Muhammad Saad Hassan.

Thursday, July 31, 2025 4:34 PM

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```
#Part 1: Arithmetic Operators

#Answer1 .is "3" beacuse when we divide 15 by 4 so it gives 3.75 and floor division round it to 3.
#Answer .is also "3" beacuse when we divide 15 by 4 so it gives remainder of 3 which is called modulus.
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)
```


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IDLE Shell 3.13.1

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Python 3.13.1 (tags/v3.13.1:0671451, Dec  3 2024
Intel)] on win32
Type "help", "copyright", "credits" or "license(

>>>

========== RESTART: D:/python storage
Addition: a + b = 19
Subtraction: a - b = 11
Multiplication: a * b = 60
Division: a / b = 3.75
Floor Division: a // b = 3
Modulus: a % b = 3
Exponentiation: a ** b = 50625
>>>
```

```python
#Part 2: Arithmetic Assignment Operators
#Answer . Value of x becomes 15 then 30 then 26 and at last it becomes 13.

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)
```

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IDLE Shell 3.13.1

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Python 3.13.1 (tags/v3.13.1:0671451, Dec  3 202
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Type "help", "copyright", "credits" or "license
>>>
========== RESTART: D:/python storag
Initial value of x: 10
After x += 5: 15
After x *= 2: 30
After x -= 4: 26
After x /= 2: 13.0
>>>
```

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```
#Part 3: Comparison Operators
#Answer a!=b , a<b , and a <=b gives True.

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)
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```
IDLE Shell 3.13.1
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Python 3.13.1 (tags/v3.13.1:0671
Intel)] on win32
Type "help", "copyright", "credit
>>>
========== RESTART: D:
a == b: False
a != b: True
a > b: False
a < b: True
a >= b: False
a <= b: True
>>>
```

```
File  Edit  Format  Run  Options  Window  Help
#Part 4: Logical Operators
# False , True , False.

x = True

y = False



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

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

print("not x:", not x)
```

```
IDLE Shell 3.13.1
File  Edit  Shell  Debug  Options  Window  Help
Python 3.13.1 (tags/v3.13.1:067145
Intel)] on win32
Type "help", "copyright", "credits
>>>
========== RESTART: D:/
x and y: False
x or y: True
not x: False
>>>
```

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```
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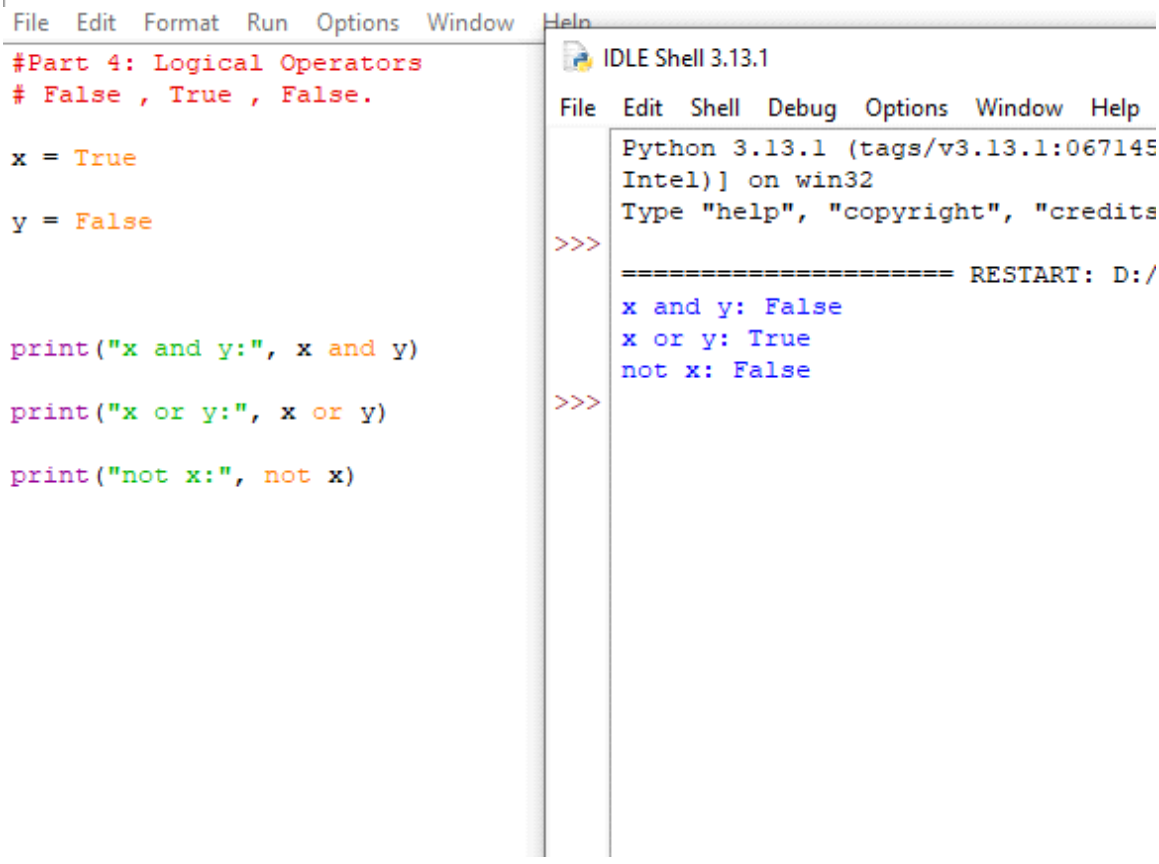

