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

Ans:

* The two values of the Boolean data type are “TRUE” AND “FALSE”.
* True is represented by the value 1 and False by the value 0.

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:

|  |  |  |
| --- | --- | --- |
| A | B | A&B |
| 0 | 0 | 0 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 1 |

* OR

|  |  |  |
| --- | --- | --- |
| A | B | A | B |
| 0 | 0 | 0 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 1 |

* NOT

|  |  |
| --- | --- |
| A | !A |
| 0 | 1 |
| 1 | 0 |

* XOR

|  |  |  |
| --- | --- | --- |
| A | B | A^B |
| 0 | 0 | 0 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 0 |

4. What are the values of the following expressions?

Ans:

* (5 > 4) and (3 == 5)🡪 FALSE and FALSE = FALSE
* not (5 > 4)🡪not TRUE = FALSE
* (5 > 4) or (3 == 5) 🡪 TRUE or FALSE = TRUE
* not ((5 > 4) or (3 == 5)) 🡪 not(TRUE or FALSE) = FALSE
* (True and True) and (True == False) 🡪 TRUE and FALSE = FALSE
* (not False) or (not True)🡪 TRUE or FALSE = TRUE

5. What are the six comparison operators?

Ans:

* EQUAL TO (==)
* NOT EQUAL TO(!=)
* GREATER THAN (>)
* LESS THAN(<)
* LESS THAN OR EQUAL TO(<=)
* GREATER 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.

ANS:

* EQUAL TO(==)

In the if block statement the both condition should be true, if the condition is not true then the else block will run.

* ASSIGNMENT operator(=)

X=10

Y= 15

X=Y

Print(X)

* The output will be 15 and the Y values will be stored in the x when we use assignment operator

7. Identify the three blocks in this code:

ANS:

* BLOCK1:

spam = 0

if spam == 10:

print('eggs')

* BLOCK2:

if spam > 5:

print('bacon')

* BLOCK3:

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 = 3

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:

* CTRL+C (ON windows)

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

ANS:

BREAK:

* for i in range(1,10):

if i ==6:

Break

Print(i)

* The loop start from 1 and check the condition until 5 when it comes to the number 6 then it comes out of the loop .

CONTINUE:

* for i in range(1,10):

if i ==6:

CONTINUE

Print(i)

* In this continue function the loop will skip the number 6 and print the value from 1 to 10 except the number 6.

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

ANS:

* range(10) 🡪 it execute from 0 to 9 in the loop function.
* range(0, 10)🡪 0 is the starting point of the loop and after coma it’s the ending point of the loop(10).
* range(0, 10, 1)🡪 0 is the starting point of the loop , 10 is the end point of the loop and 1 is the size that is used for skip the value.

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:

* FOR LOOP:

for i in range(0,11):

Print(i)

* WHILE LOOP:

i = 1

while i <= 10:

   print(i)

     i+=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()