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

Ans:

The two values of Boolean data type are **True and False.** We will write these as **True** and **False** in python unlike other programming languages.

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

Ans:

1. and
2. or
3. 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 ).

Ans:

1. and

and operator can be used on at least 2 operands. So below are the combination of Boolean values for the and operator

|  |  |  |
| --- | --- | --- |
| **Operand1** | **Operand2** | **Operand1 and Operand2** |
| True | True | True |
| True | False | False |
| False | True | False |
| False | False | False |

1. or

or operator can be used on at least 2 operands. So below are the combination of Boolean values for the or operator

|  |  |  |
| --- | --- | --- |
| **Operand1** | **Operand2** | **Operand1 and Operand2** |
| True | True | True |
| True | False | True |
| False | True | True |
| False | False | False |

1. not

not can be used on only one operand.

So below are the combination of Boolean values for the not operator

|  |
| --- |
| **Operand** |
| True |
| False |

4. What are the values of the following expressions?

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

Ans: False (because 5>4 is True and 3 is not equals to 5. So, True and False is **False**)

not (5 > 4)

Ans: False (because 5>4 is True and we are using not operator for True. So, the result is False)

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

Ans:

True (because 5>4 is True. So, the next comparison will not be done as we are using **or** operator. So, the result is **True**)

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

Ans: False (because 5>4 is True, 3 is not equal to 5. So, the result of inner operation is True and we are using not for the result of inner operation. So, not of True is False)

(not False) or (not True)

Ans: True (because not of False is True, not of True is False. True or False is True. So, the result is True)

5. What are the six comparison operators?

Ans:

Six comparison operators are:

1. >
2. >=
3. <
4. <=
5. ==
6. !=

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

Ans:

The equal to (=) operator is used to assign any value to a variable.

Assignment operators are the combination of equal to and arithmetic operators or betwise operators.

1. operator +=

If we want to increment a variable’s value by 1, then we will use this operator

Example: counter += 1

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')

Ans:

Three blocks in the above are,

1. main block
2. If block
3. Else block

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.

Ans:

spam = int(input(“Enter a value: ”))

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?

Ans: We will use **Ctrl+C** to stop the program

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

Ans:

break statement can be used to come out of a loop when a condition satisfied.

continue statement can be used to skip the execution of few/all statements inside the loop when a condition satisfied.

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

Ans:

All these 3 statements will produce the same result.

The for loop syntax is for i in range(beg value, end value, increment/decrement value)

But if we use range(10), then 10 will considered as end value, 0 will be considered as begin, and 1 will be considered as increment value

If we use range(0, 10), then 0 will be considered as begin, 10 will be considered as end value, 1 will be considered as increment value

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.

Ans:

Program to print 1 to 10 using for loop

for i in range(1,11):

print(i)

Program to print 1 to 10 using while loop

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?

Ans:

import spam

spam.bacon()