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

True, False

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

Ans:

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 ).

Ans:

AND:

|  |  |  |
| --- | --- | --- |
| Operand 1 | Operand 2 | Result |
| False | False | False |
| False | True | False |
| True | False | False |
| True | True | True |

OR:

|  |  |  |
| --- | --- | --- |
| Operand 1 | Operand 2 | Result |
| False | False | False |
| False | True | True |
| True | False | True |
| True | True | True |

NOT:

|  |  |
| --- | --- |
| Operand | Result |
| 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?

Ans:

== 🡺 equal to

!= => Not equal to

< 🡺 Less than

> 🡺 Greate than

<= 🡺 Less than or equal to

>= 🡺 Greate than 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.

Ans:

Equal to (==): This is used to compare 2 variables or values. Ex: 5 == 5

Assignment (=): Assignment is used to assign a value to a variable. Ex: a = 10

7. Identify the three blocks in this code:

Ans:

spam = 0

# first block

if spam == 10:

print('eggs')

# second block

if spam > 5:

print('bacon')

# Third block

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.

Ans:

spam = input()

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?

Ans:

Crrl+c

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

Ans:

**break** is used to terminate the loop entirely while **continue** is used to skip the remaining code in the current iteration and move on to 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)?

Ans: All gives the same output that displays 0 to 9 numbers

range(10) : when we do not mention the start point of range by default it will start from 0 and the end would be (n-1). Here n value is 10. Hence, it displays 0 – 9 numbers

range(0, 10): Here we are explicitly mentioning to start point is 0 and again n-1 is the end point. Hence, it displays 0 – 9 numbers

range(0, 10, 1): Here we are passing start point, end point and the step count. Step count is nothing but adding the step value to the previous number. In this code, start point = 0, end point (n-1) is 10. Hence, it displays 0 – 9 numbers

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.

Ans:

1. Printing 1 – 10 numbers using for loop

for i in range(1,11):

print(i)

Printing 1 – 10 numbers using while loop

count = 1

while count <=10:

print(count)

count += 1

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

Ans:

import spam

spam.bacon()