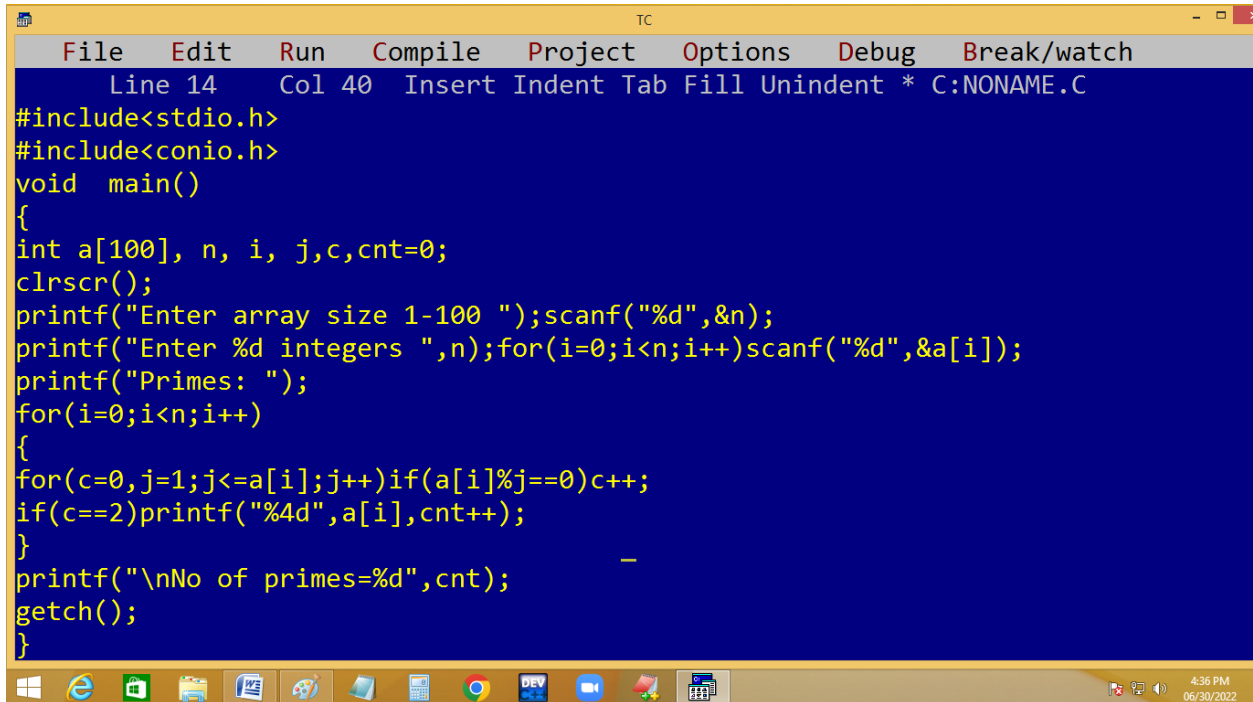


Eg. finding primes in give array and count.



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 40", and "Insert Indent Tab Fill Unindent * C:NONAME.C". The main editing area has a blue background with yellow text containing the following C code:

```
#include<stdio.h>
#include<conio.h>
void main()
{
int a[100], n, i, j,c,cnt=0;
clrscr();
printf("Enter array size 1-100 ");scanf("%d",&n);
printf("Enter %d integers ",n);for(i=0;i<n;i++)scanf("%d",&a[i]);
printf("Primes: ");
for(i=0;i<n;i++)
{
for(c=0,j=1;j<=a[i];j++)if(a[i]%j==0)c++;
if(c==2)printf("%4d",a[i],cnt++);
}
printf("\nNo of primes=%d",cnt);
getch();
}
```

The Windows taskbar is visible at the bottom, showing icons for various applications and the system clock displaying "4:36 PM" and "06/30/2022".

```

Enter array size 1-100 4
Enter 4 integers 1 2 3 4
Primes: 2 3
No of primes=2

