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

**Answer:**

There are two values of Boolean data types namely true and false. They are written as True and False respectively.

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

**Answer:**

Three different types of Boolean operators are –

1. or
2. and
3. 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 ).

**Answer:**

Truth Table of or Boolean operator

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

Truth Table of and Boolean operator

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

Truth Table of not Boolean operator

|  |  |
| --- | --- |
| **Operand 1** | **Result** |
| True | False |
| False | True |

4. What are the values of the following expressions?

**Answer:**

(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?

**Answer:**

Six comparison operators are as follows:

1. > Greater Than
2. < Less Than
3. >= Greater Than or equal to
4. <= Less Than or equal to
5. == Equal
6. != Not equal

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

**Answer:**

Equal to operator is is used for comparison of two identifiers/variables where as assignment operator is used to assign a value to a variable/identifier.

e.g.

if a==b ## Use of Equal to operator

a=5 ## use of assignment operator

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')

**Answer:**

The three blocks in the code are –

1. True part of first if statement (if spam == 10)
2. True part of second if statement (if spam > 5)
3. Else part of if statement

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.

**Answer:**

spam = 10

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?

**Answer:**

Ctrl + C

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

**Answer:**

Break statement exits the loop and execution starts from next statement.

Continue statement skips the current iteration and continues with next iteration in the loop.

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

**Answer:**

No difference.

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.

**Answer:**

#Solution to print 1 to 10 using a for loop

for i in range(1,11,1):

  print(i)

#Solution to print 1 to 10 using a while loop

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?

**Answer:**

import spam

spam.bacon()