**Assignment Information**

Title

**Assignment 1: Python Operators**

Due Date

Aug 3, 2025, 11:59 PM

Description

**Objective:**

To help you understand and practice the following Python operators:

- Arithmetic Operators

- Assignment Operators

- Comparison Operators

- Logical Operators

- Membership Operators

- Identity Operators

**Instructions:**

1. Open Python IDLE à Then Open Editor Window

2. Copy and paste each part into a new Python file.

3. Run the file using (F5) shortcut key and observe the output.

4. Answer the Question 'What do you expect?' questions before running, and verify after.

***Note: After testing take screenshots of the code you have written on Editor window and the outputs on IDLE. Add them in word file and submit it till Sunday.***

**Part 1: Arithmetic Operators**

a = 15

b = 4

print("Addition: a + b =", a + b)

print("Subtraction: a - b =", a - b)

print("Multiplication: a \* b =", a \* b)

print("Division: a / b =", a / b)

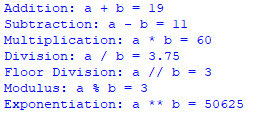
print("Floor Division: a // b =", a // b)

print("Modulus: a % b =", a % b)

print("Exponentiation: a \*\* b =", a \*\* b)

**Q: What do you expect for floor division and modulus?**

**Ans: Floor div ad mod will give same ans for this because remainder is 3 and quotient in 3.75 =~ 3**



**Part 2: Arithmetic Assignment Operators**

x = 10

print("Initial value of x:", x)

x += 5

print("After x += 5:", x)

x \*= 2

print("After x \*= 2:", x)

x -= 4

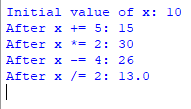
print("After x -= 4:", x)

x /= 2

print("After x /= 2:", x)

**Q: What will be the final value of x?**

**Ans: x=13**



**Part 3: Comparison Operators**

a = 7

b = 10

print("a == b:", a == b)

print("a != b:", a != b)

print("a > b:", a > b)

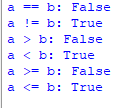
print("a < b:", a < b)

print("a >= b:", a >= b)

print("a <= b:", a <= b)

**Q: Which comparisons return True?**

**Ans: a!=b, a<b, a<=b**



**Part 4: Logical Operators**

x = True

y = False

print("x and y:", x and y)

print("x or y:", x or y)

print("not x:", not x)

**Q: Predict the result before running each line**

**Ans: x and y=F, x or y=T , x not = F**



**Part 5: Membership Operators**

**# A bit of error in code only institute is defined not my\_var so i changed all to my\_var**

institute = “Saylani Mass IT”

print("’s’ in institute:", "s" i***n*** my\_var)

print("'Saylani' in institute:", "Mass" i***n*** my\_var)

print("'Saylani' not in institute:", "Saylani" ***not in*** institute)



**Part 6: Identity Operators**

a = 5

b = 5

c = 1000

print("a is b:", a is b)

print("a is c:", a is c)

print("c is not b:", c is not b)



#**Bonus Challenge:**

#Write a mini program that:

#- Take user name and password as input.

#- You have to compare the user name with “Talha” and password with “Axiom123”.

#- How can we write this comparison in Python (provide syntax)

user = "Talha"

passw = "Axiom123"

userInput = input("Input your username: ")

passInput = input("Input your password: ")

check= (user == userInput and passw == passInput)

print("Username and/or Password are : ", check)