

1. Write a program to input two numbers and an operator and calculate the result according to the following conditions:

Operator	Result	Operator	Result
'+'	Add	'/'	Divide
'-'	Subtract	'%'	Remainder
'*'	Multiply		

**Solution:**

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

```
int main(){
double a,b, res;
printf("Enter the 1st number:");
scanf("%lf", &a);
printf("Enter the 2nd number:");
scanf("%lf", &b);

res= a+b;
printf("Result of Addition is : %.2lf\n", res );

res= a-b;
printf("Result of Subtraction is : %.2lf\n", res );

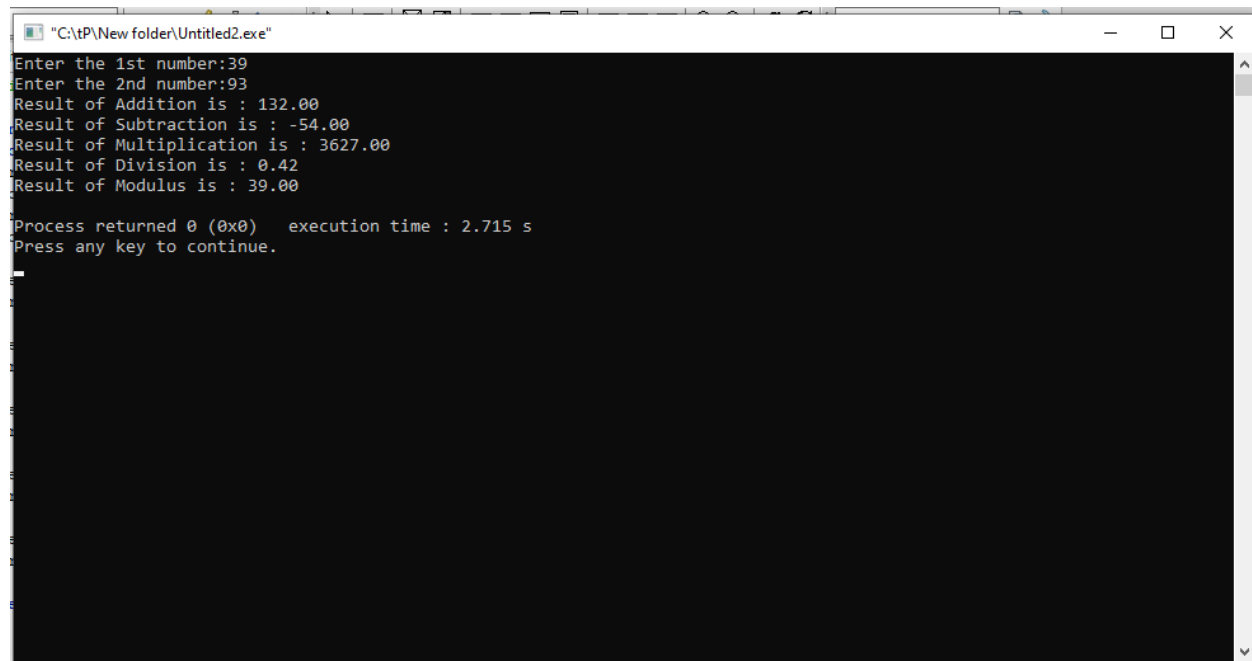
res= a*b;
printf("Result of Multiplication is : %.2lf\n", res );

res= a/b;
printf("Result of Division is : %.2lf\n", res );

res= (int)a%(int)b;
printf("Result of Modulus is : %.2lf\n", res );

return 0;
}
```

## Output:



```
"C:\tP\New folder\Untitled2.exe"
Enter the 1st number:39
Enter the 2nd number:93
Result of Addition is : 132.00
Result of Subtraction is : -54.00
Result of Multiplication is : 3627.00
Result of Division is : 0.42
Result of Modulus is : 39.00

Process returned 0 (0x0)   execution time : 2.715 s
Press any key to continue.
_
```