```

```

for(i=0; i<4; i++)
{
    for( c=0, j=1; j<=a[i]; j++) if(a[i]%j==0) c++;
    if(c==2) p(a[i], cnt++);
}
p(cnt);

```

a

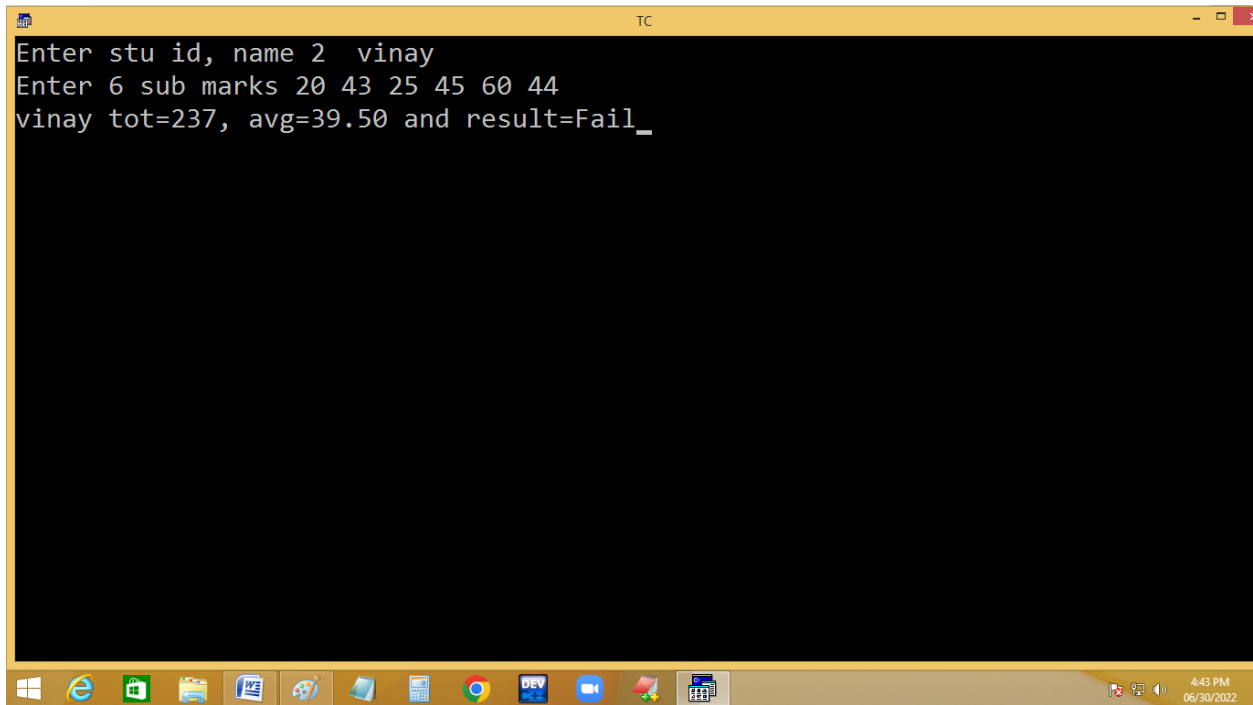
1	2	3	4
0	1	2	3

a[i]	j	c	cnt
0	1	0	0
1	1	0	1
1	2	0	2
2	1	0	2
2	2	0	3
3	1	0	3
3	2	0	3
3	3	0	3
4	1	0	3
4	2	0	3
4	4	0	3

