In [104]:

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# # Q1) Declaring an int value and storing it in a variable. Checking the type and printing

num1=10
print(type(num1))
print(id(num1))

# # Q2) Take one int value between 0 - 256.
# # Check the id of both the variables. It should come the same. Check why?

num2 = 25
num3 = 25
print(num2 is num3) # checks the id
print(id(num2))
print(id(num3))

# The id is same as per the concept of object reusability, int value between 0 - 256 are pr

# Q3) Take one int value either less than -5 or greater than 256.
# # Check the id of both the variables. It should come different. Check why?

a = -8
b = -8
print(a is b) # checks the id
print(id(a))
print(id(b))

# The id is same as per the concept of object reusability, int value between 0 - 256 are pr

# Q. Arithmetic Operations on integers
# Take two different integer values.
# Store them in two different variables.
# Do below operations on them:-

c = int(input('Enter First Number:'))
d = int(input('Enter Second Number:'))
print(c+d)   # Find sum of both numbers

print(c-d)   # Find difference between them

print(c*d)  # Find the product of both numbers

print(c/d)  # Find value after dividing first num with second number

print(c%d)  # Find the remainder after dividing first number with second number

print(c//d) # Find the quotient after dividing first number with second number

print(c**d) # Find the result of the first num to the power of the second number.

# Comparing the two numbers with below operator:

print(c>d)

print(c<d)

print(c>=d)

print(c<=d)
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# Equality Operator
e = int(input("Enter First Number:"))
f = int(input("Enter Second Number:"))
print(e == f)
print(e!=f)

# Logical operators

print(10 and 20)
print(0 and 20)
print(20 and 0)
print(0 and 0)

print(10 or 20)
print(0 or 20)
print(20 or 0)
print(0 or 0)

print(not 10)
print(not 0)

#Bitwise Operators

print(10 & 20)
print(10 | 20)
print(10 ^ 20)
print(~10)
print(10<<2)
print(10>>2)

h=10
i=10
print(h is i)        # This checks the id hence reuasability concept for int <256
print(h is not i)
h=1000
i=1000
print(h is i)       # This checks the id hence reuasability concept for int <256
print(h is not i)

print(10+(10*32)//2**5&20+(~(-10))<<2)   # output is 20

# Membership operation, All are TRUE

print('2' in 'Python2.7.8')
print(10 in [10,10.20,10+20j,'Python'])
print(10 in (10,10.20,10+20j,'Python'))
print(2 in {1,2,3})
print(3 in {1:100, 2:200, 3:300})
print(10 in range(20))

#  binary, octal or hexadecimal

j=bin(10)
k=hex(10)
l=oct(10)
print(bin(9876))
print(hex(9876))
print(oct(9876))

a = 0b1010000
print(a)
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```
b = 0o7436
print(b)
c = 0xfade
print(c)
print(bin(80))
print(oct(3870))
print(hex(64222))
print(bin(0b1010000))
print(bin(0xfade))
print(oct(0xfade))
print(oct(0o7436))
print(hex(0b1010000))
print(hex(0xfade))
```

```
80
3870
64222
0b1010000
0o7436
0xfade
0b1010000
0b1111101011011110
0o175336
0o7436
0x50
0xfade
```