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

Boolean are true or false type of data type it gives output in 0 and 1 that means either True or False. Generally, it is used to represent the truth values of the expressions. For example, 1==1 is True whereas 2<1 is False.

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

Ans The three different Boolean operators are: and, or, not.

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).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| A | B | And | Or | Not(A+B) |
| 0 | 0 | 0 | 0 | 1 |
| 0 | 1 | 0 | 1 | 0 |
| 1 | 0 | 0 | 1 | 0 |
| 1 | 1 | 1 | 1 | 0 |

From the above table we can conclude that And operator will give true values only when Both the operands true otherwise it will give False or 0 value only. Or operator will give True or 1 value if any of the value is true otherwise False. And Not operator will give the compliment of any operand that is if the value is true, it will return false and vice versa. Above table I have created Not of Or that is Not of A+B.

4. What are the values of the following expressions?

(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

5. What are the six comparison operators?

Ans

* Python Less Than (<) Operator. ...
* Python Greater Than (>) Operator. ...
* Less Than or Equal To (<=) Operator. ...
* Equal To or Greater Than – Python (>=) Operator. ...
* Python Equal To (==) Operator. ...
* Python Not Equal Operator (!=)

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

Ans Equal to operator is used to check whether the two expressions on both sides are equal or not. It returns true of they are equal, and false if they are not. Whereas Assignment operator is used to assign values/results in the memory.

For Ex:

A=10, B=20

If(A==B):

print(true)

In the above example 10 and 20 values are assigned to A and B respectively. And ‘==’ equal to operator is used to check whether the values stored in A and B are equal or not.

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')

Ans 1s Block: if spam ==10

print('eggs')

2nd Block: if spam > 5:

print('bacon')

3rd Block: 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.

Ans spam = 1

if (spam==1):

print(“Hello”)

if(spam==2):

print(“Howdy”)

else:

print(“Greetings”)

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

Ans If our programme is stuck in endless loop, we will press CTRL + C to stop it.

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

Ans. The break statement is used to terminate the loop or statement in which it is present. After that, the control will pass to the statements that are present after the break statement, if available Whereas, Continue is also a loop control statement just like the break statement. continue statement is opposite to that of break statement, instead of terminating the loop, it forces to execute the next iteration of the loop. As the name suggests the continue statement forces the loop to continue or execute the next iteration.

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

Ans.

Range(10) : It will print the values from 0-9i.e (0,1,2,3,4,5,6,7,8,9)

Range (0,10): It will print the values from 0 to 9 it will include the start value and will exclude the stop value. Ex : (0,1,2,3,4,5,6,7,8,9)

Range(0, 10, 1) : It will print the values from 0 to 9 increasing the value by 1 only as in the third clause after the comma value is given as 1. It depends on this value how much the value will be increased.

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.

Ans.

Generate numbers between 1 to 10

**for** i **in** **range**(1,11):

**print**(i)

Output will be :

1,2,3,4,5,6,7,8,9,10

While Loop :

i=1

While(i<11) :

print (i)

i=i+1

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

Ans. This function can be called with spam.bacon().