Eg. Finding stu result using array.

```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 11 Col 21 Insert Indent Tab Fill Unindent * C:NONAME.C
#include<stdio.h>
#include<conio.h>
void main()
{
int id, sub[6], i, pass=1,tot=0;
char name[20]; float avg;
clrscr();
printf("Enter stu id, name ");scanf("%d %s",&id,name);
printf("Enter 6 sub marks ");
for(i=0;i<6;i++)
{scanf("%d",&sub[i]);tot+=sub[i];if(sub[i]<35)pass=0; }
avg=tot/6.0;
printf("%s tot=%d, avg=%.2f and result=%s",name,tot,avg,pass?"Pass":"Fail");
getch();
}

TC
Enter stu id, name 1 krish
Enter 6 sub marks 99 90 89 98 99 90
krish tot=565, avg=94.17 and result=Pass_
```



```
Enter stu id, name 2 vinay
Enter 6 sub marks 20 43 25 45 60 44
vinay tot=237, avg=39.50 and result=Fail_
```

Preparing students marks memo:

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

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

```
void main()
```

```
{
```

```
int id, sub[6], i, pass=1,tot=0;
```

```
char name[20],gender[10],dob[20],fname[20],mname[20], subj[6][10]={"Tel",
```

```
"Eng","Hin","Mat","Sci","Soc"}; float avg;
```

```
clrscr();
```

```
printf("Enter stu id, name ");scanf("%d %s",&id,name);
```

```
printf("Enter gender ");scanf("%s",gender);
```

```
printf("Enter date of birth"); scanf("%s",dob);
```

```

printf("Enter father name "); scanf("%s",fname);

printf("Enter mother name ");scanf("%s",mname);

printf("Enter 6 sub marks ");

for(i=0;i<6;i++)

{scanf("%d",&sub[i]);tot+=sub[i];if(sub[i]<35)pass=0; }

avg=tot/6.0;

puts("\t\t BOARD OF SECONDARY EDUCATION");

puts("\t\t\t  ANDHRA PRADESH");

puts("*****
*****");

printf("id: %d\tName: %s\n",id,name);

printf("Gender: %s\t Dob: %s\n",gender,dob);

printf("Father: %s\t Mother: %s\n",fname,mname);

puts("*****
*****");

puts("Sub\tMarks\t Pass/Fail");

puts("*****
*****");

for(i=0;i<6;i++)

{

printf("%s\t%d \t %s\n",subj[i],sub[i],sub[i]>=35?"P":"F");

}

```

```

puts("*****
*****");

printf("%s tot=%d, avg=%.2f and result=%s",name,tot,avg,pass?"Pass":"Fail");

getch();

}

```

The screenshot shows a terminal window titled "TC" with the following content:

```

Enter stu id, name 102 sushma
Enter gender female
Enter date of birth 22-5-2004
Enter father name subbarao
Enter mother name sarojini
Enter 6 sub marks 99 89 87 90 89 99

BOARD OF SECONDARY EDUCATION
ANDHRA PRADESH

*****
id: 102 Name: sushma
Gender: female Dob: 22-5-2004
Father: subbarao Mother: sarojini
*****
Sub Marks Pass/Fail
*****
Tel 99 P
Eng 89 P
Hin 87 P
Mat 90 P
Sci 89 P
Soc 99 P
*****
sushma tot=553, avg=92.17 and result=Pass

```

The window also shows a Windows taskbar at the bottom with various application icons and a system clock indicating 5:02 PM on 06/30/2022.

