**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.**

a = 7

b = 5

sum1 = a+b

diff = a-b

prod = a \* b

quot = a / b

print(sum1) # 12

print(diff) # 2

print(prod) # 35

print(quot) # 1.4

**Task 2: Comparison Operators**

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

**2. Print the results of each comparison.**

a = 7

b = 5

Print(a < b) # False

Print(a > b) # True

Print(a <= b) # False

Print(a >= b) # True

Print(a == b) # False

Print(a != b) # True

**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 = 5

y = 3

print( x and y) # 3

print(x or y) # 5

print(not(x > 3 and x < 10)) # False

**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.**

total = 10

print(total) # 10

total += 1

print(total) # 11

total -= 1

print(total) # 10

total \*= 2

print(total) # 20

total /= 1

print(total) # 20.0

**Task 5: Bitwise Operators (Optional)**

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

**values and print the results.**

p = 5

q = 2

print(p & q) # 0

print(p | q) # 7

print(p ^ q) # 7

print( ~q) # -3

print(p >> q) # -1

print(p << q) # 20

**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.**

my\_list = [5,3,7,9,1,’a’,’p’]

print(my\_list[0] is my\_list[1]) # False

print(my\_list[0] is not my\_list[1]) # True

print(20 in my\_list) # False

print(5 not in my\_list) # True