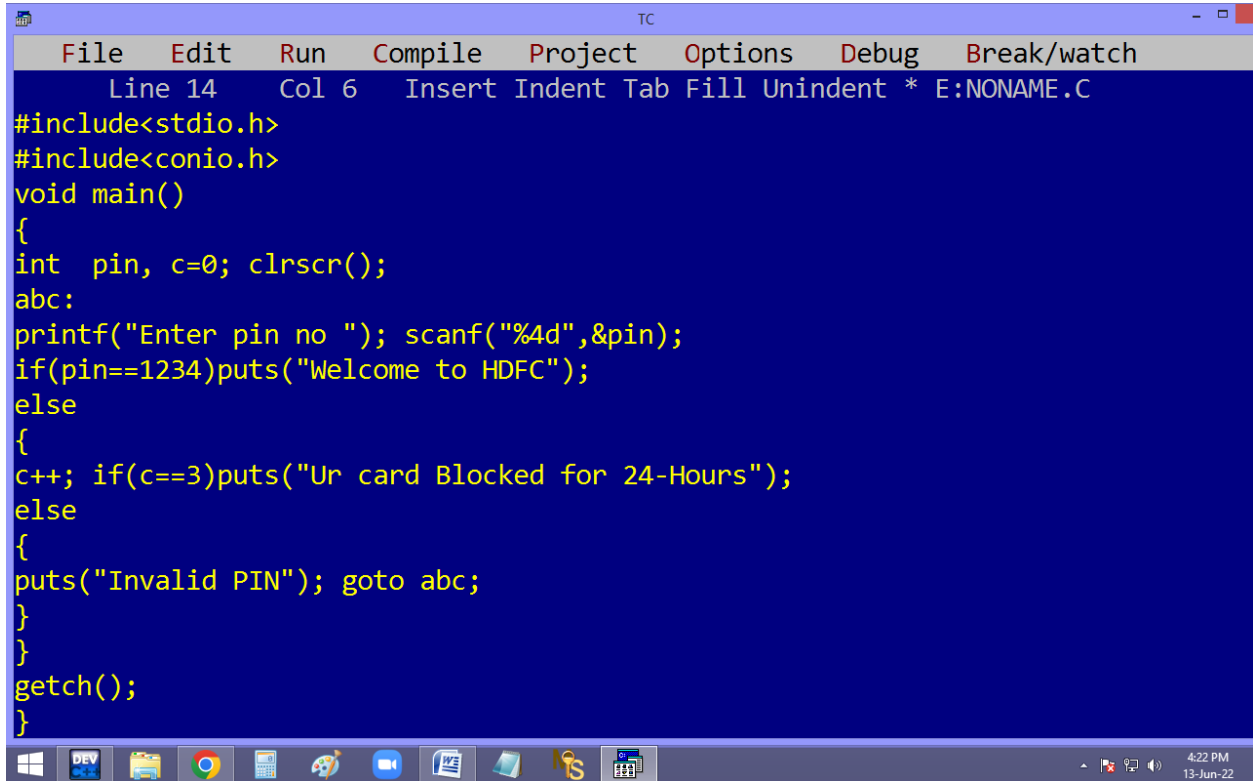


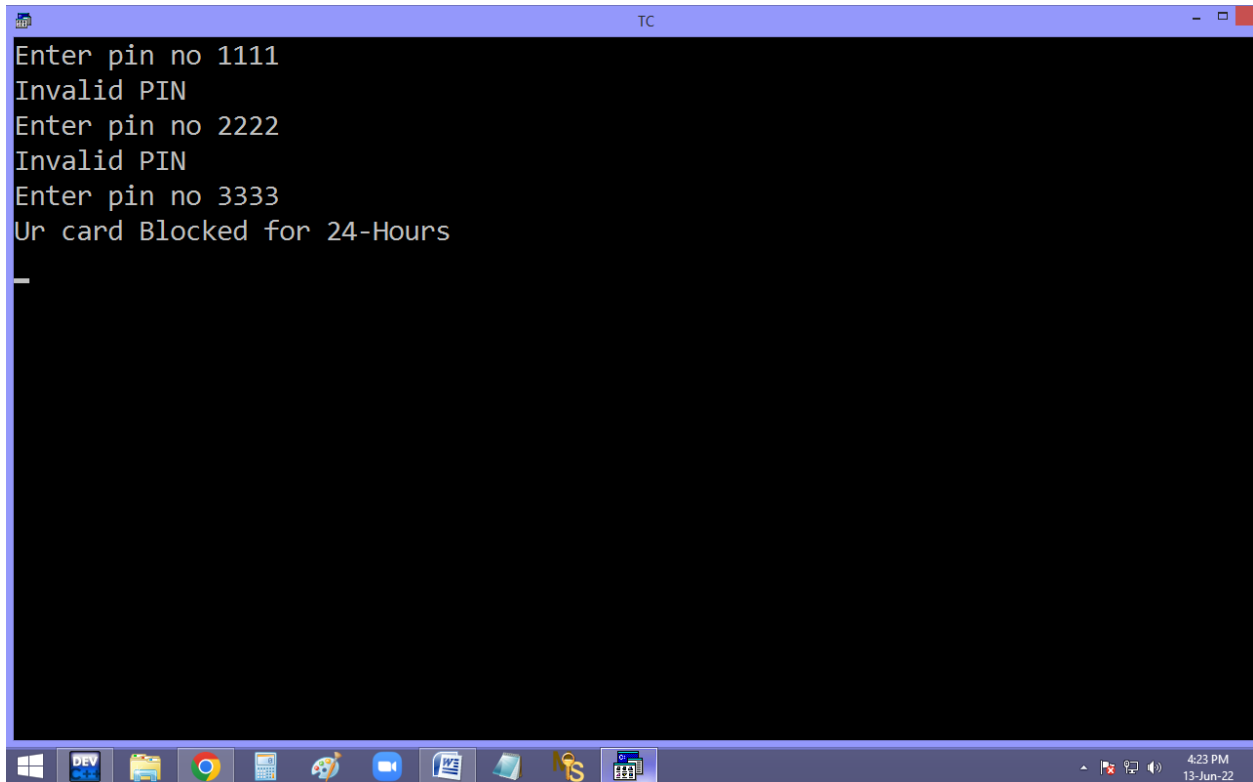
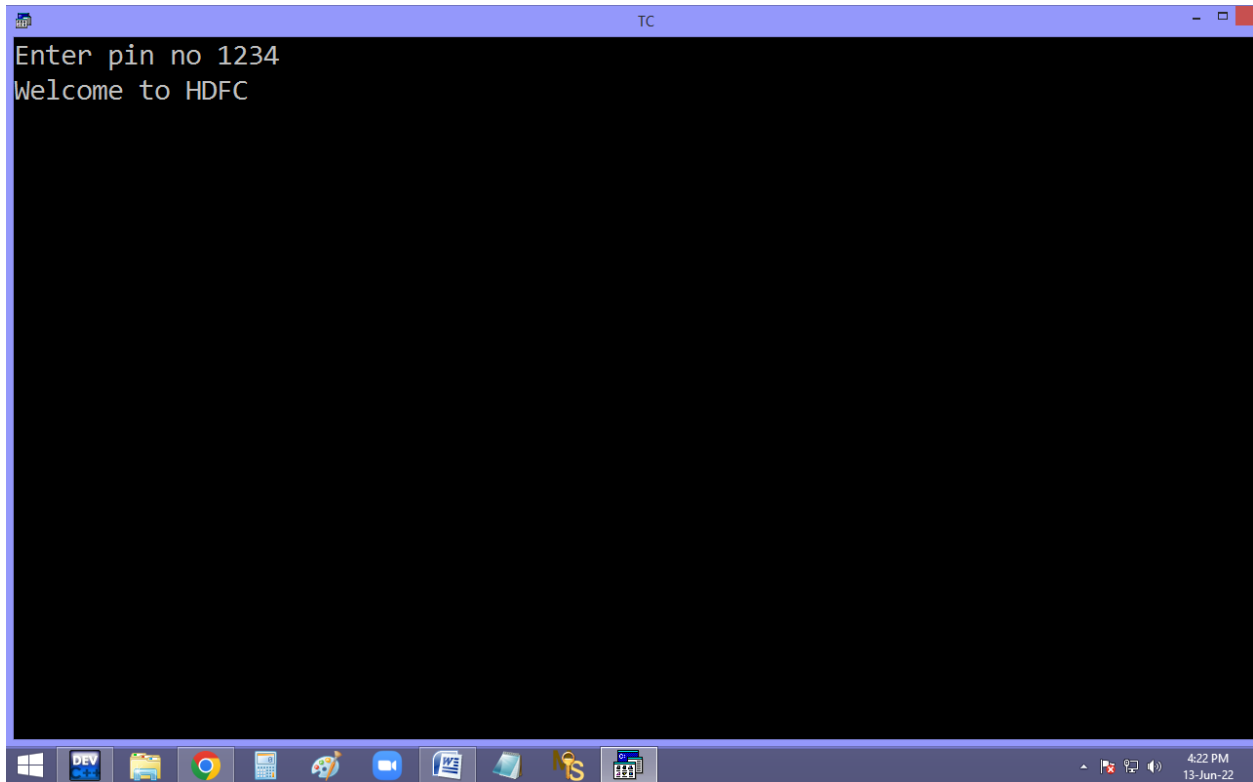
# ATM PIN Validation:

