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

Answer: True & False

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

Answer: 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).

**And**

A B output

|  |  |  |
| --- | --- | --- |
| 0 | 0 | 0 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 1 |

**OR Not**

A B output A A’

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 0 | 0 |  |  |  |  | 0 | 1 |
| 0 | 1 | 0 |  |  |  |  | 1 | 0 |
| 1 | 0 | 0 |  |  |  |  |  |  |
| 1 | 1 | 1 |  |  |  |  |  |  |

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 to

!= Not equal to

< Less than

> Greater 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.

The “=” is an assignment operator is used to assign the value on the right to the variable on the left.

Ex: a = 10 , i.e. value of variable is equal to 10

The ‘==’ operator checks whether the two given operands are equal or not. If so, it returns true. Otherwise it returns false. It is a relational or comparison operator.

Ex: a==b

7. Identify the three blocks in this code:

spam = 0

if spam == 10:

print('eggs') ----------------- Block1

elif spam > 5:

print('bacon') ------- Block2

else:

print('ham') ----------- Block3

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.

Answer:

Spam = int(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?

Answer: Ctrl + C

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

Answer:

Break statement will move the execution outside and just after a loop.

Continue statement will move the execution to the start of the loop.

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

Answer:

range(10) call ranges from 0 up to (but not including) 10

range(0, 10) explicitly tells the loop to start at 0

range(0, 10, 1) explicitly tells the loop to increase the variable by 1 on each iteration.

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:

Using for loop

for I in range(1,11):

print(i)

using 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:

spam.bacon()