**PYTHON ASSIGNMENT - 2**

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

ANSWER:

The two values of the Boolean data type are True and False. They are written exactly as shown, with the first letter capitalized.

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 Truth Table:**

True AND True = True

True AND False = False

False AND True = False

False AND False = False

**OR Truth Table:**

True OR True = True

True OR False = True

False OR True = True

False OR False = False

**NOT Truth Table:**

NOT True = False

NOT False = True

4. What are the values of the following expressions?

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

not (5 > 4)

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

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

(True and True) and (True == False)

(not False) or (not True)

ANSWER:

(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:

The six comparison operators are:

== (equal to), != (not equal to), > (greater than), < (less than), >= (greater than or equal to), <= (less than or 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.

ANSWER:

The equal to operator (==) is used to compare two values to see if they are equal. The assignment operator (=) is used to assign a value to a variable. For example, you would use the equal to operator when comparing two variables like if x == y:, whereas you would use the assignment operator when assigning a value to a variable like x = 5.

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')

ANSWER:

spam = 0

if spam == 10:

print('eggs') # Block 1

if spam > 5:

print('bacon') # Block 2

else:

print('ham') # Block 3

print('spam') # Block 3

print('spam') # Block 3

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.

ANSWER:

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** to terminate the program.

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

ANSWER:

Break is used to exit a loop entirely, while continue is used to skip the current iteration of the loop and continue with the next iteration.

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

ANSWER:

All three statements produce the same result, which is a sequence of numbers from 0 to 9. The first form, range(10), starts from 0 by default. The second form, range(0, 10), explicitly specifies the starting point. The third form, range(0, 10, 1), explicitly specifies the start, stop, and step values.

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.

ANSWER:

# Using for loop

for i in range(1, 11):

print(i)

# 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?

ANSWER

Import spam.bacon()