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

Two values are True and False. In python, it is written as True and False

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

And, or and not are the 3 types of Boolean operators

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 ).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| False | AND | False | = | False |
| False | AND | True | = | False |
| True | AND | False | = | False |
| True | AND | True | = | True |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| False | OR | False | = | False |
| False | OR | True | = | True |
| True | OR | False | = | True |
| True | OR | True | = | True |

|  |  |  |  |
| --- | --- | --- | --- |
| NOT | True | = | False |
| NOT | 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) - 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?

1. > : greater than

2. < : lesser than

3. >= : greater than or equal to

4. <= : lesser than or equal to

5. == : equal to

6. != : not 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.

Assignment operator using only one = whereas equal to operator using ==.

a=5 (assignment)

a==5 (equal to operator)

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')

1. spam = 0
2. if spam == 10

print(‘eggs’)

1. if spam > 5:

print(‘bacon’)

else:

print(‘ham’)

1. print(‘spam’)

print(‘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.

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?

Ctrl+C to stop endless loop.

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

Break will stop the loop from executing and come out of the loop.

Continue will stop the execution of current iteration and move to next iteration.

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

All 3 will have same lower bound and upper bound.

Range(10) – Here 10 refers to upper bound of the iteration index. By default, the starting index value of the iteration is 0. This means 10 iterations starting from default value which is 0. Index value will be 0,1,2,3,4,5,6,7,8,9.

Range(0,10) – Here 0 refers starting number and 10 refers to upper bound of the iteration index. It means 10 iterations starting from 0, which will give iteration index as 0,1,2,3,4,5,6,7,8,9.

Range(0,10,1) – Here 0 refers to starting value, 10 refers to upper bound of iteration index and 1 refers to step. This means iteration index starting from 0 until 9 in the step of 1 which will make the series 0,1,2,3,4,5,6,7,8,9.

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("for loop")  
for i in range(1,11):  
 print(i)  
  
print("while loop")  
i=1  
while(i<=10):  
 print(i)  
 i=i+1

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

Spam.bacon()