Printing n different tables side by side:

```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 10 Col 27 Insert Indent Tab Fill Unindent * C:NONAME.C
#include<stdio.h>
#include<conio.h>
void main()
{
int a[10],n,i,j; clrscr();
printf("Enter no of tables ");scanf("%d",&n);
printf("Enter %d table no's ",n);for(i=0;i<n;i++)scanf("%d",&a[i]);
for(i=1;i<=10;i++)
{
for(j=0;j<n;j++)printf("%4d%-2d=%-4d",a[j],i,a[j]*i);
printf("\n");
}
getch();
}
```

```
TC
Enter no of tables 4
Enter 4 table no's 2 9 25 14
 2*1 =2      9*1 =9      25*1 =25      14*1 =14
 2*2 =4      9*2 =18     25*2 =50     14*2 =28
 2*3 =6      9*3 =27     25*3 =75     14*3 =42
 2*4 =8      9*4 =36     25*4 =100    14*4 =56
 2*5 =10     9*5 =45     25*5 =125    14*5 =70
 2*6 =12     9*6 =54     25*6 =150    14*6 =84
 2*7 =14     9*7 =63     25*7 =175    14*7 =98
 2*8 =16     9*8 =72     25*8 =200    14*8 =112
 2*9 =18     9*9 =81     25*9 =225    14*9 =126
 2*10=20     9*10=90     25*10=250    14*10=140
```

```

for(i=1;i<=10;i++)
{
for(j=0;j<4;j++)
{
p("a[j] * i \t ");
}
p("\n");
}

```

a	10	25	13	45
	0	1	2	3

<u>a[j]</u>	<u>i</u>				
0,1,2,3,4 -->	10*1=10	25*1=25	13*1=13	45*1=45	
0,1	10*2=20	25*2=50...			
				
...					
....	10				

Decimal to binary conversion:

Eg: 20 → 0000 0000 0001 0100

```

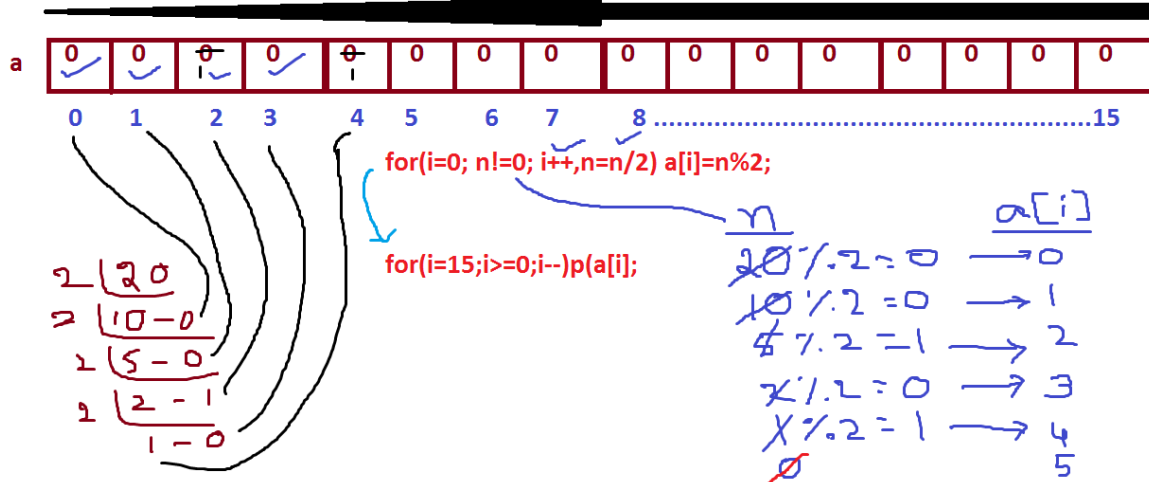
TC
File Edit Run Compile Project Options Debug Break/watch
Line 10 Col 18 Insert Indent Tab Fill Unindent * C:\NONAME.C
#include<stdio.h>
#include<conio.h>
void main()
{
int a[16]={0},n,i; clrscr();
printf("Enter the no ");scanf("%d",&n);
for(i=0;n!=0;i++,n=n/2)a[i]=n%2;
printf("Binary code ");
for(i=15;i>=0;i--)printf("%2d",a[i]);
printf("\n");
getch();
}

```

The screenshot shows a Turbo C++ IDE window titled 'TC'. The menu bar includes File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The status bar at the bottom indicates 'Line 10 Col 18 Insert Indent Tab Fill Unindent * C:\NONAME.C'. The code in the editor is a C program that takes a decimal number as input and prints its binary representation. The program uses an array 'a' of size 16 to store the binary digits. It uses a loop to divide the number by 2 and store the remainder. Finally, it prints the binary code in reverse order.

