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

True and False

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

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 ).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| A | B | A AND B | A OR B | NOT A |
| FALSE | FALSE | FALSE | FALSE | TRUE |
| FALSE | TRUE | FALSE | TRUE | TRUE |
| TRUE | FALSE | FALSE | TRUE | FALSE |
| TRUE | TRUE | TRUE | TRUE | FALSE |

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?

less than, greater than, less than or equal to, greater than or equal to, equal to and not equal to operator.

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

The assignment operator is used to assign the value on the right to the variable on the left. The equal to operator checks whether the two given operands are equal or not.

Eg:

a=12 #here a is assigned a value 12

A=3\*4

A==a # here it checks whether its equals or not

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')

spam = 0

if spam == 10:

  print('eggs')

if spam > 5:

  print('bacon')

else:

  print('ham')

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.

spam = 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?

Ctrl + C

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

The break statement is used to break the loop by immediate termination of loop, while continue statement will terminate the current iteration and resumes the next iteration.

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

range(10) – Here we will get integers from 0 to 9 by giving the only input as 10.

Range(0,10)-Here we are giving the input start and stop values to get the output and results in the output of integers from 0 to 9 without including the stop value.

Range(0,10,1)- Here we are giving the start, stop and step values and getting an output from 0 to 9 without including the stop 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.

For loop

i=0

for i in range(10):

  i=i+1

  print(i)

while loop

i=0

while i<10:

  i=i+1

  print(i)

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

spam.bacon()