**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.**

**Code:**

a = 10  
b = 20  
  
sum = a+b  
diff = a-b  
quotient = a/b  
  
print(sum) # 30

print(diff) # -10  
print(quotient) # 0.5

**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.**

**Code:**

a = 10  
b = 20

lessthan = a < b  
greaterthan = a > b  
lessthanqual = a <= b  
greaterthanequal = a >= b  
  
print(lessthan) # True  
print(greaterthan) # False  
print(lessthanqual) # True  
print(greaterthanequal) # 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.**

x = True  
y = False  
  
print(x and y) # False  
print(x or y) # True  
print(not x) # False  
print(not y) # True

**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.**

**Code :**

a = 10

a += 10  
print(a) # 20  
  
a -= 2  
print(a) # 18   
  
a \*= 5  
print(a) # 90  
  
a /= 3  
print(a) # 30.0

**Task 6: 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.**

**Code:**

my\_list = [1, 'gopi', 2.3, -20, 'puropale']  
b = my\_list  
print(my\_list is b) # true  
print(my\_list is not b) # false

print('gopi' in my\_list) # true  
print(2.3 not in my\_list) # false

**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.**

**Code:**

a=8  
b=2  
  
print(a&b) # 0  
print(a|b) #10  
print(a^b)#10  
print(~a)# -9  
print(a<<b)# 32  
print (a >> b) #2