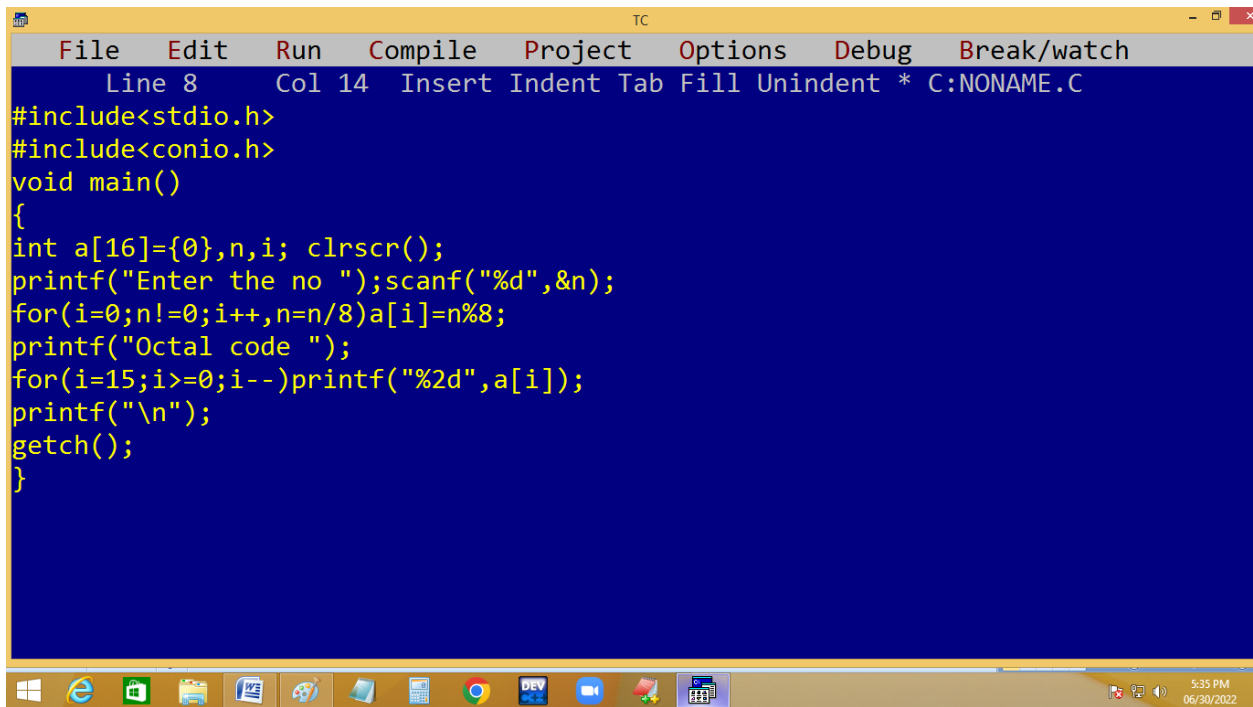
Enter the no 20

Binary code 0 0 0 0 0 0 0 0 0 0 0 1 0 1 0 0



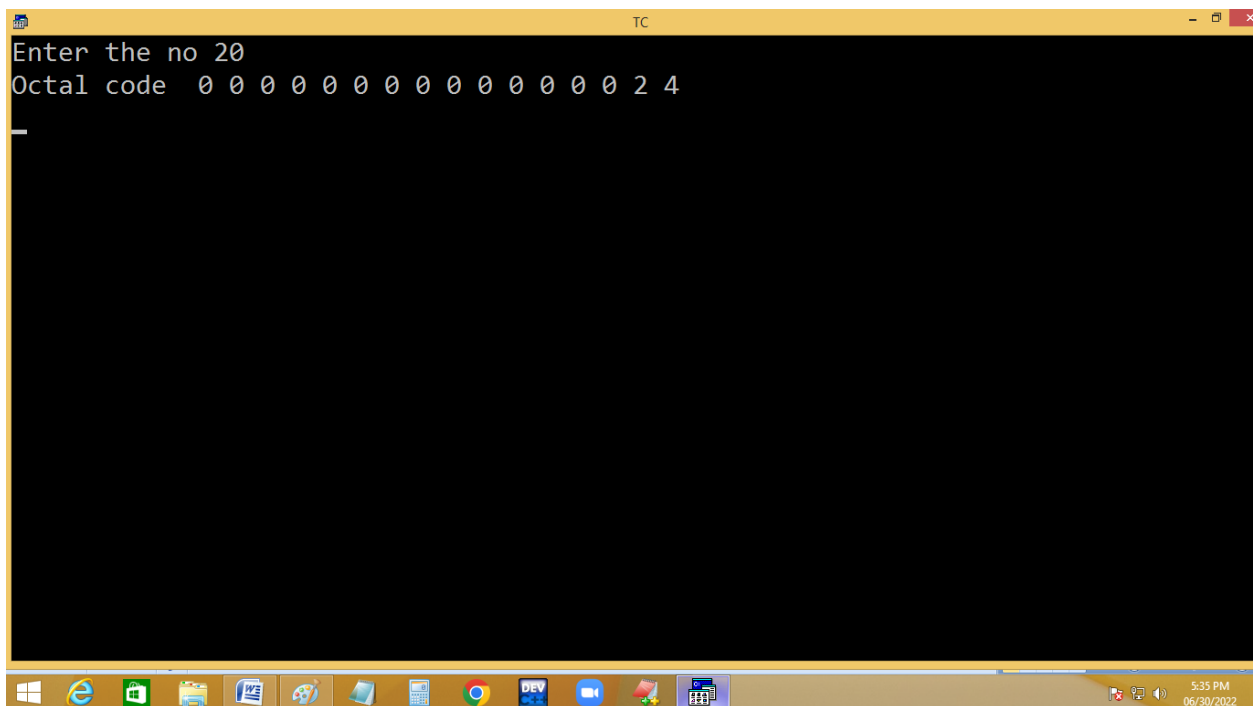
eg. decimal to octal:

$$\frac{20}{2-4}$$



The screenshot shows the Turbo C++ (TC) IDE with a blue background. The menu bar includes File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The status bar at the bottom indicates 'Line 8 Col 14 Insert Indent Tab Fill Unindent * C:\NONAME.C'. The code is as follows:

```
#include<stdio.h>
#include<conio.h>
void main()
{
int a[16]={0},n,i; clrscr();
printf("Enter the no ");scanf("%d",&n);
for(i=0;n!=0;i++,n=n/8)a[i]=n%8;
printf("Octal code ");
for(i=15;i>=0;i--)printf("%2d",a[i]);
printf("\n");
getch();
}
```



The screenshot shows the Turbo C++ (TC) IDE with a black background, displaying the execution output of the program. The user has entered the number 20. The output shows the octal code as 0 0 0 0 0 0 0 0 0 0 0 0 0 2 4. A horizontal line is visible below the output.

