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

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

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

and , or & not are the three different types of Boolean operators.

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 ).

|  |  |
| --- | --- |
| Boolean operator | Truth table |
| AND | |  |  |  | | --- | --- | --- | | A | B | X | | 0 | 0 | 0 | | 0 | 1 | 0 | | 1 | 0 | 0 | | 1 | 1 | 1 | |
| OR | |  |  |  | | --- | --- | --- | | A | B | X | | 0 | 0 | 0 | | 0 | 1 | 1 | | 1 | 0 | 1 | | 1 | 1 | 1 | |
| NOT | |  |  | | --- | --- | | Input | Value | | 0 | 1 | | 1 | 0 | |
| NAND | |  |  |  |  | | --- | --- | --- | --- | | A | B | AND | NAND | | 0 | 0 | 0 | 1 | | 0 | 1 | 0 | 1 | | 1 | 0 | 0 | 1 | | 1 | 1 | 1 | 0 | |
| NOR | |  |  |  |  | | --- | --- | --- | --- | | A | B | OR | NOR | | 0 | 0 | 0 | 1 | | 0 | 1 | 1 | 0 | | 1 | 0 | 1 | 0 | | 1 | 1 | 1 | 0 | |

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)

|  |  |
| --- | --- |
| VALUES | EXPRESSIONS |
| (5>4) and (3 == 5) | Result: False  Reason: Both the condition wants to satisfy in and operator. |
| not (5 > 4) | Result: False |
| (5 > 4) or (3 == 5) | Result: True  Reason: Any one condition is satisfy we will get True in or operator. |
| not ((5 > 4) or (3 == 5)) | Result: False  Reason: Both the conditions are false . |
| (True and True) and (True == False) | False |
| (not False) or (not True) | True |

5. What are the six comparison operators?

|  |  |
| --- | --- |
| Operators | Description |
| > | Greater than |
| < | Lesser than |
| >= | Greather than or equal to |
| == | Equal to |
| <> | 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.

|  |  |
| --- | --- |
| EQUAL TO | ASSIGNMENT OPERATOR |
| Used to compare two values  Ex: a= 5  b =6  (a== b)  Here the values get compare and return True if the values are equal | Used to assign the left hand side value to right hand side.  Ex: a= 5  b =6  (a= b)  Here the b value will update in the a variable |

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')

The three blocks are:-

1. Comparision
2. IF block
3. Else block

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.

https://github.com/Ranivuma/IneuronAssignment/blob/266a39bcaad087537c66fbbe0118d17e5f10f0fc/IF\_statement.py

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

Ctrl + C

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

|  |  |
| --- | --- |
| **Break** | Continue |
| Used inside the loop | Used inside the loop |
| the break statement exit immediately from the innermost loop. | the continue statement begins the next iteration of the loop. |

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

No difference in the three range function.All will return the same output.

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.

https://github.com/Ranivuma/IneuronAssignment/blob/571c21159fecfef1c20cf1c914e7dad760b07c86/for%20and%20while.py

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

Import spam as sp

sp.bacon()