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```
#Part 5: Membership Operators


'''institute = "Saylani Mass IT"

print("'s' in institute:", "s" in my_var)

print("'Saylani' in institute:", "Mass" in my_var)

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


#A lot of mistakes in code.
#Correct version:


institute = "Saylani Mass IT"

print("'s' in institute:", "s" in institute)

print("'Mass' in institute:", "Mass" in institute)

print("'Saylani' not in institute:", "Saylani" not in institute)
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IDLE Shell 3.13.1

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```
Python 3.13.1 (tags/v3.13.1:0671451
Intel)] on win32
Type "help", "copyright", "credits"
>>>
========== RESTART: D:/p
's' in institute: True
'Mass' in institute: True
'Saylani' not in institute: False
>>>
```

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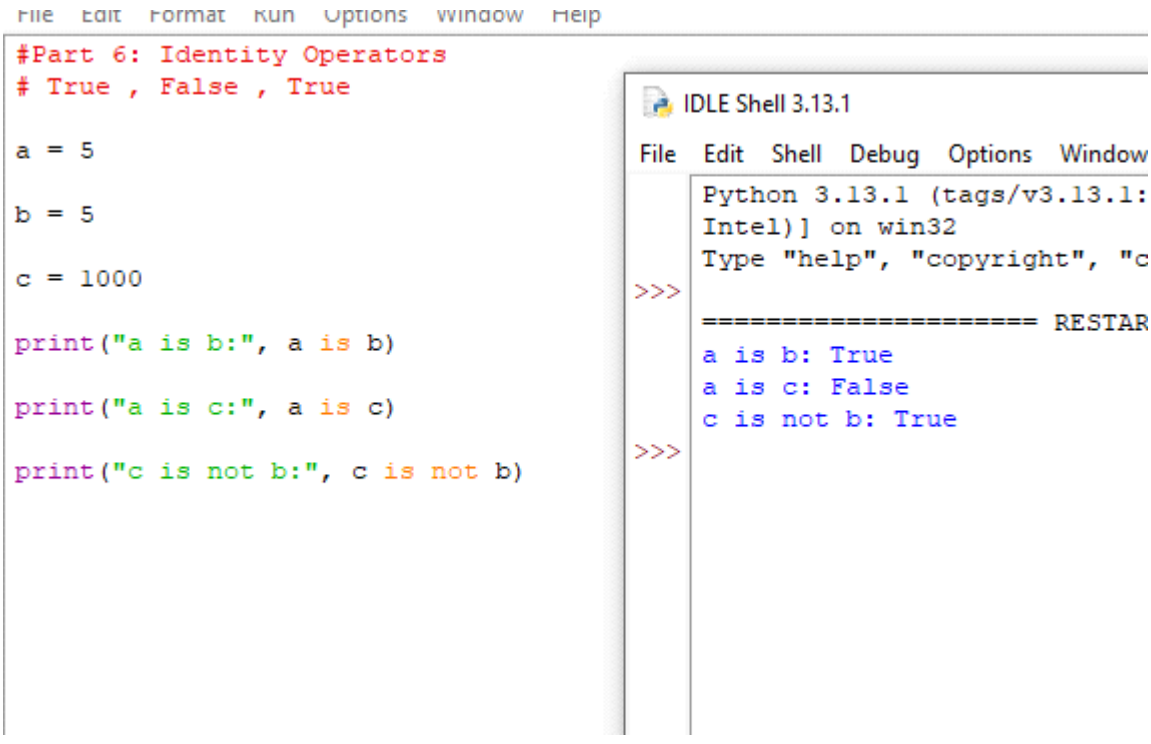
```
#Part 6: Identity Operators
# True , False , True

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)
```



```
File  Edit  Format  Run  Options  Window  Help
name = input("Please Enter your name : ")
password = input("Please Enter your password : ")

# Comparison statements
print(name == "Talha")
print(password == "Axioml23")
```