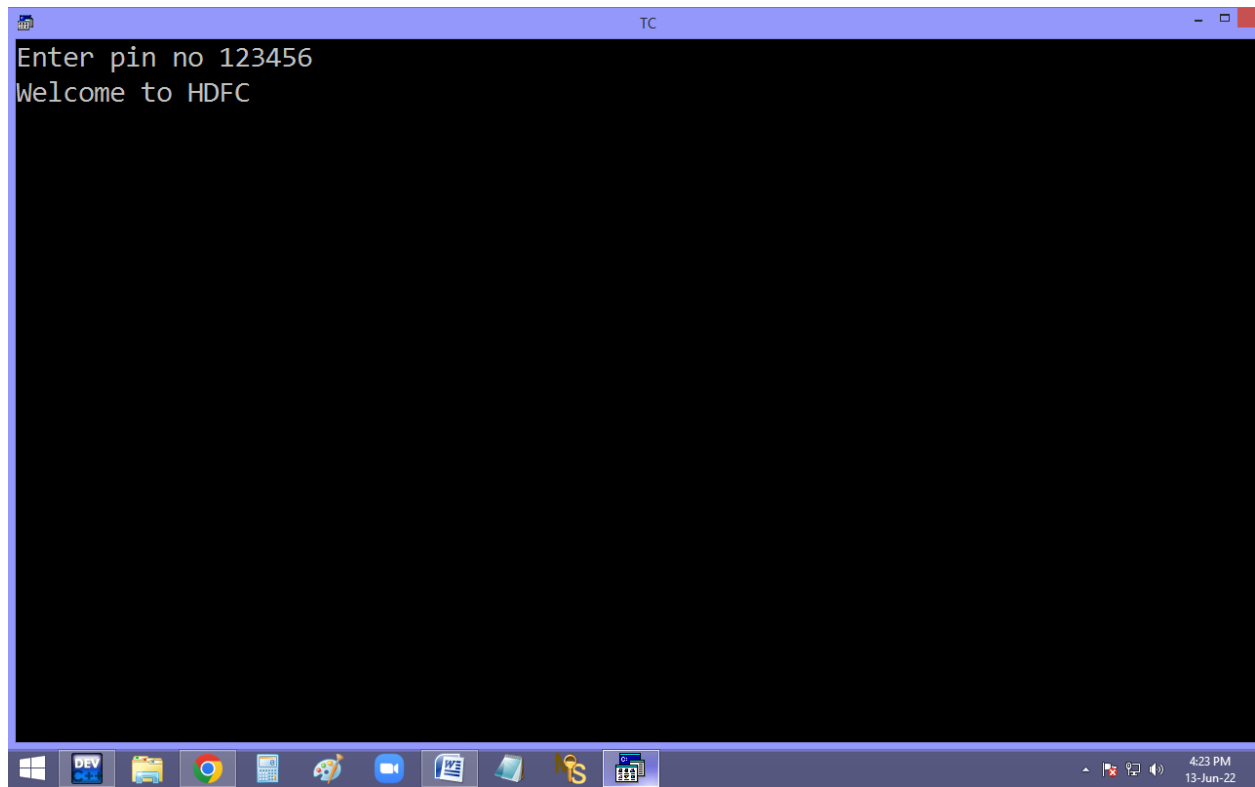


The image shows a screenshot of a Turbo C++ (TC) IDE window. The title bar reads "TC". The menu bar includes "File", "Edit", "Run", "Compile", "Project", "Options", "Debug", and "Break/watch". The status bar at the top indicates "Line 14", "Col 6", and "Insert Indent Tab Fill Unindent \* E:NONAME.C". 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()
{
int  pin, c=0; clrscr();
abc:
printf("Enter pin no "); scanf("%4d",&pin);
if(pin==1234)puts("Welcome to HDFC");
else
{
c++; if(c==3)puts("Ur card Blocked for 24-Hours");
else
{
puts("Invalid PIN"); goto abc;
}
}
getch();
}
```

The Windows taskbar is visible at the bottom, showing icons for Windows, DEV C++, File Explorer, Google Chrome, Calculator, Paint, WhatsApp, Notepad, and a folder icon. The system tray on the right shows the time as 4:22 PM and the date as 13-Jun-22.





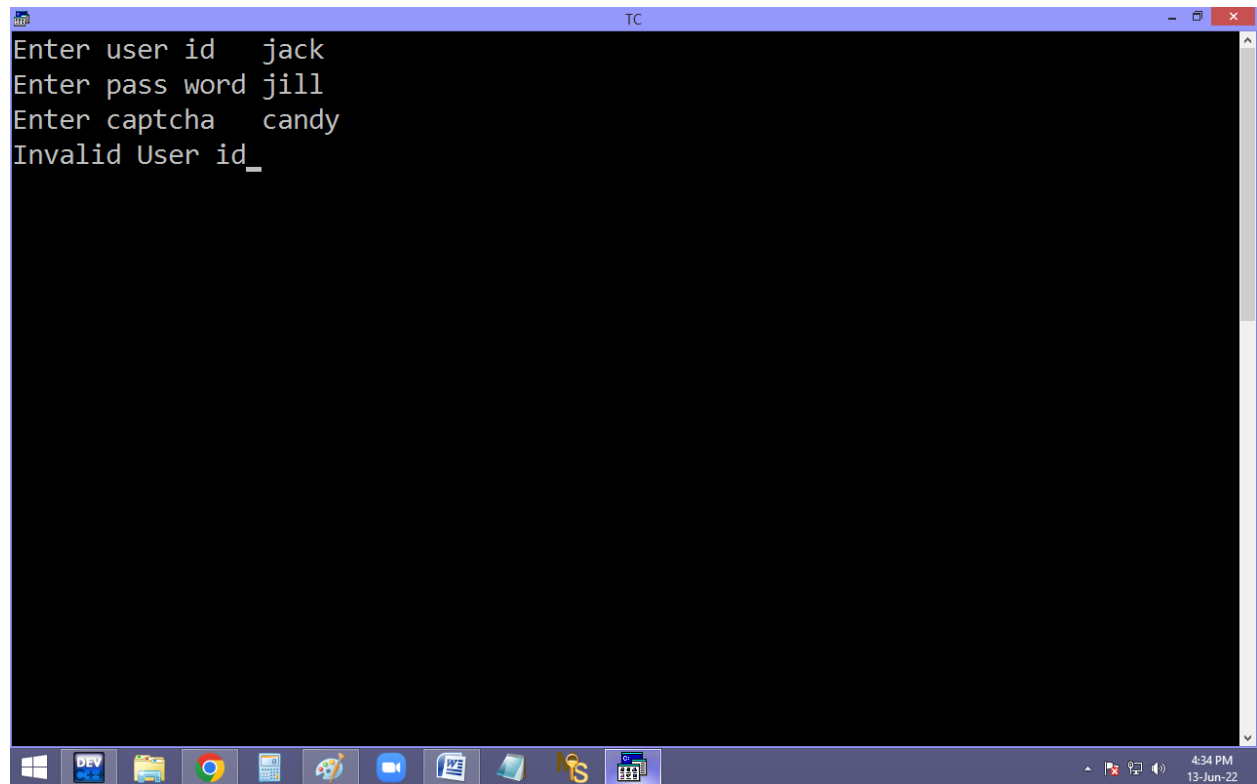
**Eg. IRCTC Login:**

```
TC
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main()
{
char user[20], pass[20], cap[20]; clrscr();
printf("Enter user id  "); scanf("%s",user);
printf("Enter pass word "); scanf("%s",pass);
printf("Enter captcha  "); scanf("%s", cap);
if(strcmp(user,"Krish")==0)
{
if(strcmp(pass,"Indian")==0)
{
if(strcmp(cap,"Hyd-16")==0)puts("Welcome to IRCTC");
else puts("Invalid Captcha");
}
else puts("Invalid Password");
}
else printf("Invalid User id"); getch();
}
```

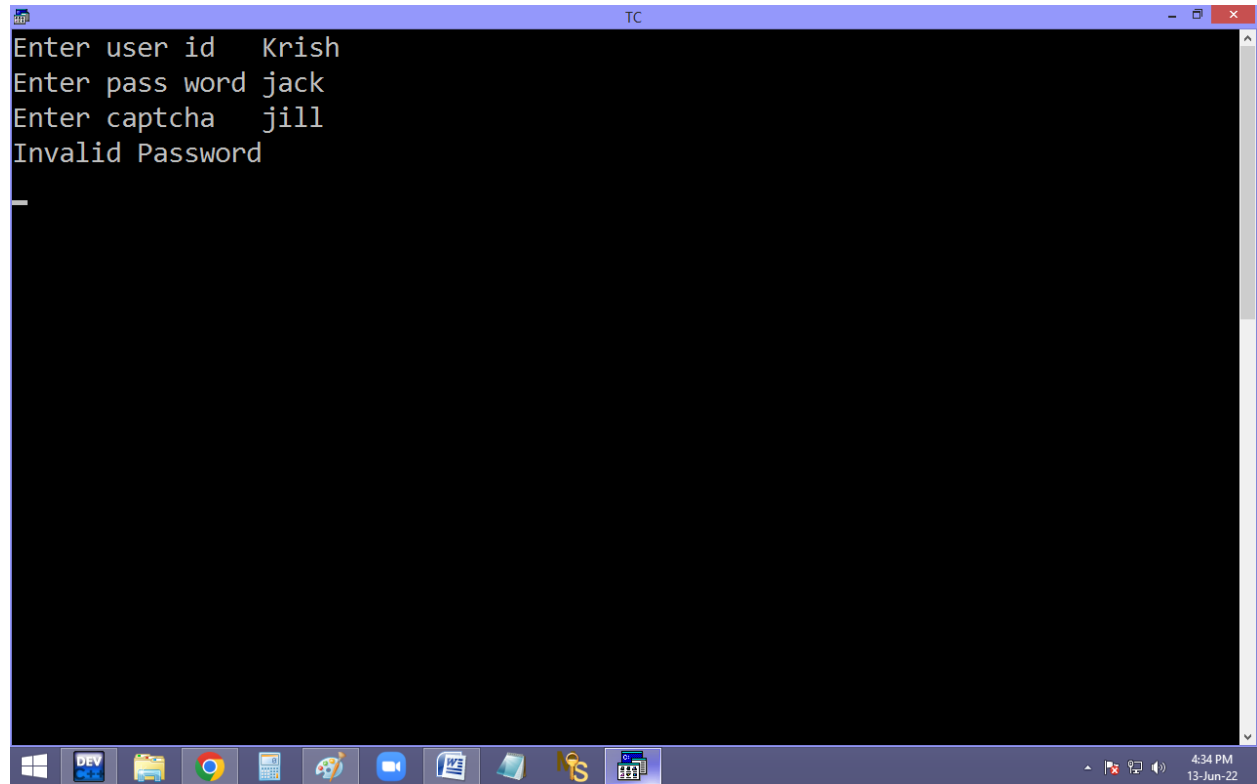
```
TC
Enter user id  Krish
Enter pass word Indian
Enter captcha  Hyd-16
Welcome to IRCTC
_
```

Page: 4 of 4 | Words: 6 | 100% 4:34 PM 13-Jun-22

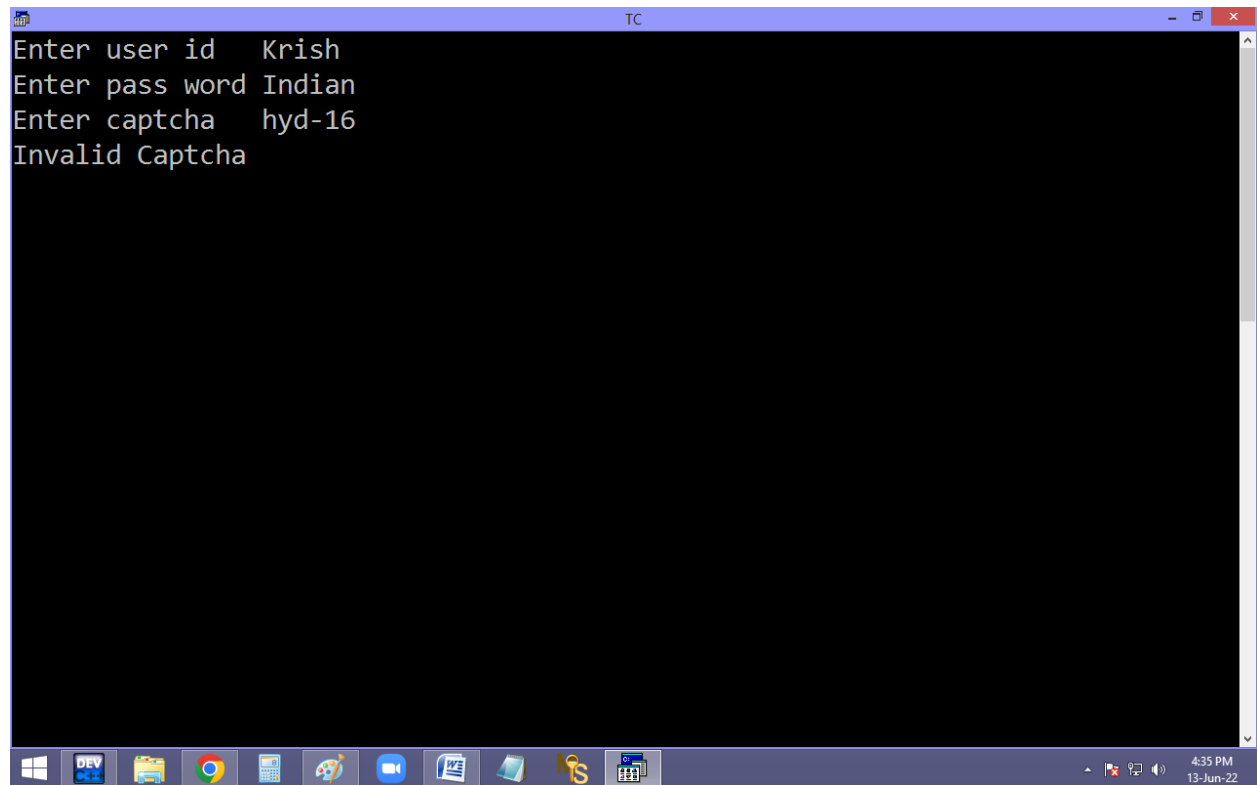
```
TC
Enter user id  jack
Enter pass word jill
Enter captcha  candy
Invalid User id_
```



