Task 1: Arithmetic Operators

1. Create two variables a and b with numeric values.

2. Calculate the sum, difference, product, and quotient of a and b.

3. Print the results.

Program:- outputs: 9

a=5 1   
b=4  
sum=a+b 20   
difference=a-b  
product=a\*b 1  
quotient=a%b  
print(sum)  
print(difference)  
print(product)  
print(quotient)

Task 2: Comparison Operators

1. Compare the values of a and b using the following comparison operators: <,>,<=,>=, ==,

and !=.

2. Print the results of each comparison.

Program:- outputs:-

a=3  
b=8 false  
r1=a>b  
r2=a<b true  
r3=a<=b  
r4=a>=b false  
r5=a==b false  
print(r1,r2,r3,r4,r5) false

Task 3: Logical Operators

1. Create two boolean variables, x and y.

2. Use logical operators (and, or, not) to perform various logical operations on x and y.

3. Print the results.

Program:- outputs:- false

x = True  
y = False true  
RESULT=x and y  
result1=x or y false  
result2=not x  
result3=not y true  
print(RESULT)  
print(result1)  
print(result2)  
print(result3)

Task 4: Assignment Operators

1. Create a variable total and initialize it to 10.

2. Use assignment operators (+=, -=, \*=, /=) to update the value of total.

3. Print the final value of total.

Program outputs:-10.0

x=10  
x +=5  
x -=5  
x\*=5  
x/=5  
print(x)

Task 5: Bitwise Operators (Optional)

1. If you are comfortable with bitwise operators, perform some bitwise operations on integer

values and print the results. If not, you can skip this task.

a = 10  
b = 4   
y\_or = a | b  
xor = a ^ b  
not\_a= !a  
x\_and= a&b  
left\_shift = a << 2  
right\_shift = a >> 2  
print (y\_or)  
print(xor)  
print(not\_a)  
print(x\_and)  
print(left\_shift)  
print(right\_shift)

outputs:-

14

14

-11

0

40

2

Identity and Membership Operators

1. Create a list my\_list containing a few elements.

2. Use identity operators (is and is not) to check if two variables are the same object.

3. Use membership operators (in and not in) to check if an element is present in my\_list.

4. Print the results.

Program:-

a = [1, 2, 3, 4, 5]

b=a

x = (a is b)

y= (a is not b)

c=[1,2,3,4,5]

d=[3,4,5,6]

re1=(1 in d)

re2=(7 in not d)

print(x)

print(y)

print(re1)

print(re2)