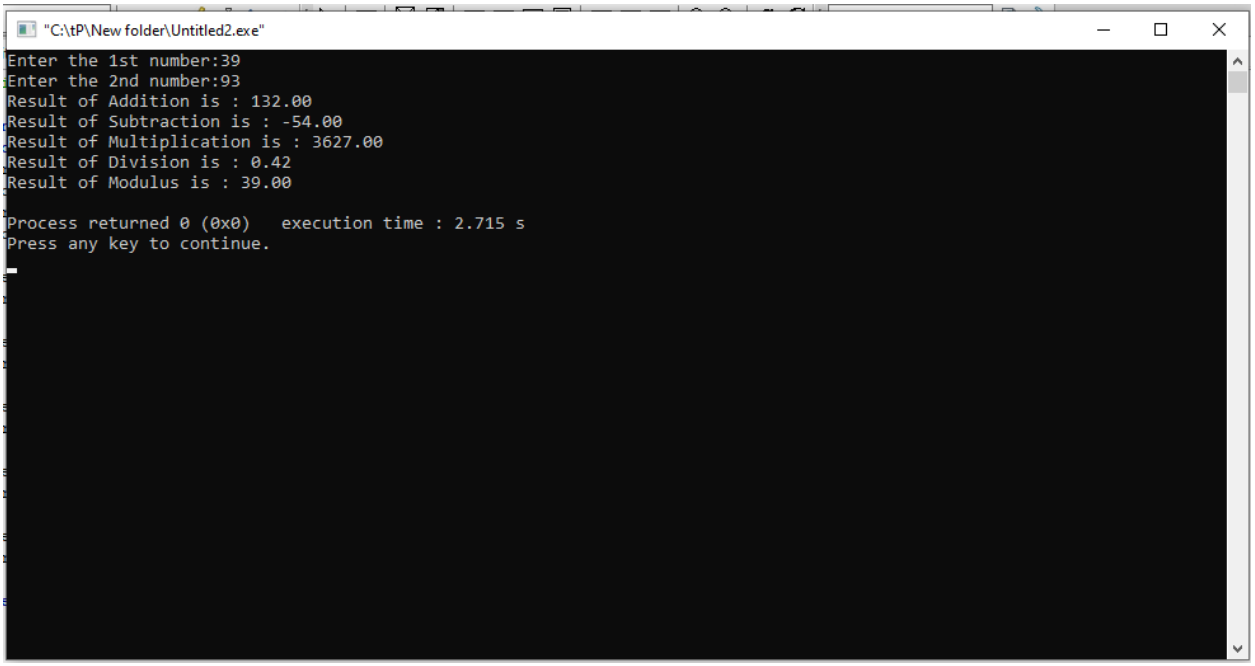
1. Write a program to input two numbers and an operator and calculate the result according to the following conditions:

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.

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 );
  ```

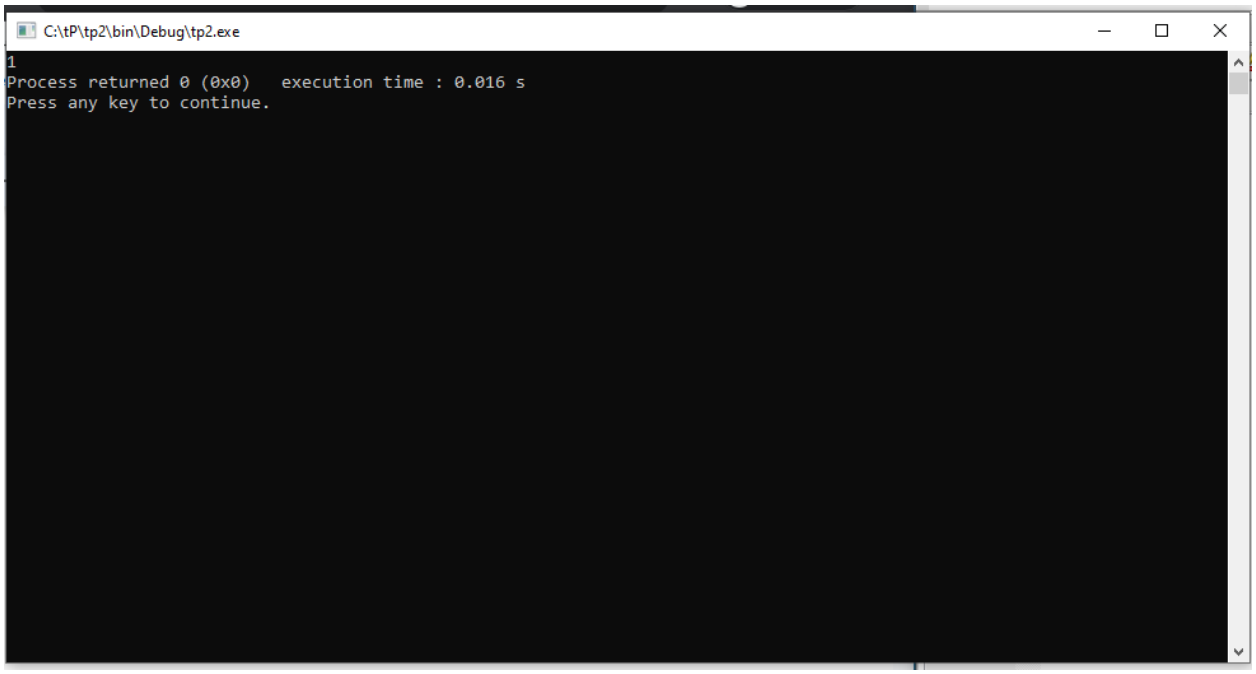
- i= 2; j =3;
  k= i*j == 6;
  printf(”%d”, k);

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:



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

Solution:

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

k>i;

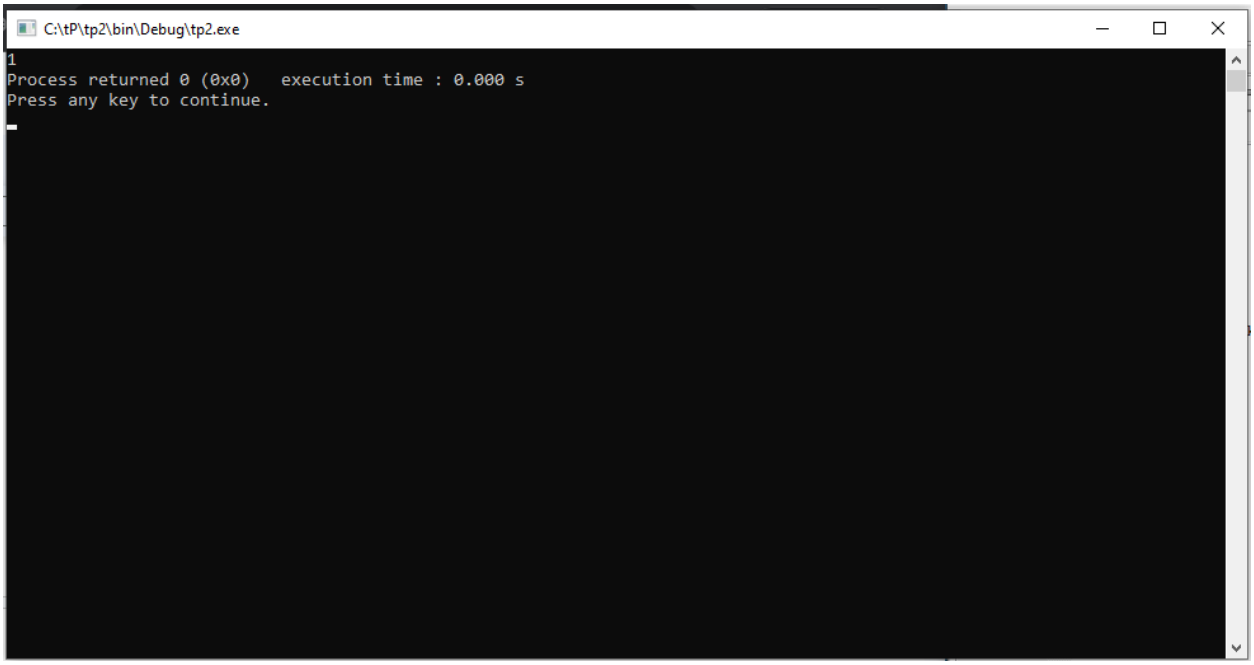
1>5;

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:

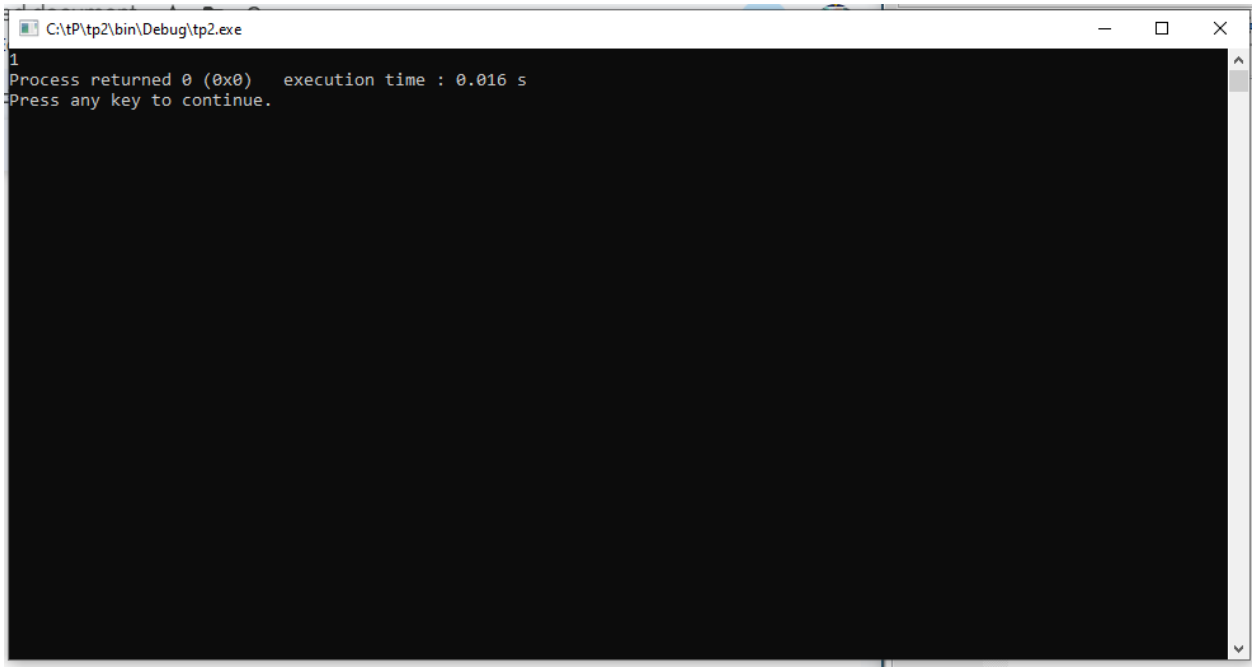


- i=3;j=2;k=1;
  printf(“%d”, i<j == j<k);
  Solution:
  i=3;
  j=2;
  k=1;
  i<j;
  3<2;
  j<k;
  2<1;
  i<j == j<k;

