```
i=0
while i<=10:
  operators=input("Enter the the operator type you want to do: ");
  if operators=='arithmetic':
    operator=input("Enter the the operation you want to do: ");
    num1=int(input("Enter the first value:"));
    num2=int(input("Enter the second value:"));
    #if operator=='+':
    print("addition ",num1+num2);
    #elif operator=='-':
    print("subtraction ",num1-num2);
    #elif (operator=='*'):
    print("multiplication ",num1*num2);
    #elif (operator=='/'):
    print("division ",num1/num2);
    #elif (operator=='**'):
    print("exponential ",num1**num2);
    #elif (operator=='%'):
    print("modulus ",num1%num2);
    #elif (operator=='//'):
    print("integer float division ", num1//num2);
  elif operators=='comparison':
    num1=int(input("Enter the first value to compare:"));
    num2=int(input("Enter the second value to compare:"));
    if num1==num2:
      print("%d is equal to %d"%(num1,num2));
    #elif num1!=num2:
      #print("%d is not equal to %d"%(num1,num2));
    elif num1>num2:
      print("%d is greater than %d"%(num1,num2));
    elif num1<num2:
      print("%d is less than %d"%(num1,num2));
  elif operators=='assignment':
    num1=int(input("Enter the value of z: "));
    num2=int(input("Enter the value of p: "));
    print("The simple assignment        (z=p)   : z= %d"%(num2));
    num1+=num2;print("The addition assignment        (z+=p)   : z= %d"%(num1));
    num1-=num2;print("The subtraction assignment     (z-=p)   : z= %d"%(num1));
    num1*=num2;print("The multiplication assignment  (z*=p)   : z= %d"%(num1));
    num1/=num2;print("The division assignment        (z/=p)   : z= %d"%(num1));
    #num1%=num2;print("The modulus assignment         (z%=p)   : z= %d"%(num1));
  elif operators=='bitwise':
    num1=int(input("Enter the value of a: "));
    num2=int(input("Enter the value of b: "));
    print("the binary value of a= ",bin(num1));
    print("the binary value of b= ",bin(num2));
    print("binary OR operation for a and b is    ",bin(num1 & num2));
    print("binary AND operation for a and b is   ",bin(num1 | num2));
    print("binary XOR operation for a and b is   ",bin(num1 ^ num2));
    print("binary NOT operation for a is         ",bin(~num1));
    a=bin(num1 << 2);print("binary left shift operation for a is  ",a);
    b=bin(num1 >> 2);print("binary right shift operation for a is ",b);

      Enter the the operator type you want to do: arithmetic
      Enter the the operation you want to do: __
      Enter the first value:2
      Enter the second value:3
      addition  5
```

```
subtraction  -1
multiplication  6
division  0.6666666666666666
exponential  8
modulus  2
integer float division  0
Enter the the operator type you want to do: assignment
Enter the value of z: 2
Enter the value of p: 3
The simple assignment        (z=p)   : z= 3
The addition assignment        (z+=p)   : z= 5
The subtraction assignment     (z-=p)   : z= 2
The multiplication assignment  (z*=p)   : z= 6
The division assignment        (z/=p)   : z= 2
Enter the the operator type you want to do: comparison
Enter the first value to compare:10
Enter the second value to compare:20
10 is less than 20
Enter the the operator type you want to do: comparison
Enter the first value to compare:20
Enter the second value to compare:10
20 is greater than 10
Enter the the operator type you want to do: comparison
Enter the first value to compare:10
Enter the second value to compare:10
10 is equal to 10
Enter the the operator type you want to do: bitwise
Enter the value of a: 2
Enter the value of b: 3
the binary value of a=  0b10
the binary value of b=  0b11
binary OR operation for a and b is     0b10
binary AND operation for a and b is    0b11
binary XOR operation for a and b is    0b1
binary NOT operation for a is          -0b11
binary left shift operation for a is   0b1000
binary right shift operation for a is  0b0
```