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

The two Boolean data types are

**True**

**False**

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

**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 ).

|  |  |  |  |
| --- | --- | --- | --- |
| **A** | **B** | **AND** | **OR** |
| **0** | **0** | **0** | **0** |
| **0** | **1** | **0** | **1** |
| **1** | **0** | **0** | **1** |
| **1** | **1** | **1** | **1** |

|  |  |
| --- | --- |
| **A** | **NOT** |
| **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?

== **Equal**

!= **Not Equal**

> **Greater Than**

< **Less Than**

>= **Greater than or equal to**

**<= Less than; or 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 ‘==’ is used as a comparison operator for example**

**5 == 4**

**This expression will compare if 5 equal to 4, and return True if both the value are equal else False**

**Where as assignment operators ( = , += , -= …) are used to assign a value to a variable or calculate and assign for example**

**X = 5 the value 5 is assigned to variable X**

**X+=5, is X = X + 5 , the value 5 is added to X and assigned to X**

7. Identify the three blocks in this code:

spam = 0 **Block 1**

--------------------------------------------------------

if spam == 10:  **Block 2**

print('eggs')

-------------------------------------------------------------

if spam > 5:

print('bacon')

else:  **Block 3**

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.

**Spam = int(input("choose a number"))**

**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 + C**

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

**Break will break out of a loop and a function if a certain goal or a target is reached,**

**Continue can be used to executive the next loop or the current loop though we have reach the targeted goal in the current loop**

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

**All the three variations produce the same sequence from 0 to 9, but the difference lies on how the arguments are passed to range function,**

**In range(10), 10 here is the stop value, it by default end at 10 and a default step increment of 1.**

**In range(0,10), we are passing two arguments, instructing range to start at 0 and end yet, and it will take the default step size as 1.**

**In range (0,10,1) we are also providing the step size of 1 along with the start and stop.**

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.

# using for loop

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

**print(x)**

**#while loop**

**x = 1**

**while x < 11:**

**print(x)**

**x=x+1**

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

**Spam.bacon()**