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

1. The Boolean data type are o values: true or false. 'T' and 'F' are capital, true and false are not valid Booleans and Python will throw an error for them. Internally Python represents True as 1 and False as 0.

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

2. 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).

3. TT for “and” operator:-

|  |  |  |
| --- | --- | --- |
| A | B | A & B |
| 0 | 0 | 0 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 1 |
| A | B | A OR B |
| 0 | 0 | 0 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 1 |
| A | B (Not A) |  |
| 0 | 1 |  |
| 1 | 0 |  |
|  |  |  |
|  |  |  |

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?

5. less than (<), greater than (>), Less Than or Equal To (<=), Equal to or greater than (>=), Equal To (==) and 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.

6. = is an Assignment Operator it is used to assign the value of variable or expression, while == is an Equal to Operator and it is a relation operator used for comparison (to compare value of both left and right side operands).

EG: print (10 == 9) Output – False – USE OF Equal to Operator

a = 200

b = 33

If b > a:

print ("b is greater than a")

else:

print ("a is greater than b") – Output - a is greater than b

7. Identify the three blocks in this code:

7. Highlighted lines are the blocks

spam = 0

if spam == 10:

print('eggs')

if spam > 5:

print('bacon')

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.

8.

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?

9. CTRL-C

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

10. The difference between break and continue are - **break statement** will move the execution outside and just after a loop & the **continue statement** will move the execution to the start of the loop.

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

11. They all do the same thing.

* The range(10) call ranges from 0 up to (but not including) 10,
* range(0, 10) explicitly tells the loop to start at 0,
* range(0, 10, 1) explicitly tells the loop to increase the variable by 1 on each iteration.

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.

12. FOR LOOP PROGRAM

for i in range(1, 11):

print(i)

WHILE LOOP PROGRAM

i = 1

while i <= 10:

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?

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