

Q. Declare a boolean value and store it in a variable.
Check the type and print the id of the same.

Q. Take one boolean value between 0 - 256.
Assign it to two different variables.
Check the id of both the variables. It should come the same. Check why?

Q. Arithmetic Operations on boolean data
Take two different boolean values.
Store them in two different variables.
Do below operations on them:-
 Find sum of both values
 Find difference between them
 Find the product of both.
 Find value after dividing first value with second value
 Find the remainder after dividing first value with second value
 Find the quotient after dividing first value with second value
 Find the result of first value to the power of second value.

Q. Comparison Operators on boolean values
Take two different boolean values.
Store them in two different variables.
Do below operations on them:-
 Compare these two values with below operator:-
 Greater than, '>'
 less than, '<'
 Greater than or equal to, '>='
 Less than or equal to, '<='
Observe their output(return type should be boolean)

Q. Equality Operator
Take two different boolean values.
Store them in two different variables.
Equate them using equality operators (==, !=)
Observe the output(return type should be boolean)

Q. Logical operators
Observe the output of below code
Cross check the output manually

```
print(True and True)
#----->Output is True
```

```

print(False and True)
#----->Output is False

print(True and False)
#----->Output is False

print(False and False)
#----->Output is False

print(True or True)
#----->Output is True

print(False or True)
#----->Output is True

print(True or False)
#----->Output is True

print(False or False)
#----->Output is False

print(not True)
#----->Output is False

print(not False)
#----->Output is True

```

Q. Bitwise Operators

Do below operations on the values provided below:-

Bitwise and(&)	-----> True, True	-----> Output is True
Bitwise or()	-----> True, False	-----> Output is True
Bitwise(^)	-----> True, False	-----> Output is True
Bitwise negation(~)	-----> True	-----> Output is -2
Bitwise left shift	-----> True,2	-----> Output is 4
Bitwise right shift	-----> True,2	-----> Output is 0

Cross check the output manually

Q. What is the output of expression inside the print statement. Cross check before running the program.

```

a = True
b = True
print(a is b)           #True or False?  #

```

```
print(a is not b)          #True or False?
```

```
a = False
```

```
b = False
```

```
print(a is b)              #True or False?
```

```
print(a is not b)          #True or False?
```

Q. Membership operation

in, not in are two membership operators and it returns boolean value

```
print(True in [10,10.20,10+20j,'Python', True])
```

```
print(False in (10,10.20,10+20j,'Python', False))
```

```
print(True in {1,2,3, True})
```

```
print(True in {True:100, False:200, True:300})
```

```
print(False in {True:100, False:200, True:300})
```