The image shows a Windows command prompt window titled "C:\tP\New folder\Untitled2.exe". The window has a standard Windows title bar with minimize, maximize, and close buttons. The command prompt displays the following text: "Enter the 1st number:39", "Enter the 2nd number:93", "Result of Addition is : 132.00", "Result of Subtraction is : -54.00", "Result of Multiplication is : 3627.00", "Result of Division is : 0.42", "Result of Modulus is : 39.00", "Process returned 0 (0x0) execution time : 2.715 s", and "Press any key to continue.". A cursor is visible on the line "Press any key to continue.". The background of the command prompt is black, and the text is white.

2. Show the output produced by each assuming that i,j and k are integer variables. Show the necessary calculations and write a program to check whether your calculations are correct or Not.

- `i = 2; j = 3;`  
`k = i * j == 6;`  
`printf ("%d",k);`
- `i = 5; j = 10; k = 1;`  
`printf ("%d", k > i < j);`
- `i = 3; j = 2; k = 1;`  
`printf ("%d", i < j == j < k );`
- `i = 3; j = 4; k = 5;`  
`printf ("%d", i % j + 1 < k );`

- `i= 2; j =3;`  
`k= i*j == 6;`  
`printf("%d", k);`

**Solution:**

```
i=2;
j=3;
k=(2*3)
k=6
k=6==6;
```

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

```
int main(){
    int i,j,k;
    i=2; j=3;
    k= i*j==6;
    printf("%d", k);
```

```
return 0;
}
```

### **Output:**



```
C:\tP\tp2\bin\Debug\tp2.exe
1
Process returned 0 (0x0) execution time : 0.016 s
Press any key to continue.
```

- `i=5;j=10;k=1;`  
`printf("%d", k>i<j);`

### **Solution:**

```
i=5;j=10;k=1;
```

```
k>i;
```

```
1>5;
```

```
i<j;
```

```
5<10;
```

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

```
int main(){
```

```
    int i,j,k;
```

```
    i=5;
```

```
    j=10;
```

```
    k=1;
```

```
    printf("%d", k>i<j);
```

```
    return 0;
```

```
}
```

## Output:



```
C:\tp\tp2\bin\Debug\tp2.exe
1
Process returned 0 (0x0)   execution time : 0.000 s
Press any key to continue.
```

