1.What are the two values of the Boolean data type? How do you write them?

**Answer:**

The 2 values of Boolean data type are **True** and **False**. As python is the case sensitive language the first letter of values should be capital. i.e. True and False

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2. What are the three different types of Boolean operators?

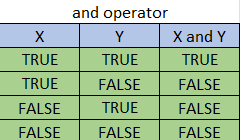
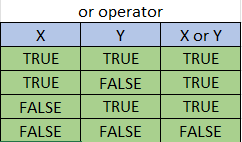
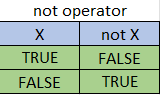
**Answer:**

The three different type of Boolean operators are : **and**, **or**, **not**

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3. Make a list of each Boolean operator's truth tables (i.e. every possible combination of Boolean values for the operator and what it evaluate).

**Answer:**

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4. What are the values of the following expressions?

(5 > 4) and (3 == 5)

not (5 > 4)

(5 > 4) or (3 == 5)

not ((5 > 4) or (3 == 5))

(True and True) and (True == False)

(not False) or (not True)

**Answer:**

(5 > 4) and (3 == 5) = **False**

not (5 > 4) = **False**

(5 > 4) or (3 == 5) = **True**

not ((5 > 4) or (3 == 5)) = **False**

(True and True) and (True == False) = **False**

(not False) or (not True) = **True**

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5. What are the six comparison operators?

**Answer:**

The 6 comparison operators are

Equals to: **==**

Not equals to : **!=**

Greater than: **>**

Less than: **<**

Greater than or equal to: **>=**

Less than or equal to: **<=**

**===========================================================**

6. How do you tell the difference between the equal to and assignment operators?Describe a condition and when you would use one.

**Answer:**

We will use the “==” for equal and “=” for assignment operators.

If the scenario comes where you want to check whether 2 variables has the same values or not we have to use the equal operator i.e. ==

Ex: if want to compare a and b, we can use: a==b, this will give the required answer.

If the scenario comes where you want to give certain value to the variable we have to use assignment operator i.e. =

Ex: if you want to assign value 100 to variable we can use: a=100

**==========================================================**

7. Identify the three blocks in this code:

spam = 0

if spam == 10:

print('eggs')

if spam > 5:

print('bacon')

else:

print('ham')

print('spam')

print('spam')

**Answer:**

Following are the three blocks in above code:

**Block 1:**

if spam == 10:

print('eggs')

**Block 2:**

if spam > 5:

print('bacon')

**Block 3:**

else:

print('ham')

print('spam')

print('spam')

**=========================================================**

8. Write code that prints Hello if 1 is stored in spam, prints Howdy if 2 is stored in spam, and prints Greetings! if anything else is stored in spam.

**Answer:**

if spam==1:

print(“Hello”)

elif span==2:

print(“Howdy”)

else:

print(“Greetings!”)

**======================================================**

9.If your programme is stuck in an endless loop, what keys you’ll press?

**Answer:** we can use ctrl + c key to terminate the program if its running in endless loop.

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10. How can you tell the difference between break and continue?

**Answer:**

The break statement will end the loop if it satisfies the condition for the break statement to execute, whereas continue statement will just skip the upcoming steps/statements if the condition for continue statement executes it won’t terminate the loop.

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11. In a for loop, what is the difference between range(10), range(0, 10), and range(0, 10, 1)?

**Answer:**

**range(10):** this will print values starting from 0 the default value till 9 as it will exclude the given value in the range function.

**range(0,10):** this will also print the values from the 0 till 9. As the start point is mentioned at ‘0’ and the end value given will not print.

**range(0,10,1):** this will also print the values from 0 till 9. As the first parameter is “0” it will start printing from that till the second parameter but it will not include 10 also the third parameter define the steps in between the values, since the step is 1 it will print all values from 0 to 9.

There for there is no difference in these three functions calls.

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12. Write a short program that prints the numbers 1 to 10 using a for loop. Then write an equivalent program that prints the numbers 1 to 10 using a while loop.

**Answer:**

**For loop:**

For i in range(1,11):

print(i)

**while loop:**

a=1

while(a<11):

print(a)

a=a+1

**==================================================================**

13. If you had a function named bacon() inside a module named spam, how would you call it after importing spam?

**Answer:**

We can call the function bacon which is inside spam which is already imported as below:

spam.bacon()

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