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

Ans: The two Boolean data types value are:

* True : represents value as 1
* False: represents value as 0

It generally used with conditional operators for eg:

if True:

print("Action to be performed when condition is true")

else:

print("Action to performed when condition is false")

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

Ans: 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 for AND:

|  |  |  |
| --- | --- | --- |
| A | B | O/P |
| 0 | 0 | 0 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 1 |

Truth Table for OR:

|  |  |  |
| --- | --- | --- |
| A | B | O/P |
| 0 | 0 | 0 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 1 |

Truth Table for NOT:

|  |  |
| --- | --- |
| A | !A |
| 0 | 1 |
| 1 | 0 |

4. What are the values of the following expressions?

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

O/P : False

* not (5 > 4)

O/P : False

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

O/P: True

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

O/P: False

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

O/P: False

* (not False) or (not True)

O/P: True

1. What are the six comparison operators?

* == (Equal To)
* !=(Not Equal To)
* <(Less Than)
* <=(Less Than equal to)
* >(Greater Than)
* >=(Greater Than Equal to)

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

= (Assignment Operator) whearas == represents Equal to Operator

For eg:

A =10 #Assigned int value to variable A

if A==20: # Comparison using equal to operator

print("Value is equal to 10")

else:

print("Value is not equal to 10")

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 :

spam = 0

if spam == 10: # outer if block started

print('eggs')

if spam > 5: # inner if block started

print('bacon')

else: # else block

print('ham')

print('spam') # outer if block ends

print('spam')

1. 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 :

if spam == 1:

print("Hello")

elif spam == 2:

print("Howdy")

else:

print("Greetings")

spam = int(input("Enter a number"))

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

Press: ctrl+C

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

**Ans**: Break: the break statement terminates the loop immediately and control comes out of the loop

Continue: The continue statement terminates the current iteration and control comes to the next iteration of the loop

For eg

for i in range(10):

if i==5:

continue

if i==7:

break

print(i)

print("You are out of loop now")

O/P :

0

1

2

3

4

6

You are out of loop now

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

**Ans:**

All three are the same.

range(10) automatically takes default start value as 0 and step as 1,

1. 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.

**Using For Loop**

for i in range(1,11):

print(i)

**Using While Loop**

i= 1

while i<=10:

print(i)

i+=1

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

**Ans :** from spam import bacon