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

The Boolean data type represents two values: true and false.

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

There are three primary Boolean operators: AND, OR , NOR

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 | | |
| Operand 1 | Operand 2 | Result |
| false | false | false |
| OR | | |
| false | false | false |
| NOR | | |
| false |  | true |

4. What are the values of the following expressions?

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

not (5 > 4) ---> false

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

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

(True and True) and (True == False) ---> false

(not False) or (not True) ---> true

5. What are the six comparison operators?

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

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

The equal to operator (==) and the assignment operator (=) are two distinct operators used in programming, and they serve different purposes.

Use Equal To Operator (==) When:

You want to compare two values to check if they are equal.

You are working with conditional statements (like if statements) to make decisions based on the equality of values.

Use Assignment Operator (=) When:

You want to assign a value to a variable.

You are initializing or updating a variable with a new value.

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')

ham

spam

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.

stor=int(input('Enter any number: '))

if stor==1:

print('Hello')

elif stor==2:

print('Howdy')

else:

print('Greetings!')

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

Ctrl + C

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

The break statement is used to exit the current loop prematurely when a certain condition is met.

for i in range(1, 6):

if i == 3:

break

print(i)

The continue statement is used to skip the current iteration of a loop when a specific condition is met.

for i in range(1, 6):

if i == 3:

continue

print(i)

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

range(10):

This creates a sequence of numbers starting from 0 (the default start value) and ending at 9 (10 minus 1, the default stop value). It increments by 1 by default.

range(0, 10):

This explicitly specifies the start and stop values. It starts at 0 and ends at 9 (10 minus 1), just like range(10). It also increments by 1 by default.

range(0, 10, 1):

This explicitly specifies the start, stop, and step values. It starts at 0, ends at 9 (10 minus 1), and increments by 1. Again, this is equivalent to the previous two examples.

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.

print([m for m in range(1,11)])

n=1

while n<11:

print(n)

n+=1

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

import spam

spam.bacon()