```
TC
Enter user id  Krish
Enter pass word jack
Enter captcha  jill
Invalid Password
_
```



```
TC
Enter user id    Krish
Enter pass word  Indian
Enter captcha    hyd-16
Invalid Captcha
```

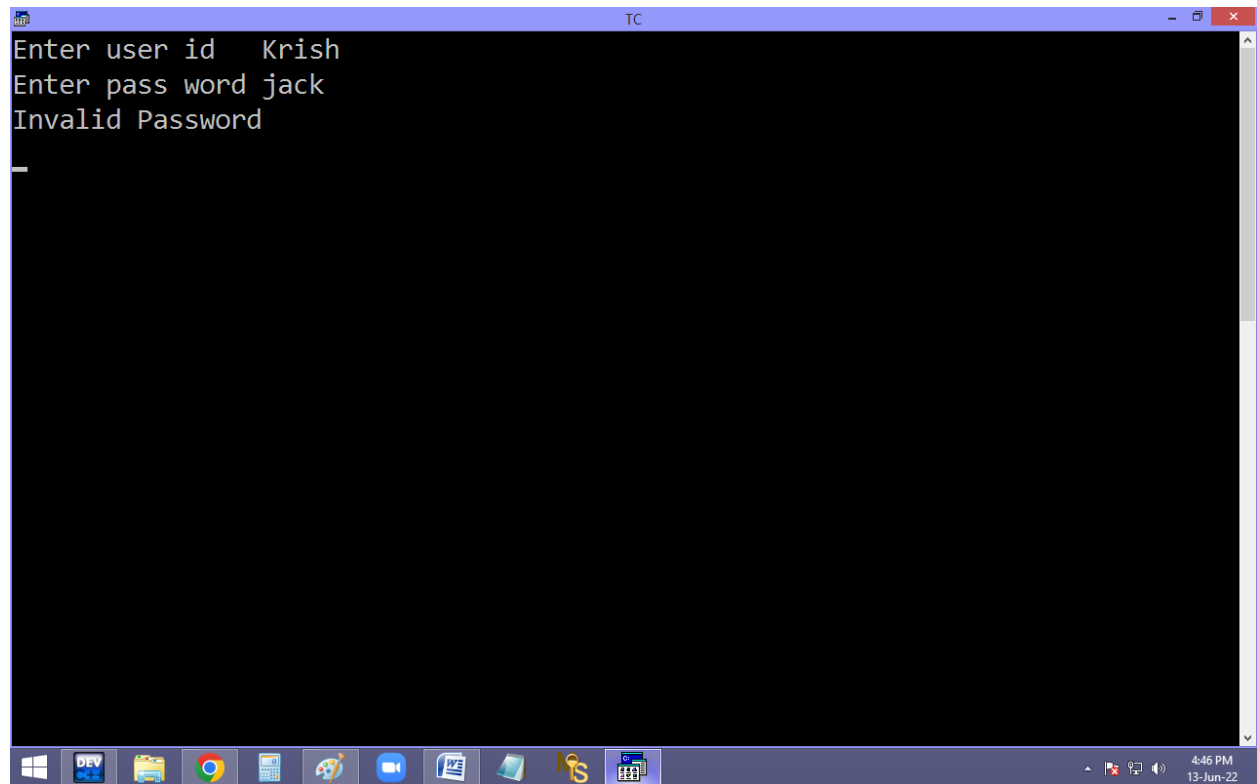


**Gmail type login:**

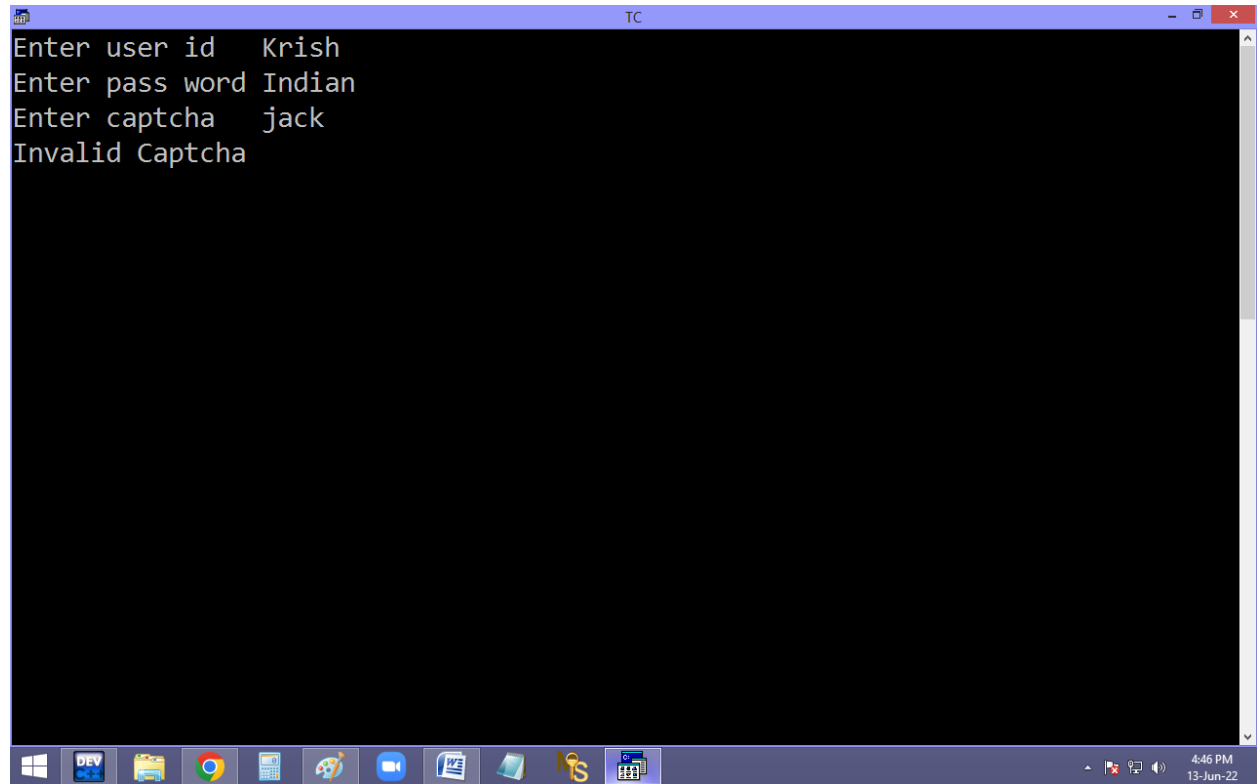
```
TC
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main()
{
char user[20], pass[20], cap[20]; clrscr();
printf("Enter user id  "); scanf("%s",user);
if(strcmp(user,"Krish")==0)
{
printf("Enter pass word "); scanf("%s",pass);
if(strcmp(pass,"Indian")==0)
{
printf("Enter captcha  "); scanf("%s", cap);
if(strcmp(cap,"Hyd-16")==0)puts("Welcome to IRCTC");
else puts("Invalid Captcha");
}
else puts("Invalid Password");
}
else printf("Invalid User id"); getch();
}
```

