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. It is written as True and False.

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

Ans:

and, or, not

1. 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:

|  |  |  |  |
| --- | --- | --- | --- |
| **Input1** | **Operator** | **Input2** | **Output** |
| True | and | True | True |
| True | and | False | False |
| False | and | True | False |
| False | and | False | False |
| True | or | True | True |
| True | or | False | True |
| False | or | True | True |
| False | or | False | False |
|  | not | True | False |
|  | not | False | True |

1. What are the values of the following expressions?

(5 > 4) and (3 == 5)

not (5 > 4)

(5 > 4) or (3 == 5)

not ((5 > 4) or (3 == 5))

(True and True) and (True == False)

(not False) or (not True)

Ans:

False

False

True

False

False

True

1. What are the six comparison operators?

Ans:

==, !=, >, <, >=, <=

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

Ans:

== is the equal to operator that compares two values and evaluates to a Boolean, while = is the assignment operator that stores a value in a variable

Equal to Operator Example:

|  |  |
| --- | --- |
| Code | Output |
| 6 == 5 | False |

Addition Assignment Operator Example:

|  |  |
| --- | --- |
| Code | Output |
| X = 5; print(X) | 5 |

1. 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')

Ans:

Block A is all the lines of code inside if statement.

Block B is print('bacon')

Block C is print('ham')

1. 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!')

1. If your programme is stuck in an endless loop, what keys you’ll press?

Ans:

Ctrl+C

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

Ans:

Break statement stops the process of the loop whereas Continue statement only stops the current iteration of the loop.

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

Ans:

There is no difference between all three functions. It will give the same output, i.e.,

0

1

2

3

4

5

6

7

8

9

1. 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 code:

for i in range(1, 11):

print(i)

While loop code:

i = 1

while i < 11:

print(i)

i += 1

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

Ans:

spam.bacon()