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

The two values of Boolean data type are 1 and 0. They are written as “True” and “False” respectively.

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

and, or, not are python 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 ).

|  |  |  |
| --- | --- | --- |
| X | Y | X AND Y |
| True | True | True |
| True | False | False |
| False | True | False |
| False | False | False |

|  |  |  |
| --- | --- | --- |
| X | Y | X OR Y |
| True | True | True |
| True | False | True |
| False | True | True |
| False | False | False |

|  |  |
| --- | --- |
| X | NOT X |
| True | False |
| False | True |

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?

>

>=

<

<=

==

!=

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

Sol)

Assignment Operator (=) is used to assign a value to a variable

Ex: name = “Ram” assigns a value “Ram” to the variable name

Equal operator (==) is a comparison operator and used to compare to values

Ex: 5 == 4, compares two values and results in a value False

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')

**Sol)**

spam = 0

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if spam == 10:

print('eggs')

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if spam > 5:

print('bacon')

else:

print('ham')

print('spam')

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print('spam')

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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.

If spam == 1:

print(“Hello”)

elif spam == 2:

print(“Howdy”)

else:

print(“Greetings!”)

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

Ctrl+z, Ctrl+c

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

Sol)

“break” command is used to interrupt a loop and compiler gets out of the loop and skip all the statements within the loop. This command is normally used to interrupt a loop if conditions aren’t met.

“continue” command is used to move the compiler to the end of the loop. When the compiler encounters “continue” command the loop won’t get interrupted and compiler moves to the end of the loop by skipping all the forthcoming statements.

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

Sol)

The syntax or range command is

range(stop) Considers a range of values from 0 to stop-1

range(start,stop) Considers a range of values from start to stop-1

range(start,stop,step) Considers a range of values starting from start till stop-step, considering a step value

range(10) considers values from 0 to 9. The range(10)

range(0,10) also gives values from 0 to 9

range(0,10,1) also gives values from 0 to 9, with a step = 1

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.

Sol)

for num in range(1,11):

print(num)

num = 10

while (num <= 10):

print(num)

num -= 1

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

from spam import bacon