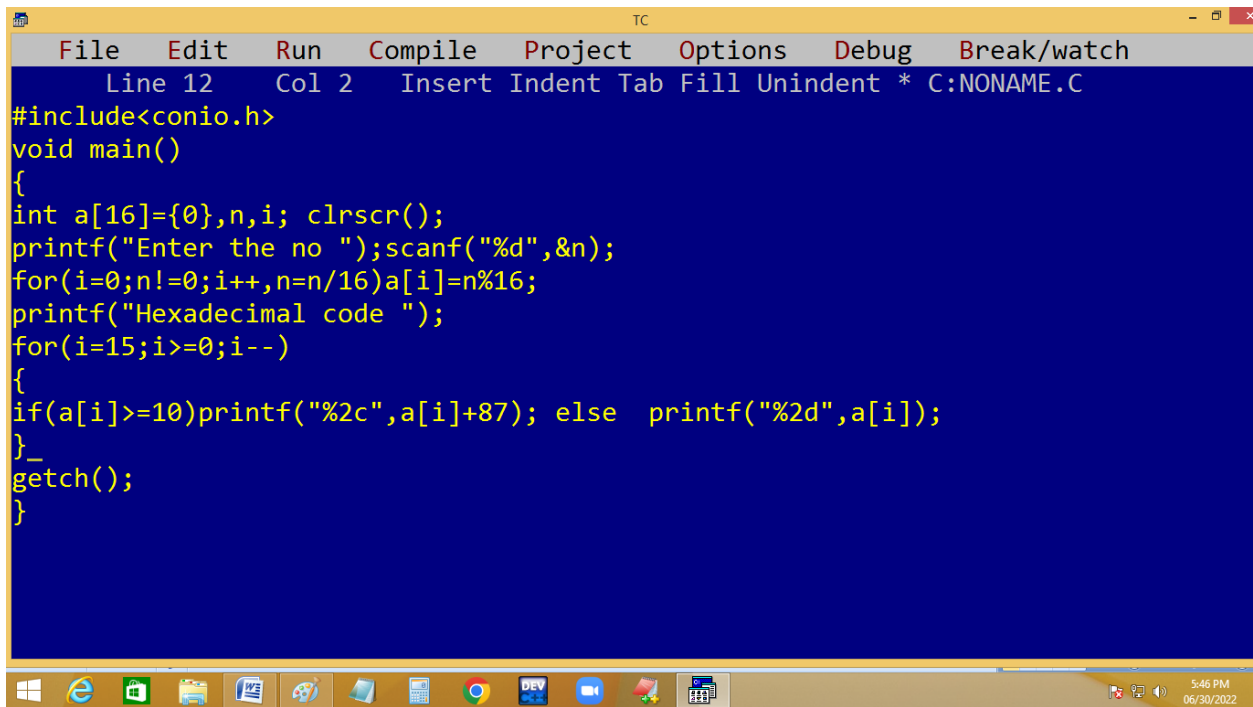
```
Enter the no 20
Octal code  0 0 0 0 0 0 0 0 0 0 0 0 0 2 4
_
```

Decimal to hexadecimal:

