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

Answer: TRUE & FALSE

Bool\_1 =TRUE

Bool\_2 = 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 evaluates).

TRUE OR FALSE = TRUE

TRUE OR TRUE = TRUE

FALSE OR FALSE =FALSE

TRUE & TRUE = TRUE

TRUE & FALSE =FALSE

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: Equal to (`==`)

Not equal to (`!=`)

Greater than (`>`)

Less than (`<`)

Greater than or equal to (`>=`) Less 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.

Answer :

Assigned value is done by using (=) it means we assigned the fixed values

For example

a =20

b = 45

Equal (==) is used to compare the value

For example, if a==b means we compared the assigned values of a and b

If true of false

7. Identify the three blocks in this code:

spam = 0

if spam == 10:

print('eggs') block 1 if

if spam > 5:

print('bacon')

else:

print('ham') block 2

print('spam')

print('spam') block 3

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.

spam = Assign a value to the spam variable here

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 +Break

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

Answer

- The "break" statement is used to exit the current loop prematurely.

- When a "break" statement is encountered within a loop, it immediately terminates the loop's execution, and control moves to the statement immediately following the loop.

It is often used to exit a loop early based on a specific condition or when a particular task is completed

The "continue" statement is used to skip the current iteration of a loop and move to the next iteration.

- When a "continue" statement is encountered within a loop, it skips the remaining code in the current iteration and proceeds to the next iteration of the loop.

- It is often used when you want to skip specific iterations based on a condition without exiting the entire loop.

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

In a `for` loop:

1. `range(10)`: This generates a sequence of numbers from 0 to 9 (inclusive) with a default step of 1.

2. `range(0, 10)`: This is equivalent to `range(10)` and also generates a sequence of numbers from 0 to 9 (inclusive) with a default step of 1.

3. `range(0, 10, 1)`: This is again equivalent to the previous two options and generates a sequence of numbers from 0 to 9 (inclusive) with an explicitly defined step of 1.

In summary, all three expressions will produce the same sequence of numbers from 0 to 9 when used in a `for` loop. The default step is 1, so it's not necessary to specify it 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 :

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

print(i)

b) 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?

Answer :

import spam

spam.bacon()