```
TC
Enter user id  jack
Invalid User id_
```

```
TC
Enter user id   Krish
Enter pass word jack
Invalid Password
_
```



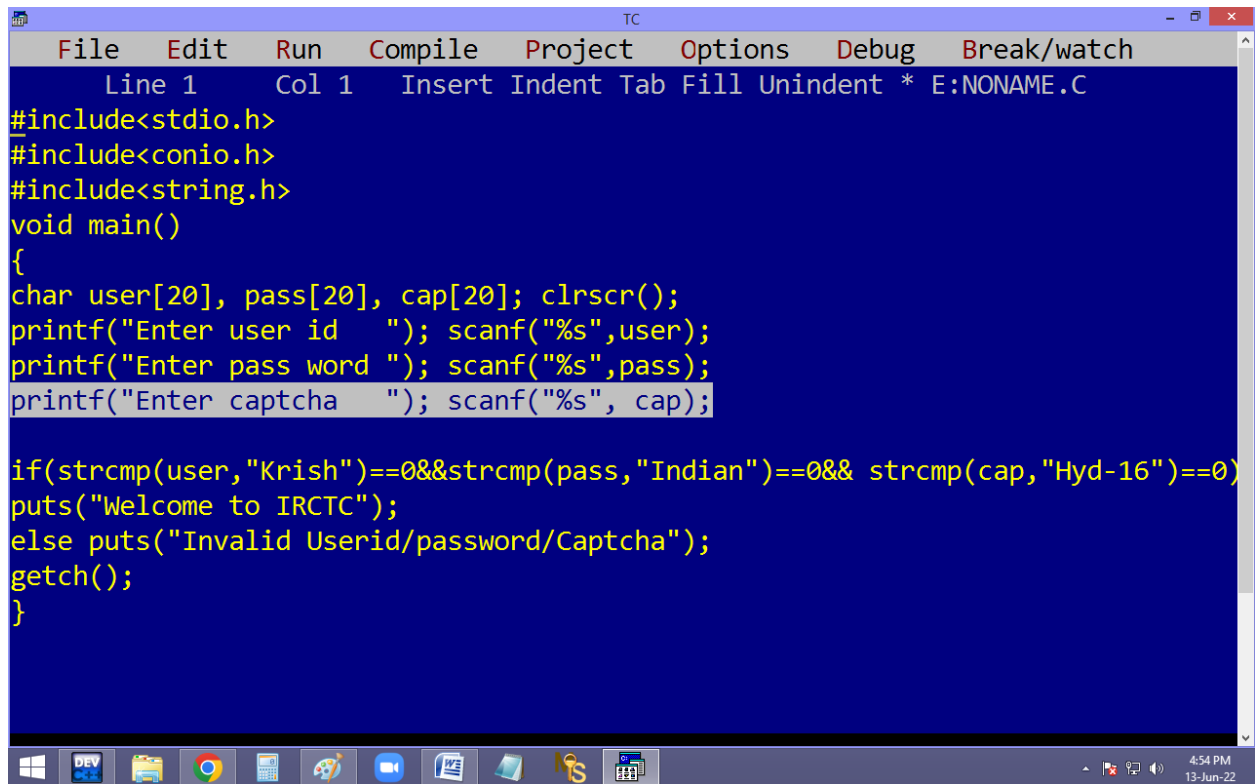
```
TC
Enter user id   Krish
Enter pass word Indian
Enter captcha   jack
Invalid Captcha
```





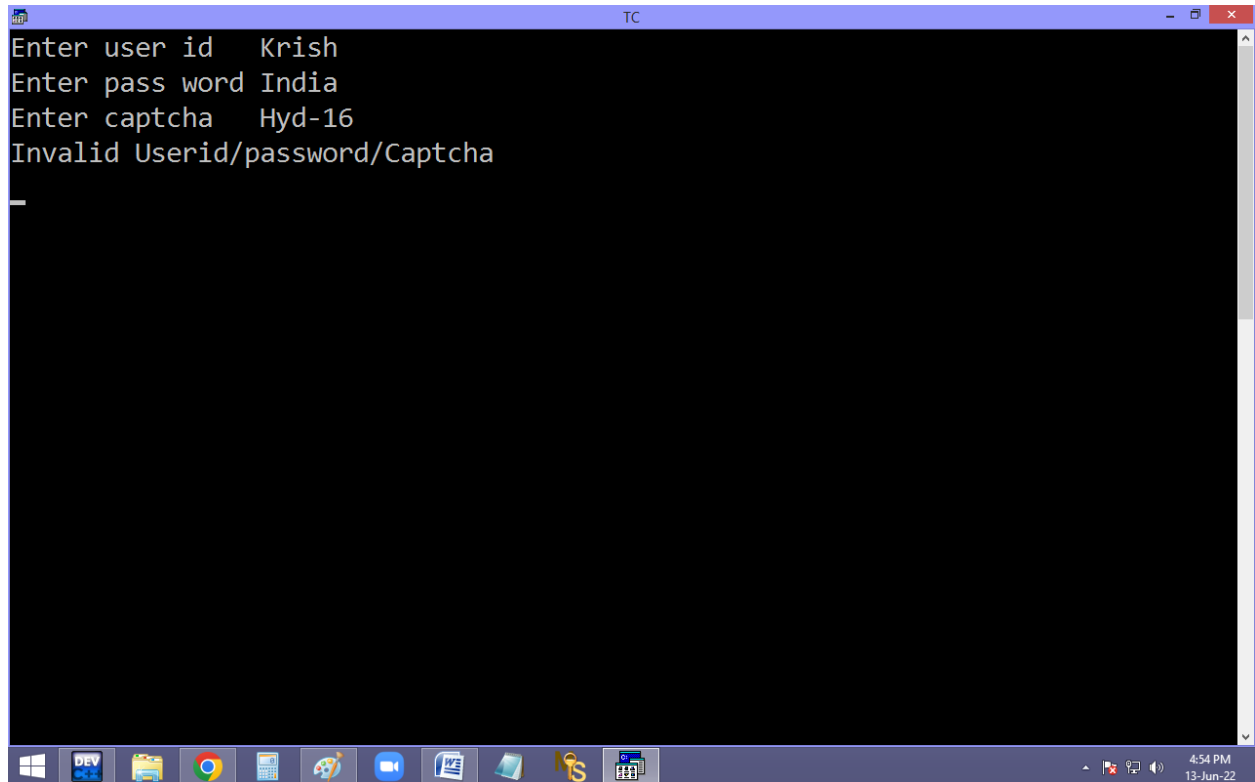
```
TC
Enter user id    Krish
Enter pass word  Indian
Enter captcha    Hyd-16
Welcome to IRCTC
```

**Net Banking Login:**



```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 1 Col 1 Insert Indent Tab Fill Unindent * E:NONAME.C
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main()
{
char user[20], pass[20], cap[20]; clrscr();
printf("Enter user id "); scanf("%s",user);
printf("Enter pass word "); scanf("%s",pass);
printf("Enter captcha "); scanf("%s", cap);

if(strcmp(user,"Krish")==0&&strcmp(pass,"Indian")==0&& strcmp(cap,"Hyd-16")==0)
puts("Welcome to IRCTC");
else puts("Invalid Userid/password/Captcha");
getch();
}
```



```
TC
Enter user id Krish
Enter pass word India
Enter captcha Hyd-16
Invalid Userid/password/Captcha
```

```
TC
Enter user id   Krdfdsd
Enter pass word Indian
Enter captcha   Hyd-16
Invalid Userid/password/Captcha
```

```
TC
Enter user id   Krish
Enter pass word Indian
Enter captcha   Hyd-16
Welcome to IRCTC
```

**Eg. Read a stu id, name, 6 sub marks and find the stu total, avg and grade [ Distinction / 1<sup>st</sup> class / 2<sup>nd</sup> / 3<sup>rd</sup> / Fail ]**

```
#include<stdio.h>
```

```
#include<conio.h>
```

```
#include<string.h>
```

```
void main()
```

```
{
```

```
char id[20], name[20], result[20];
```

```
int tel, eng, hin, mat, sci, soc,tot;
```

```
float avg;
```

```
clrscr();
```

```
printf("Enter stu id, name ");
```

```
scanf("%s %s",id, name);
```

```
printf("Enter 6 sub marks ");
```

```
scanf("%d %d %d %d %d %d", &tel, &eng, &hin, &mat, &sci, &soc);

