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

Ans:

The two values are True and False, also denotated as 0 or 1 for the understanding.

We do write them as follows:

Variable\_name1 = True

Variable\_name2 = False.

Also we can write True or False at any statement.

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

Ans:  
The three different type of opperators are AND operator (and), OR Operator (or), and NOT operator (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 Operator (and)

|  |  |  |
| --- | --- | --- |
| **Value\_1** | **Value\_2** | **Value\_1 ‘and’ Value\_2** |
| True | True | True |
| True | False | False |
| False | True | False |
| False | False | False |

1. OR Operator (or)

|  |  |  |
| --- | --- | --- |
| **Value\_1** | **Value\_2** | **Value\_1 ‘or’ Value\_2** |
| True | True | True |
| True | False | True |
| False | True | True |
| False | False | False |

1. NOT Operator (not)

|  |  |
| --- | --- |
| **Value\_1** | **‘not’ Value\_1** |
| True | False |
| False | True |

4. What are the values of the following expressions?

Ans:

* (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?

Ans:

The following are the Comparison operators:

1. equal to (==)
2. greater than (>)
3. less than (<)
4. greater than equal to (>=)
5. less than 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.

Ans:

The equal to operator is used to compare the values in the expression. It check weather the value at left side and right side are equal or not. Where as assignment operator is used to assigned the value to variable.

For example:

1. If I want to store the interger value 10 and 20 at two variable then I will use the assignment operator like following:

X = 10

Y = 20

1. If I want to compare the x and y are similar or not, in this case I will use equal to operator, like following:
   1. X == y

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:

1. Block 1: first if statement (if spam == 10:) includes the statement print('eggs').
2. Block 2: second if statement (if spam > 5:) includes the statement print('bacon'). The else statement and its associated block (print('ham')) are also part of this block.
3. Block 3: The block associated with the else statement under the second if statement includes the statement print('ham').

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:

*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:

Ctrl + C

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

Ans:

The break and continue statements are the control flow statement.

1. Break:
   1. The break statement is used to exit or terminate the loop of condition if break statement meet.
   2. For example:

*for i in range(1, 10):*

*if i == 2:*

*break*

*print(i)*

* 1. Here, if i value is become 2 which will match the condition in if statement then break statement will terminate the loop and print the value of I which is 1.

1. Continue:
   1. The continue statement us used to skip the loop of condition and switch to another line of code if contion matches.
   2. For Example:

*for i in range(1, 10):*

*if i == 2:*

*Continue*

*print(i)*

* 1. Here, if i value is become 2 which will match the condition in if statement then it will skip the statement for that part and run entire loop till end of for loop and will print 1, 3, 4,5,6,7,8,9

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

Ans:

1. range(10): This will generate the sequence of number from 0 to 9
2. range(0, 10): This will also generate the sequence of number from 0 to 9
3. range(0, 10, 1): This will also generate the sequence of number from 0 to 9 with step size 1

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:

1. Using for loop:

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

*print(i)*

1. 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()*