16 | 20
1-4

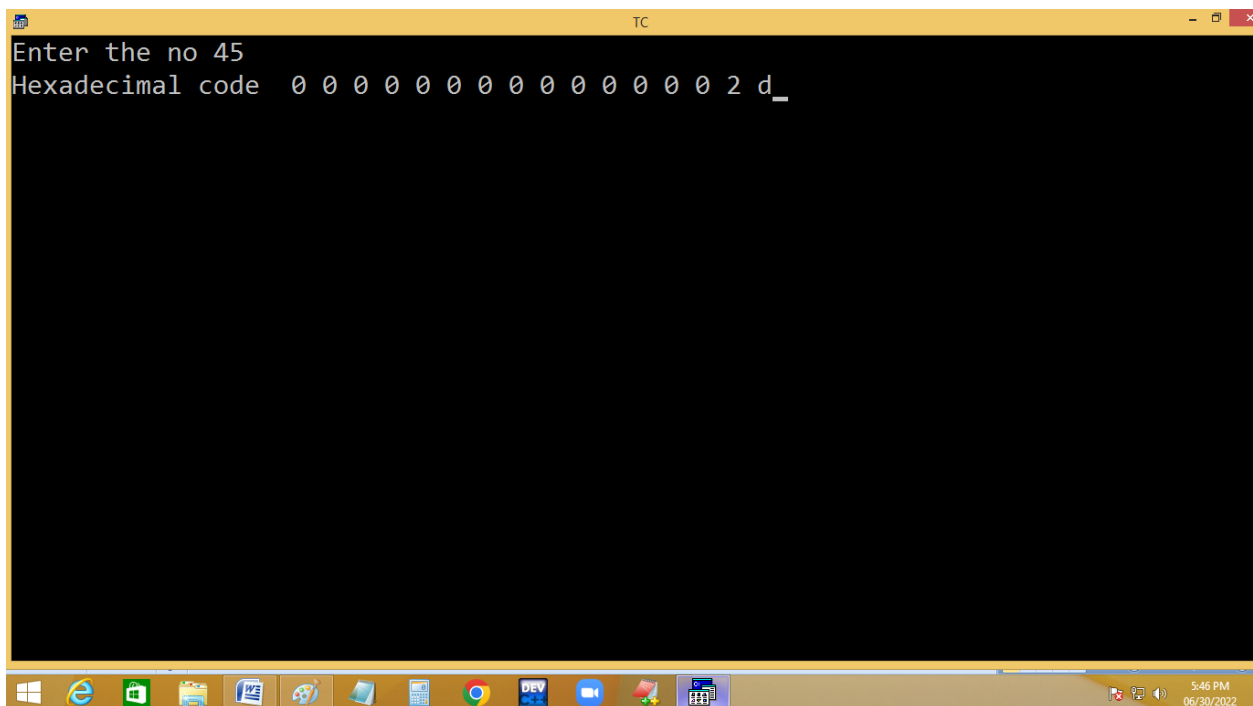
```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 8 Col 20 Insert Indent Tab Fill Unindent * C:NONAME.C
#include<stdio.h>
#include<conio.h>
void main()
{
int a[16]={0},n,i; clrscr();
printf("Enter the no ");scanf("%d",&n);
for(i=0;n!=0;i++,n=n/16)a[i]=n%16;
printf("Hexadecimal_code ");
for(i=15;i>=0;i--)printf("%2d",a[i]);
printf("\n");
getch();
}
```

```
TC
Enter the no 20
Hexadecimal code 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 4
```



The screenshot shows the Turbo C++ (TC) IDE with a blue background. The menu bar includes File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The status bar at the bottom indicates 'Line 12 Col 2' and the file path 'C:\NONAME.C'. The code is as follows:

```
Line 12 Col 2 Insert Indent Tab Fill Unindent * C:\NONAME.C
#include<conio.h>
void main()
{
int a[16]={0},n,i; clrscr();
printf("Enter the no ");scanf("%d",&n);
for(i=0;n!=0;i++,n=n/16)a[i]=n%16;
printf("Hexadecimal code ");
for(i=15;i>=0;i--)
{
if(a[i]>=10)printf("%2c",a[i]+87); else printf("%2d",a[i]);
}_
getch();
}
```



The screenshot shows the Turbo C++ (TC) IDE with a black background, displaying the output of the program. The status bar at the bottom indicates '5:46 PM 06/30/2022'. The output is as follows:

```
Enter the no 45
Hexadecimal code  0 0 0 0 0 0 0 0 0 0 0 0 0 2 d _
```

The screenshot shows a Turbo C++ (TC) compiler window with a black background and white text. The text inside the window reads: "Enter the no 95" followed by "Hexadecimal code 0 0 0 0 0 0 0 0 0 0 0 0 0 5 f_". The window has a yellow title bar with the text "TC" and standard Windows window controls. Below the window is a Windows taskbar with various application icons, including the Start button, Internet Explorer, Word, and others. The system clock in the bottom right corner shows the time as 5:47 PM on 06/30/2022.

```
Enter the no 95
Hexadecimal code 0 0 0 0 0 0 0 0 0 0 0 0 0 5 f_
```

Home work:

Eg. Arranging array elements in reverse order.