- `i=3;j=2;k=1;`  
`printf("%d", i<j == j<k);`

### **Solution:**

```
i=3;
j=2;
k=1;
i<j;
3<2;
j<k;
2<1;
i<j == j<k;
```

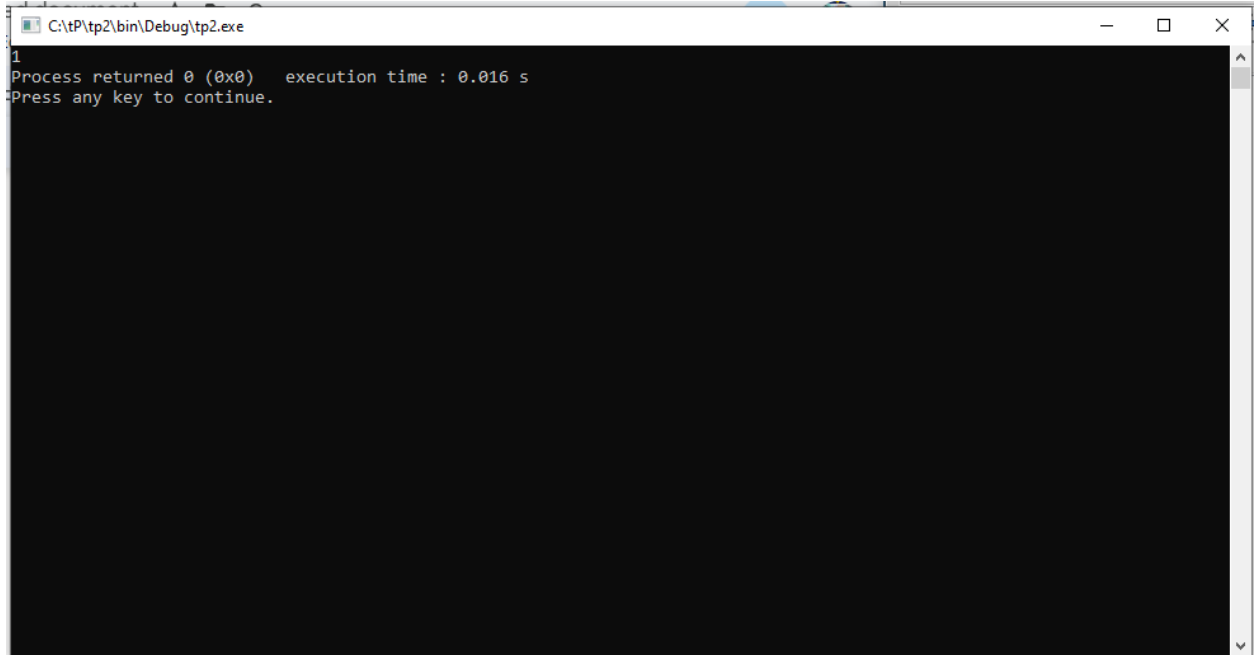
```
#include<stdio.h>
```

```
int main(){
    int i,j,k;
    i=3;
    j=2;
    k=1;
    printf("%d", i<j == j<k);
```

```
    return 0;
```

}

### Output:



```
C:\tp2\bin\Debug\tp2.exe
1
Process returned 0 (0x0) execution time : 0.016 s
Press any key to continue.
```

- `i=3;j=4;k=5;`  
`printf("%d", i % j+1 < k);`

#### **Solution:**

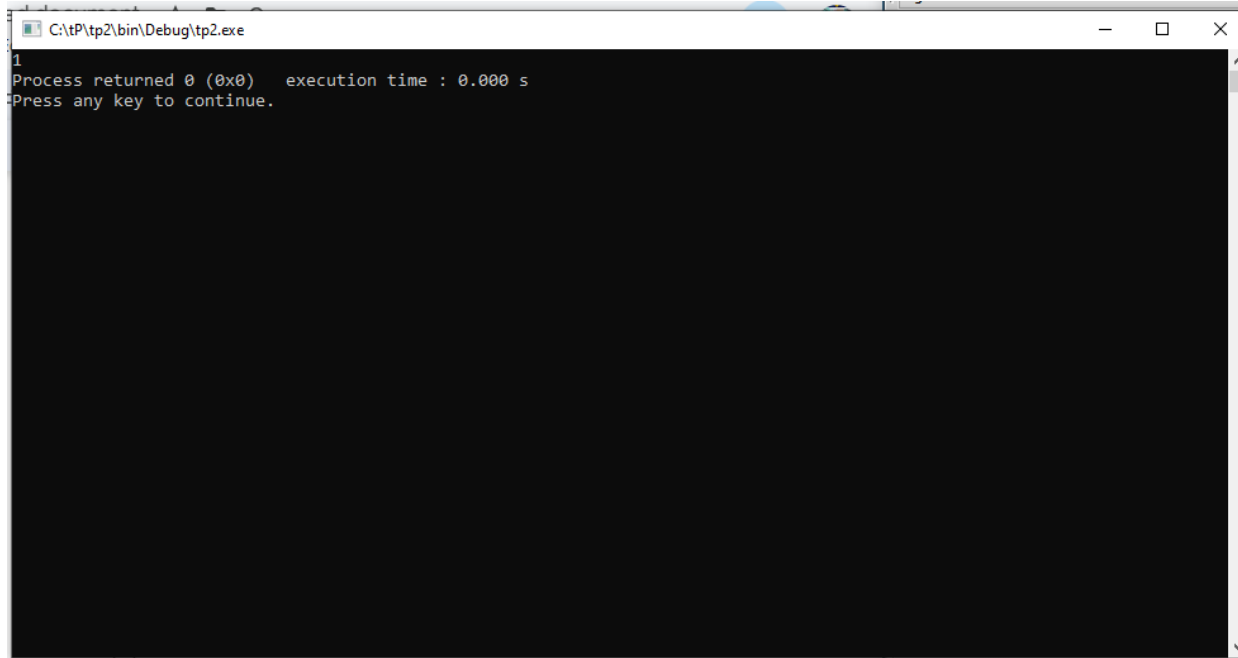
```
i=3; j=4; k=5;
=i%j+1
=3+1
=4;
4<5;
```

