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

There are two types of Boolean data types and they are TRUE and FALSE. True represents 1 as it’s value and false is represented by 0.

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

The tree different types of Boolean operators are:

* The And Operators
* The Or Operators and
* The Not Operator

1. 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 ).

### == Truth Table

| **x** | **==** | **y** | **Returns** |
| --- | --- | --- | --- |
| True | == | True | True |
| True | == | False | False |
| False | == | True | False |
| False | == | False | True |

### AND Truth Table

| **x** | **and** | **y** | **Returns** |
| --- | --- | --- | --- |
| True | and | True | True |
| True | and | False | False |
| False | and | True | False |
| False | and | False | False |

### OR Truth Table

| **x** | **or** | **y** | **Returns** |
| --- | --- | --- | --- |
| True | or | True | True |
| True | or | False | True |
| False | or | True | True |
| False | or | False | False |

### NOT Truth Table

| **not** | **x** | **Returns** |
| --- | --- | --- |
| not | True | False |
| not | 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

1. What are the six comparison operators?

Python has six comparison operators, which are as follows:

* Less than ( < )
* Less than or equal to (<=)
* Greater than (>)
* Greater than or equal to (>=)
* Equal to ( == )
* Not equal to ( != )

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

= is the operator that assigns values to a variable whereas == operator compares two values and evaluates if it’s the same 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')

Correct code :

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.

if spam == 1:

  print("Hello")

elif spam == 0:

  print("Howdy")

else :

  print("Greetings!")

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

Ctrl+C / Break statement

1. 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.

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

Range(10) - gives space for 10 values as default it starts with 0 as 1st value if not specifically mentioned.

Range(0,10) - starts from 0th value till 9th value - eg - 0,1,2,3,4,5,6,7,8,9

Range(0,10,1) - starts from 0th value till 9th value in an interval of 1 value

1. 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.

for i in range(10):

  i = i+1

  print(i)

i = 0

while i<=9:

  i = i+1

  print(i)

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

Spam.bacon()