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

**Ans:** The Boolean data type can be two values only i.e. either True or False.

Ex: a = True

B = False

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

**Ans:** Three different types of Boolean operators are AND, OR and NOT.

1. 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: Truth Table**

|  |  |  |  |
| --- | --- | --- | --- |
| **X** | **Operator** | **Y** | **Result** |
| **True** | **==** | **True** | **True** |
| **False** | **==** | **False** | **True** |
| **True** | **==** | **False** | **False** |
| **False** | **==** | **True** | **False** |
| **True** | **and** | **True** | **True** |
| **True** | **and** | **False** | **False** |
| **False** | **and** | **True** | **False** |
| **False** | **and** | **False** | **False** |
| **True** | **or** | **True** | **True** |
| **True** | **or** | **False** | **True** |
| **False** | **or** | **True** | **True** |
| **False** | **or** | **False** | **False** |
| **True** | **not** |  | **False** |
| **False** | **not** |  | **True** |

4. What are the values of the following expressions?

(5 > 4) and (3 == 5) **Ans:** False

not (5 > 4) **Ans:** False

(5 > 4) or (3 == 5) **Ans:** True

not ((5 > 4) or (3 == 5)) **Ans:** False

(True and True) and (True == False) **Ans:** False

(not False) or (not True) **Ans:** True

5. What are the six comparison operators?

**Ans:** Six comparison operators are,

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

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

**Ans:** Equal to operator denote in double equals (==) symbol whereas assignment operators denote in single equals (=) symbol.

Equal to (==) operation would use in comparing two values.

Ex: (5==3)

Assignment operator (=) would use to store value into a variable.

Ex: a = 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')

**Ans:** Three blocks are,

i) Assignment block,

spam = 0

ii) if statement block,

if spam == 10:

print('eggs')

iii) if else statement block,

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.

**Ans:**

Code,

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?

**Ans:** Ctrl + “C” use to terminated an endless loop.

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

**Ans:** The break statement stops the loop in which the statement is placed. A continue statement skips a single iteration in a loop.

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

**Ans:**There is no difference in all three statements. All three statements will display value from 0 to 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.

**Ans:**

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

**Print(i)**

**A = 1**

**while A <= 10:**

**print(A)**

**A+=1**

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

**Ans:** spam.bacon()