HomeWork

June 7, 2024

```
[ ]: #DayOne
```

```
[4]: #Arithmetic Operators

a = 10
b = 20

print(a + b)
print(a - b)
print(a * b)
print(a / b)
print(a % b)
print(a ** b)
print(a // b)
```

```
30
-10
200
0.5
10
100000000000000000000
0
```

```
[5]: #Assignment Operators:
a = 10
a += 5
print(a)
```

```
15
```

```
[6]: #Comparison Operators
a = 10
b = 20

print(a == b)
print(a != b)
print(a > b)
print(a < b)
print(a >= b)
```

```python
print(a <= b)
```

```
False
True
False
True
False
True
```

```python
[9]:   #Logical Operators:
       a = True
       b = False

       print(a and b)
       print(a or b)
       print(not a)
```

```
False
True
False
```

```python
[8]:   #Bitwise Operators:
       a = 10   # binary: 1010
       b = 4    # binary: 0100

       print(a & b)   # Output: 0 (binary: 0000)
       print(a | b)   # Output: 14 (binary: 1110)
       print(~a)      # Output: -11 (binary: 0101)
       print(a ^ b)   # Output: 14 (binary: 1110)
       print(a >> 2)  # Output: 2 (binary: 0010)
       print(a << 2)  # Output: 40 (binary: 101000)
```

```
0
14
-11
14
2
40
```

```python
[7]:   #Identity Operators:
       a = [1, 2, 3]
       b = [1, 2, 3]
       c = a

       print(a is b)
       print(a is not b)
       print(a is c)
```

```
False
```

```
True
True
```

[10]:
```python
#Membership Operators:
a = [1, 2, 3]

print(1 in a)      # Output: True
print(4 not in a)  # Output: True
```

```
True
True
```

[ ]: