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

The two values of the Boolean data type are True and False.

bool(1) = True and bool(0) = False

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

The three different types of Boolean operators are “AND” (&&), “OR” (||) and “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 evaluates).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Condition 1 (e.g., X)** | **Condition 2 (e.g., Y)** | **NOT X ( ~ X )** | **X AND Y ( X && Y )** | **X OR Y ( X || Y )** |
| False(0) | False(0) | True(1) | False(0) | False(0) |
| False(0) | True(1) | True(1) | False(0) | True(1) |
| True(1) | False(0) | False(0) | False(0) | True(1) |
| True(1) | True(1) | False(0) | True(1) | True(1) |

4. What are the values of the following expressions?

(5 > 4) and (3 == 5) False (0)

not (5 > 4) False (0)

(5 > 4) or (3 == 5) True (1)

not ((5 > 4) or (3 == 5) False (0)

(True and True) and (True == False) False (0)

(not False) or (not True) True (1)

5. What are the six comparison operators?

1. **less than ( < )**
2. **less than or equal to ( <= )**
3. **greater than ( > )**
4. **greater than or equal to ( >= )**
5. **equal to ( == )**
6. **not 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.

[The “**=**” is an](https://www.geeksforgeeks.org/operators-c-c/)[assignment operator](https://www.geeksforgeeks.org/assignment-operators-in-c-c/) used to assign the value on the right to the variable on the left. The ‘==’ operator checks whether the two given operands are equal or not and evaluates to a Boolean value.

7. Identify the three blocks in this code:

spam = 0

if spam == 10:

print('eggs') #Block 1

if spam > 5:

print('bacon') #Block 2

else:

print('ham') #Block 3

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.

spam = int(input(“Input spam value : “)

if spam == 1 :

print(“Hello”)

elif spam == 2:

print(“Howdy”)

else :

print(“Greeting!”)

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

 If program is stuck in endless loop we will press ctrl+c.

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

The main difference between both the statements is that when break keyword comes, it terminates the execution of the current loop and passes the control over the next loop or main body, whereas when continue keyword is encountered, it skips the current iteration and executes the very next iteration in the loop.

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

All three gives same output.

range(10) it gives only end value of range ,assume that initial value is 0 with increment of 1.

range(0,10) it gives initial value and end value , assume increment is 1.

range(0,10,1) it gives all initial value end value and increment value.

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.

*#Use of For Loop*

print("For Loop")

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

print(i)

*#Use of While Loop*

print("While Loop")

a **=**1

**while** a **<=** 10:

print(a)

a**+=**1

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

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