  ```
  #include<stdio.h>

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


  return 0;
  ```

}

Output:

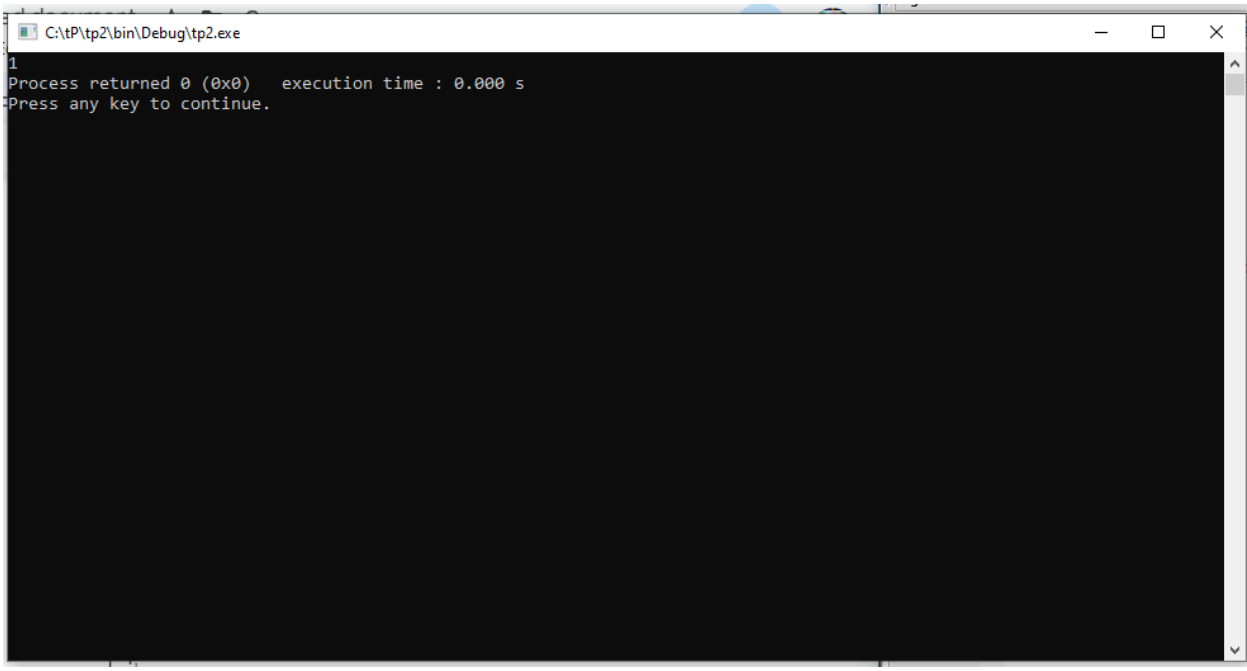


- i=3;j=4;k=5;
  printf(“%d”, i % j+1 < k);
  Solution:
  i=3; j=4; k=5;
  =i%j+1
  =3+1
  =4;
  4<5;

  ```
  #include<stdio.h>

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

}

Output:



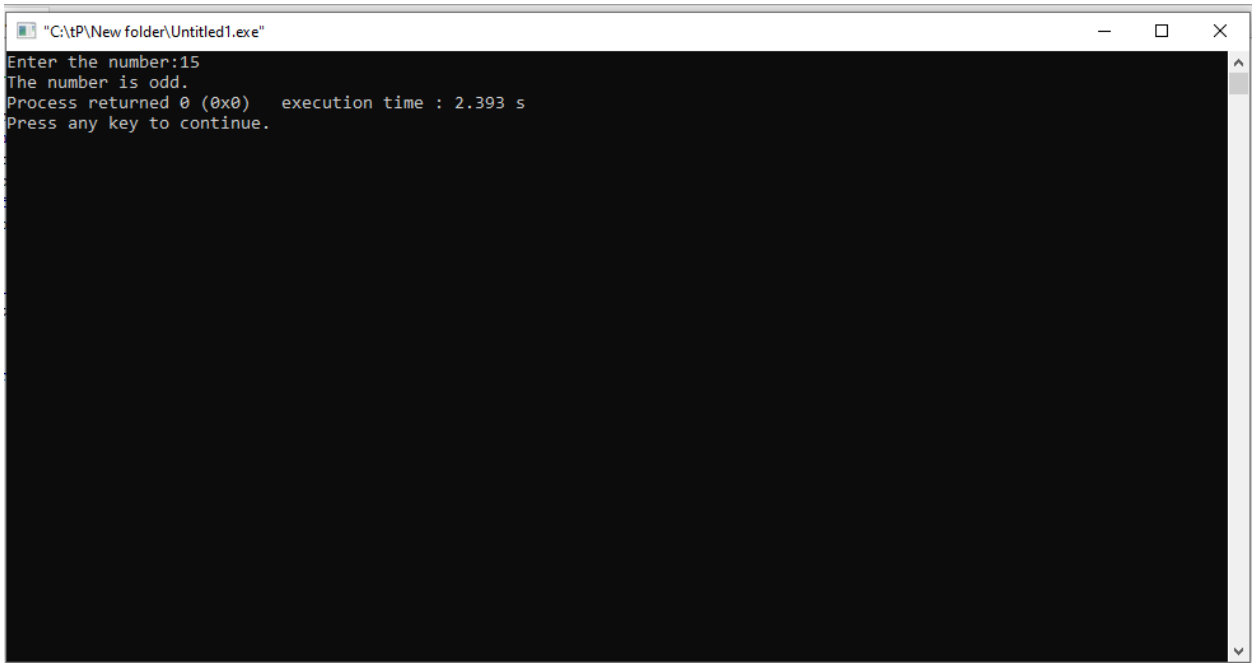
3. Write a C program to check whether a given number is even or odd using bitwise operator.

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:



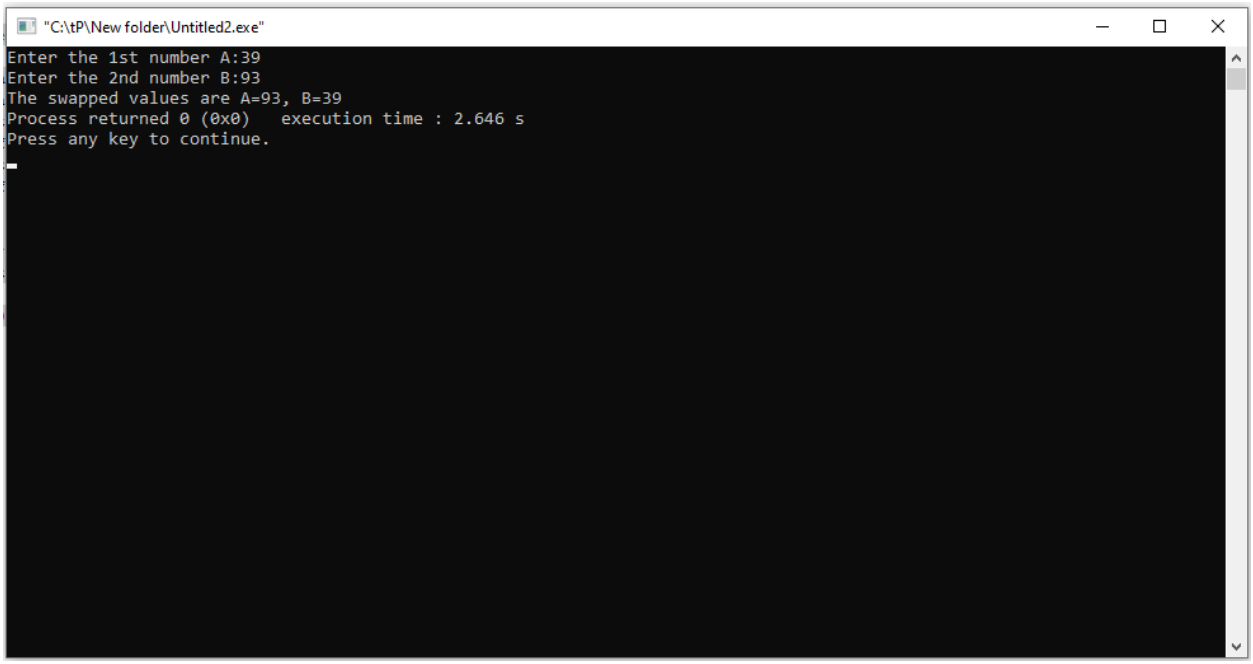
4. Write a C program which swaps the values of two variables using bitwise operation.

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:


"C:\tP\New folder\Untitled2.exe"
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.