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

Answer: True (1), False (0), Write as True, 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 evaluate ).

Answer: AND Operator:

|  |  |  |
| --- | --- | --- |
| INP1 | INP2 | AND |
| 0 | 0 | 0 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 1 |

OR Operator:

|  |  |  |
| --- | --- | --- |
| INP1 | INP2 | OR |
| 0 | 0 | 0 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 1 |

NOT Operator

|  |  |
| --- | --- |
| INP1 | NOT |
| 0 | 1 |
| 1 | 0 |

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

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

Answer: We can tell the difference by looking at the operator sign. Equal to is defined by (==) and assignment is defined by (=). While we assign a variable we use assignment like: legs = 2, and while we are comparing we use equal to: 2 == 2

7. Identify the three blocks in this code:

spam = 0

if spam == 10: Block A

print('eggs') Block A

if spam > 5: Block A

print('bacon') Block B inside Block A

else: Block A

print('ham') Block C inside Block A

print('spam') Block A

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.

spam = int(input("Enter your input"))

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 + C

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

Answer: Break terminate the loop/blocks where condition met and continue just ignore/skip the particular matched iteration and go next.

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

Answer: The difference are basically the parameter uses, range(10) only using the end condition and by default will start from 0 and will be incremented by 1 so output (0-9). Then range(0,10) using both start and end condition and default increment 1 so will output (0-9) again. And range (0,10,1) here we are using start, end and also incremental condition. So, the difference is between the parameter uses here.

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.

**For Loop:**

for i in range(1,11):

print(i)

**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?

Import spam as s

s.bacon()