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

```
int main(){
    int i,j,k;
    i=3;
    j=4;
    k=5;
    printf("%d", i%j+1 <k);
    return 0;
```

```
}
```

### **Output:**



```
C:\tp2\bin\Debug\tp2.exe
1
Process returned 0 (0x0)   execution time : 0.000 s
Press any key to continue.
```

3. Write a C program to check whether a given number is even or odd using bitwise operator.

### **Solution:**

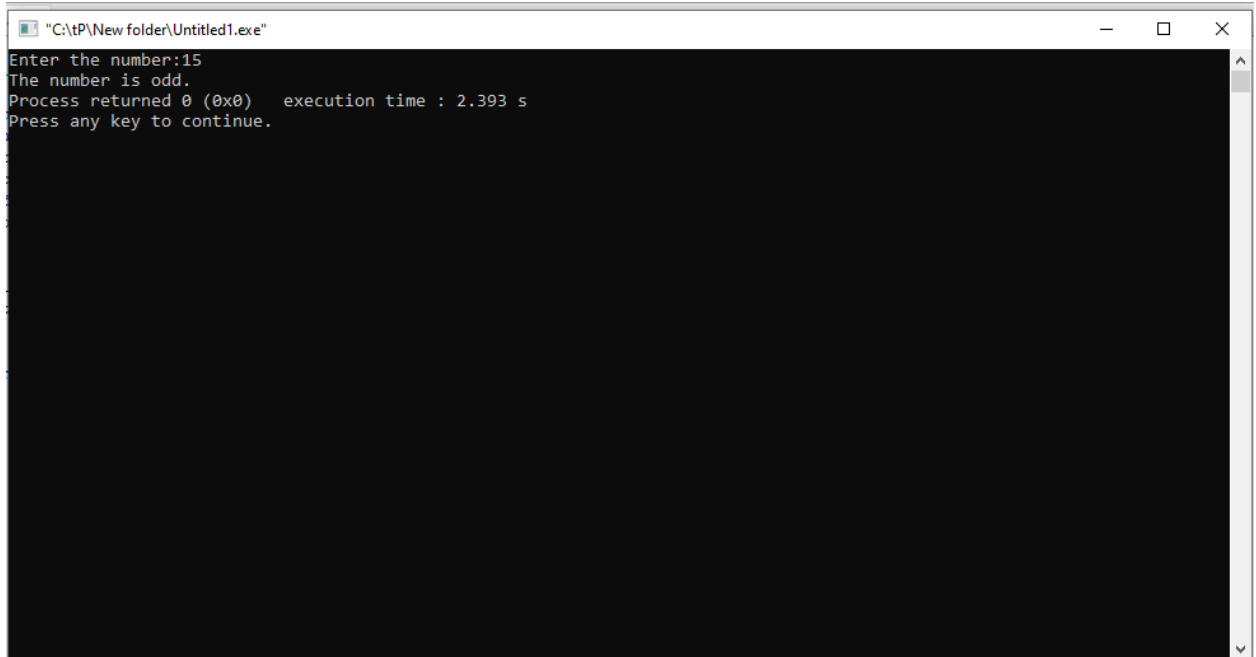
```
#include<stdio.h>
```

```
int main(){
    int a;
    printf("Enter the number:");
    scanf("%d", &a);
    if(a & 1){
        printf ("The number is odd.");
    }
    else{
        printf("The number is even.");
    }

    return 0;
```