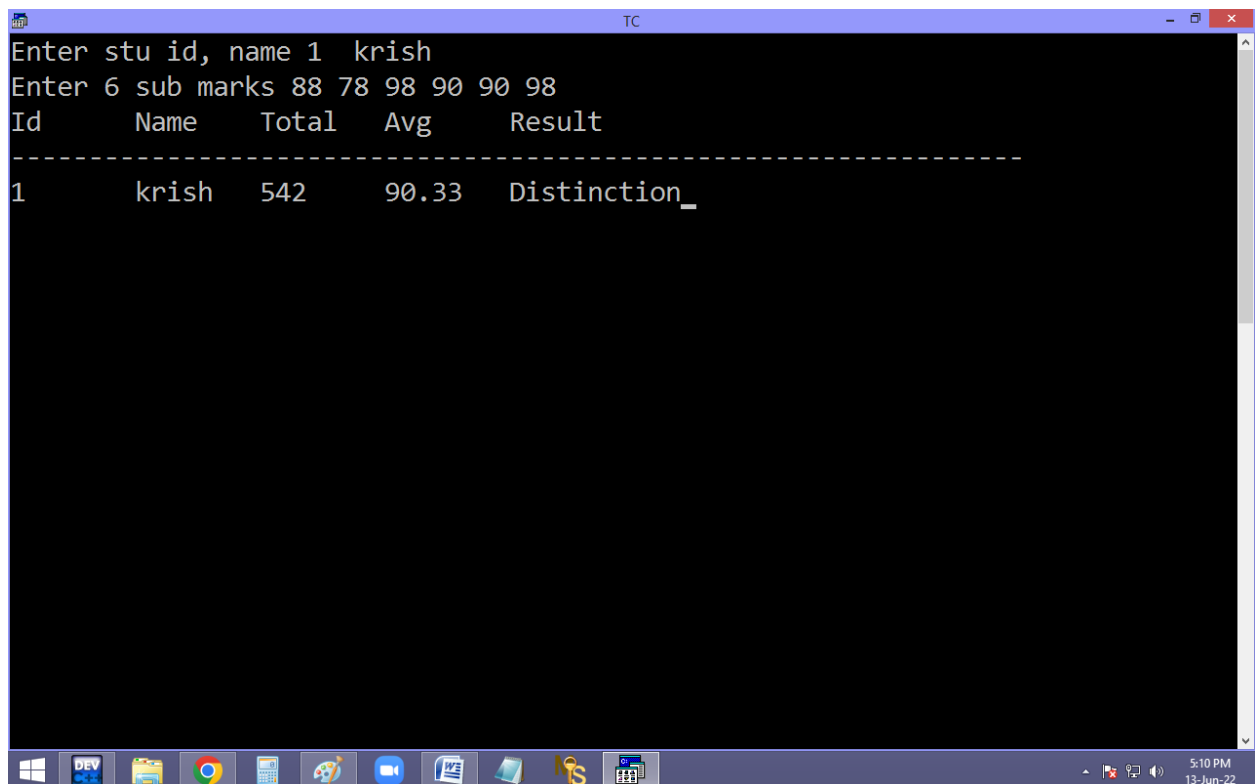
tot = tel+eng+hin+mat+sci+soc;

avg = tot/6.0;

if(tel>=35&&eng>=35&&hin>=35&&mat>=35&&sci>=35&&soc>=35)
{
    if(avg>=75)strcpy(result, "Distinction");
    else if(avg>=60)strcpy(result, "1st class");
    else if(avg>=50)strcpy(result, "2nd class");
    else strcpy(result, "3rd class");
}
else strcpy(result, "Fail");

puts("Id\tName\tTotal\tAvg\tResult");
```

```
puts("-----  
-----");  
  
printf("%s\t%s\t%d\t%.2f\t%s",id,name,tot,av  
g,result);  
  
getch();  
  
}
```



```
TC  
Enter stu id, name 1 krish  
Enter 6 sub marks 88 78 98 90 90 98  
Id      Name      Total   Avg      Result  
-----  
1       krish     542     90.33   Distinction_
```

```
TC
Enter stu id, name 102 siri
Enter 6 sub marks 76 87 89 67 50 30
Id      Name      Total   Avg      Result
-----
102     siri       399     66.50    Fail
```

## Without using strcpy():

```
#include<stdio.h>
```

```
#include<conio.h>
```

```
void main()
```

```
{
```

```
char id[20], name[20];
```

```
int tel, eng, hin, mat, sci, soc, tot;
```

```
float avg;

clrscr();

printf("Enter stu id, name ");

scanf("%s %s",id, name);

printf("Enter 6 sub marks ");

scanf("%d %d %d %d %d
%d",&tel,&eng,&hin,&mat,&sci,&soc);

tot = tel+eng+hin+mat+sci+soc;

avg = tot/6.0;

puts("Id\tName\tTotal\tAvg\tResult");

puts("-----
-----");

printf("%s\t%s\t%d\t%.2f\t",id,name,tot,avg);

if(tel>=35&&eng>=35&&hin>=35&&mat>=35&
&sci>=35&&soc>=35)
```



```
{  
if(avg>=75)puts("Distinction");  
else if(avg>=60)puts("1st class");  
else if(avg>=50)puts("2nd class");  
else puts("3rd class");  
}  
else puts("Fail");  
getch();  
}
```

