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

Answer:

True and False.

The first letter is uppercase and rest are lowercase like True, False.

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

Answer:

not, or, and

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:

**not A**

|  |  |
| --- | --- |
| A | Output |
| True | False |
| False | True |

**A and B**

|  |  |  |
| --- | --- | --- |
| A | B | Output |
| True | True | True |
| True | False | False |
| False | True | False |
| False | False | False |

**A or B**

|  |  |  |
| --- | --- | --- |
| A | B | Output |
| True | True | True |
| True | False | True |
| False | True | True |
| False | False | False |

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?

Answer:

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

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

Answer:

* = is assignment operator and is used to assign value to a variable.

**Example:** Let us say we have to assign a value 2 to a variable x then we will do it like this

x = 2

* == is equal operator and is a relational operator used for comparison.

**Example:** Let us say we have to check whether x is equal to 2 or not**,** so we will write

x == 2, this will return True if x equals 2 and False if x is not equal to 2.

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:

Proper indentation is missing to identify blocks.

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: It breaks the loop and brings us out of the loop.

Continue: It causes the loop to move on to next iteration without executing code written after continue in that loop.

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

Answer: All are same, they all call range() staring from 0 and ending at 9 with 1 as step size.

range(10): Does not specify start and step size, however by default they are 0 and 1 respectively.

range(0,10): Specifies start as 0 explicitly.

range(0,10,1): Specifies start as 0 and step size as 1 explicitly.

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<11:

  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?

Answer:

spam.bacon()