}

**Output:**



```
"C:\tP\New folder\Untitled1.exe"
Enter the number:15
The number is odd.
Process returned 0 (0x0) execution time : 2.393 s
Press any key to continue.
```

4. Write a C program which swaps the values of two variables using bitwise operation.

**Solution:**

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

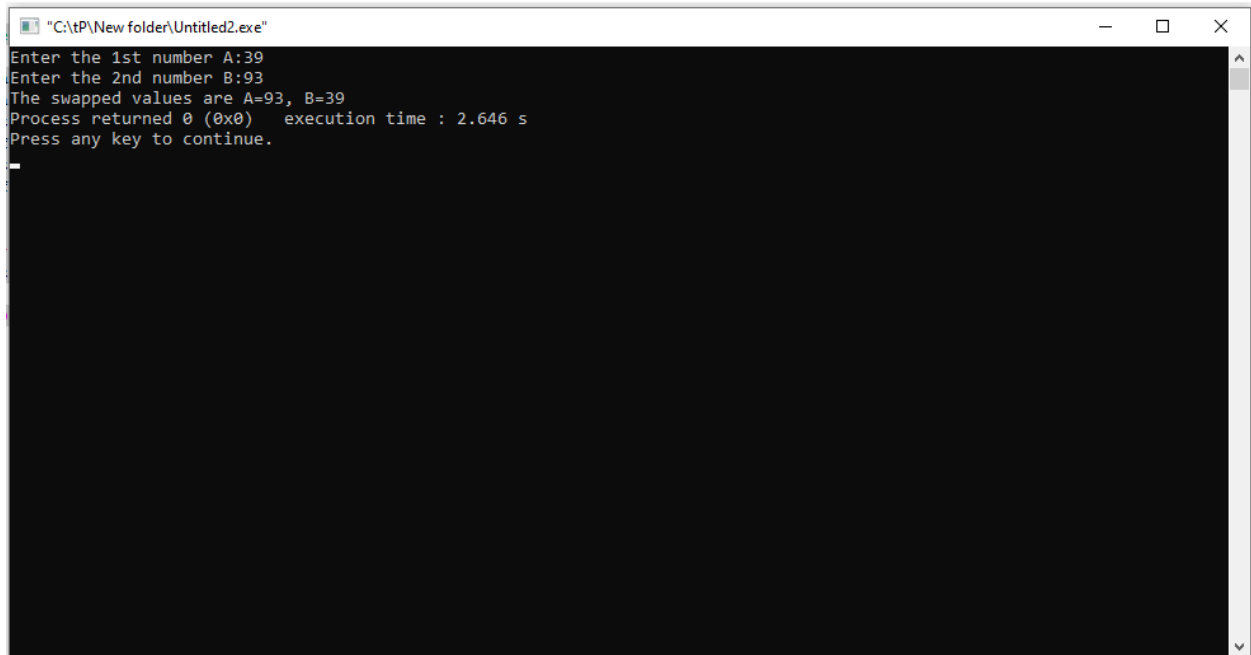
```
int main(){
    int a,b;
    printf("Enter the 1st number A:");
    scanf("%d", &a);
    printf("Enter the 2nd number B:");
    scanf("%d", &b);
    a= a ^ b;
    b= a ^b;
    a= a^ b;
    printf("The swapped values are A=%d, B=%d", a,b);

    return 0;
```



}

### **Output:**



A screenshot of a Windows command prompt window titled "C:\tP\New folder\Untitled2.exe". The window has a black background with white text. The text displayed is as follows:

```
Enter the 1st number A:39
Enter the 2nd number B:93
The swapped values are A=93, B=39
Process returned 0 (0x0)   execution time : 2.646 s
Press any key to continue.
```

A small white cursor is visible on the line "Press any key to continue.".