```
TC
Enter stu id, name 2 kavya
Enter 6 sub marks 56 60 65 43 54 52
Id      Name      Total   Avg      Result
-----
2       kavya     330     55.00    2nd class
```

## Ternary / Conditional operator( ? : )

It is similar to if else / ladder if in working style.

It allows to complete if else / ladder if in a single statement.

When we are working with if else/ladder if it is going to take more than one line of

statements. Ternary operator is going to finish the same task in a single statement.

**But the difference between if ...else and ternary operator is ternary operator supports only one statement at a time and if supports any number of statements.**

It is having 3 expressions. Hence it is called ternary operator.

It is starting with a condition. Hence it is called conditional operator.

**Syntax:**

condition ? true statement : false statement ;



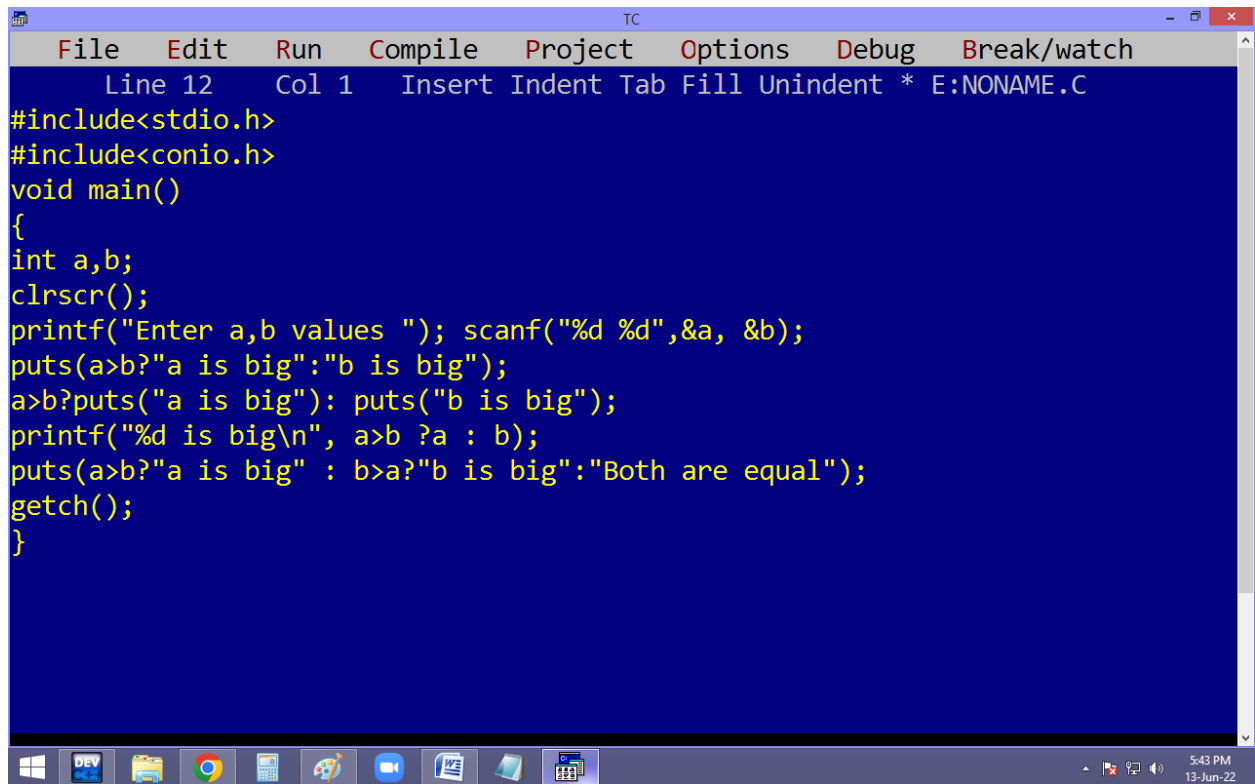
exp1/op1    exp2/op2    exp3/op3

If condition true, statement after **?** executed.

If condition false, statement after **:** is executed.

When compared with if else, conditional operator **performance is high**.

**Eg:** Finding big in two no's using ternary operator.



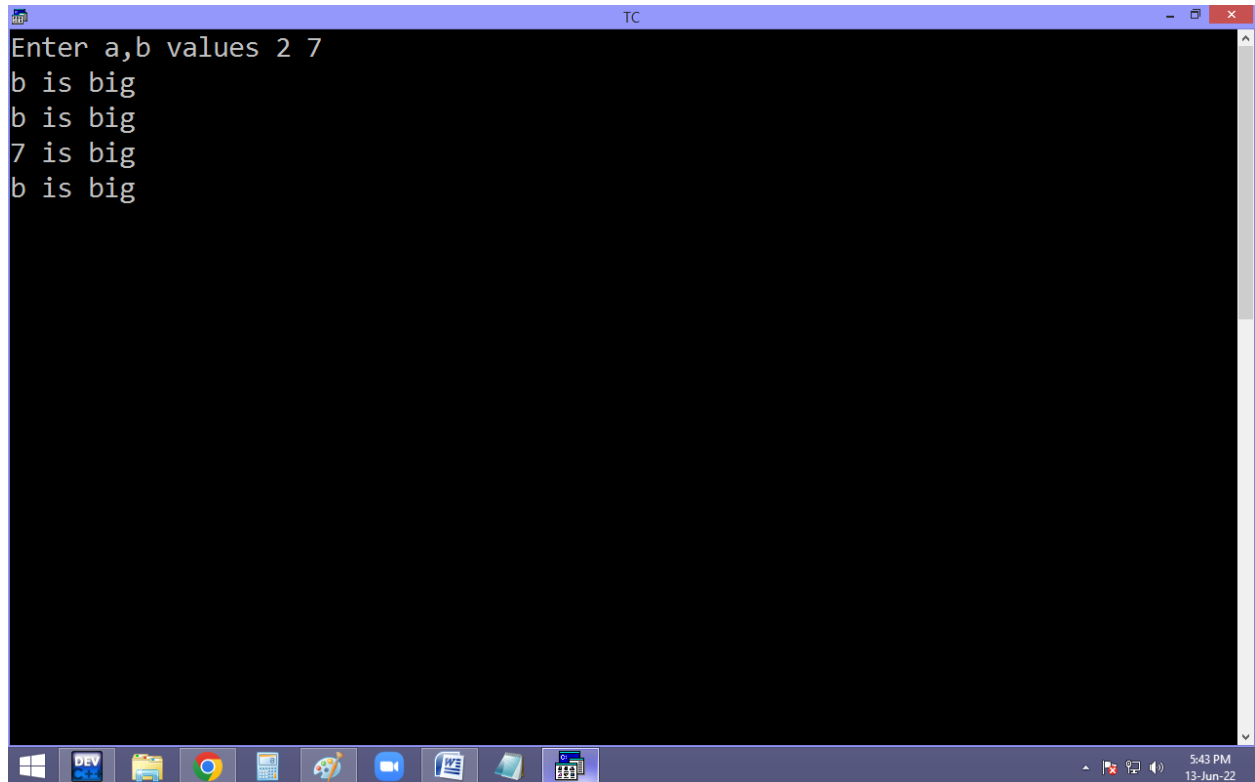
TC

File Edit Run Compile Project Options Debug Break/watch

Line 12 Col 1 Insert Indent Tab Fill Unindent \* E:NONAME.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
int a,b;
clrscr();
printf("Enter a,b values "); scanf("%d %d",&a, &b);
puts(a>b?"a is big":"b is big");
a>b?puts("a is big"): puts("b is big");
printf("%d is big\n", a>b ?a : b);
puts(a>b?"a is big" : b>a?"b is big":"Both are equal");
getch();
}
```

