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

**Answer:**

* True ( 1)
* False ( 0)

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:**

|  |  |  |
| --- | --- | --- |
| Operand 1 | Operand 2 | Operand 1 and Operand 2 |
| True(1) | True(1) | True(1) |
| True(1) | False(0) | False(0) |
| False(0) | True(1) | False(0) |
| False(0) | False(0) | False(0) |
| Operand 1 | Operand 2 | Operand 1 or Operand 2 |
| True(1) | True(1) | True(1) |
| True(1) | False(0) | True(1) |
| False(0) | True(1) | True(1) |
| False(0) | False(0) | False(0) |

|  |  |
| --- | --- |
| Operand | NOT Operand |
| True(1) | False(0) |
| False(0) | True(1) |

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(0)
* not (5 > 4) 🡪 False(0)
* (5 > 4) or (3 == 5) 🡪 True(1)
* not ((5 > 4) or (3 == 5)) 🡪 False(0)
* (True and True) and (True == False) 🡪 False(0)
* (not False) or (not True) 🡪 True(1)

5. What are the six comparison operators?

**Answer:**

== 🡪 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:**

* Equal to (==): compares two values are same or not
* Assignment operators (=): x=2, assign value 2 to the variable x

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 🡪 Value assignment

if spam == 10: 🡪 IF condition

print('eggs')

if spam > 5: 🡪IF condition

print('bacon')

else: 🡪ELSE block

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.

**Answer:**

spam=int(input('Enter Spam value:'))

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 – make the control come out of loop
* Continue – takes the control for next iteration

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

**Answer:**

No Difference. Range will take values 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.

**Answer**

**For loop**

for i in range(1,11):

print(i)

**While loop**

a=1

while a<11:

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?

**Answer**

spam.bacon()