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

**Ans: The two values of the Boolean data type are True and False**

**We denote Boolean by T and F**

**Internally Python represents True as 1 and False as 0**

**b=True**

**type(b) =>bool**

**Eg: a=10 , b=20 , c=a<b**

**print(c)==>True**

**True+True==>2**

**True-False==>1**

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

**Ans: The three basic 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: Boolean operator's truth tables**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **a** | **b** | **OR** | **AND** | **NOT** |
| **False** | **False** | **False** | **False** | **True** |
| **True** | **False** | **True** | **False** | **False** |
| **False** | **True** | **True** | **False** | **True** |
| **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?

**Ans: Comparison operators includes:**

|  |  |
| --- | --- |
| **>** | **Less than** |
| **<** | **Greater than** |
| **>=** | **Less than or equal to** |
| **<=** | **Greater than or equal to** |
| **==** | **Equal to** |
| **!=** | **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

== it is used for comparing two values. It returns 1 if both the values are **equal** otherwise returns 0.

= is the assignment operator that stores a value in a variable.

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')

**solution**

spam = 0

if spam == 10:

print('eggs')

if spam > 5:

print('bacon')

else:

print('ham')

print('spam')

print('spam')

Blocks are everything inside the if statement and the lines print('eggs') , print('bacon') and print('ham').  
  
if spam > 5:  
print('bacon')  
else:  
print('ham')  
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.

Solution:

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

if(spam==1):

print("hello")

elif(spam==2):

print("Howdy")

else:

print("Greeting")

9.If your programme is stuck in an endless loop, what keys you’ll press?

Ans: To stop an endless loop we have to break the endless loop, which can be done by pressing key Ctrl+C. Or else we can use break keyword

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

**1) break:**

**We can use break statement inside loops to break loop execution based on some**

**condition.**

**2) continue:**

**We can use continue statement to skip current iteration and continue next iteration.**

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

Ans:

range(10)

When you pass only one argument to the range (), it will generate a sequence of integers starting from 0 to 10.

range(0,10)

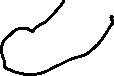
When you pass two arguments to the range (), it will generate integers starting from the start number to stop-1.

range(0,10,1)

When you pass all three arguments to the range(), it will return a sequence of numbers, starting from the start number, increments by step number, and stops before a stop number.

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.

Solution:



1.for loop

for i in range(1,11):

print(i)

2.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:

Bacon() function is called using spam.bacon().