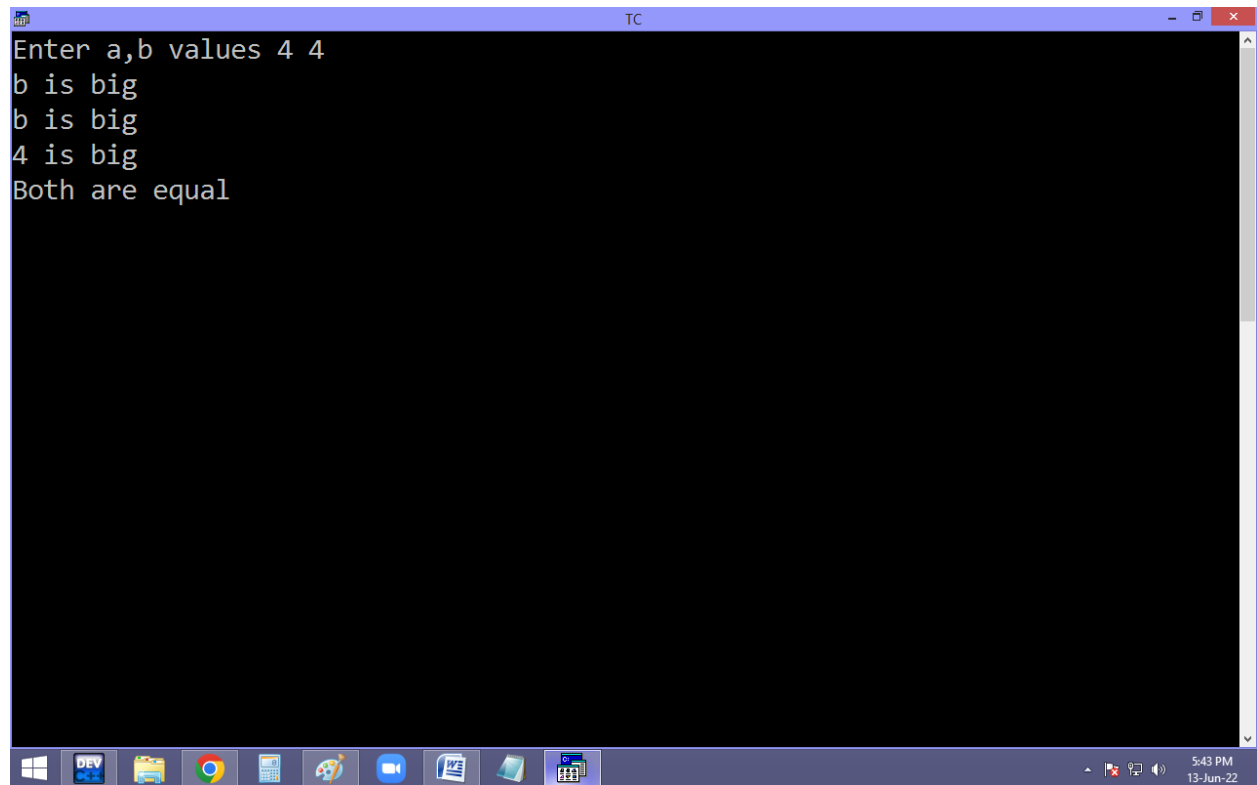
5:43 PM 13-Jun-22



TC

```
Enter a,b values 2 7
b is big
b is big
7 is big
b is big
```

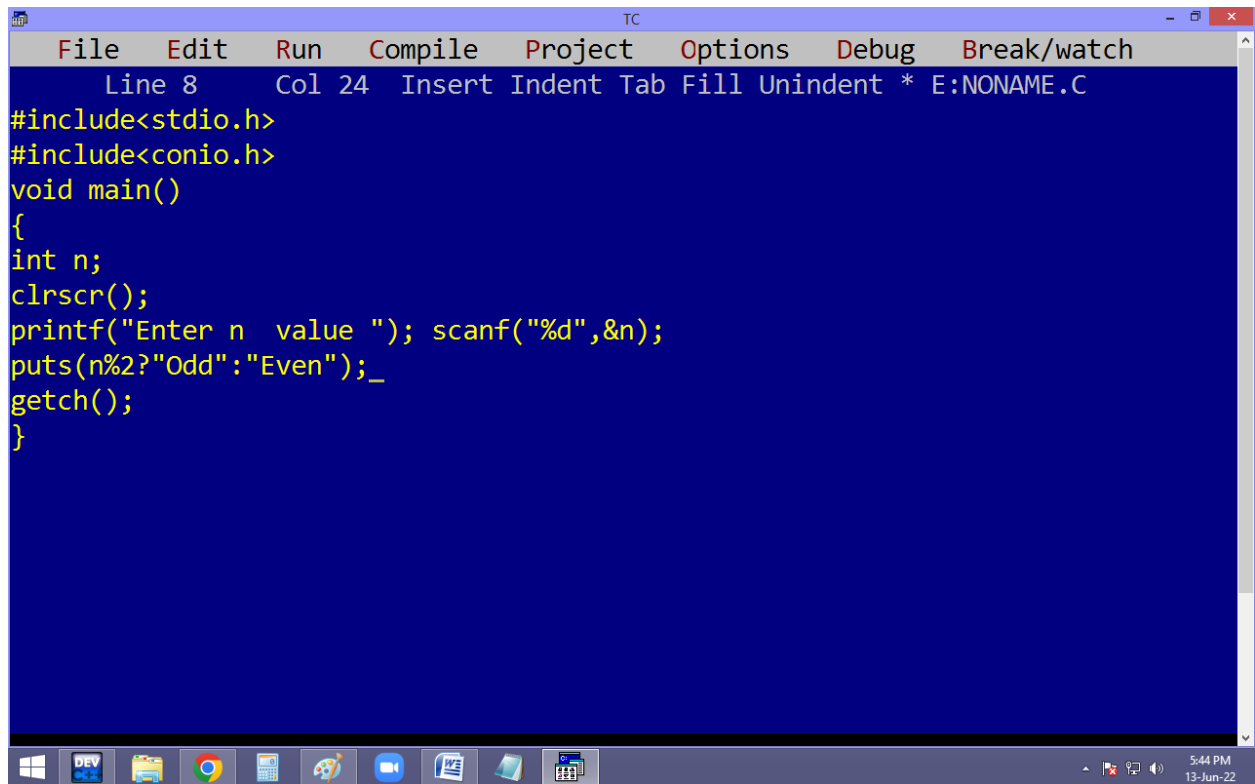
5:43 PM 13-Jun-22



A screenshot of a Turbo C++ (TC) window. The window title bar is blue and contains the text "TC" in the center. The main area is black with white text. The text displayed is: "Enter a,b values 4 4", "b is big", "b is big", "4 is big", and "Both are equal". The window has a standard Windows taskbar at the bottom with various icons including Windows, DEV, File Explorer, Chrome, Calculator, Paint, and others. The system tray on the right shows the time as 5:43 PM and the date as 13-Jun-22.

```
Enter a,b values 4 4
b is big
b is big
4 is big
Both are equal
```

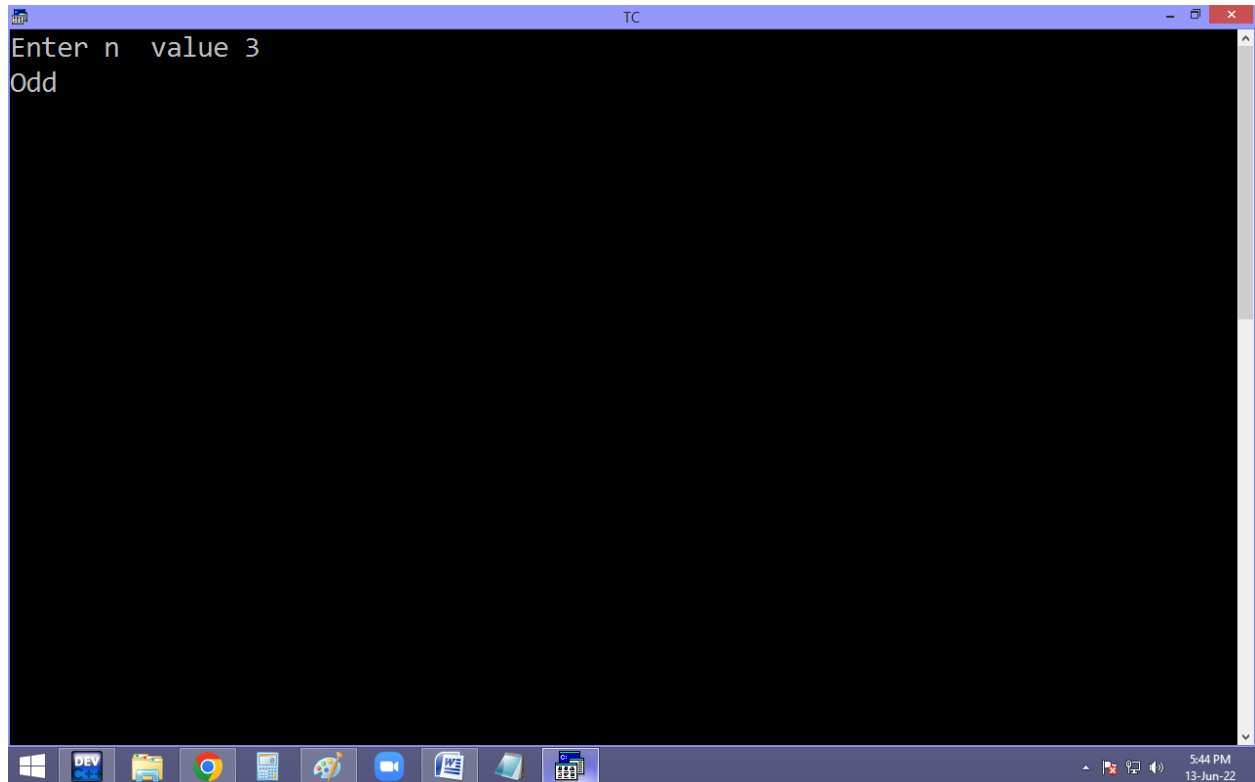
**Eg. finding even/odd using ternary operator.**



The screenshot shows the Turbo C++ (TC) IDE with a menu bar (File, Edit, Run, Compile, Project, Options, Debug, Break/watch) and a toolbar. The main window displays a C program for checking if a number is odd or even. The code is as follows:

```
Line 8 Col 24 Insert Indent Tab Fill Unindent * E:NONAME.C
#include<stdio.h>
#include<conio.h>
void main()
{
int n;
clrscr();
printf("Enter n value "); scanf("%d",&n);
puts(n%2?"Odd":"Even");_
getch();
}
```

The Windows taskbar at the bottom shows the Start button and several application icons, including DEV C++, File Explorer, Google Chrome, Calculator, Paint, and others. The system clock in the bottom right corner indicates 5:44 PM on 13-Jun-22.



The screenshot shows the Turbo C++ (TC) IDE after the program has been executed. The main window now displays the program's output:

```
Enter n value 3
Odd
```

The rest of the IDE interface, including the menu bar, toolbar, and Windows taskbar, remains the same as in the first screenshot. The system clock still shows 5:44 PM on 13-Jun-22.

```
TC
Enter n value 4
Even
```

