**Assignment No.2**

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

Ans1.>Boolean data type have two values TRUE & FALSE

A = True  
 B = False  
 C = (1==3)

Q.2. What are the three different types of Boolean operators?

Ans.> Three basic boolean operators are: AND, OR, and NOT.

Q.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 ).

Ans.> The expression 1 <= 2 is True , while the expression 0 == 1 is False .

### == Truth Table

| **x** | **==** | **y** | **Returns** |
| --- | --- | --- | --- |
| True | == | True | True |
| True | == | False | False |
| False | == | True | False |
| False | == | False | True |

### AND Truth Table

| **x** | **and** | **y** | **Returns** |
| --- | --- | --- | --- |
| True | and | True | True |
| True | and | False | False |
| False | and | True | False |
| False | and | False | False |

### OR Truth Table

| **x** | **or** | **y** | **Returns** |
| --- | --- | --- | --- |
| True | or | True | True |
| True | or | False | True |
| False | or | True | True |
| False | or | False | False |

### NOT Truth Table

| **not** | **x** | **Returns** |
| --- | --- | --- |
| not | True | False |
| not | False | True |

Q.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)

Ans.>Code:

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)

Output: -

True

Q.5. What are the six comparison operators?

Ans.>

| *OPERATOR* | *MEANING* |
| --- | --- |
| = | Equal to |
| > | Greater than |
| < | Less than |
| >= | Greater than or equal to |
| <= | Less than or equal to |
| <> | Not equal to |

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

Ans.> The “=” is an assignment operator is used to assign the value on the right to the variable on the left. The '==' operator checks whether the two given operands are equal or not. If so, it returns true. Otherwise it returns false

e.g.

5==5

Output:-

This will return true.

Q.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.> Block 1

if spam == 10:

print('eggs')

Block 2

if spam > 5:

print('bacon')

Block 3

else:

print('ham')

print('spam')

print('spam')

Q.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.>

spam = input ()

if spam == 1:

print('Hello')

elif spam == 2:

print('Howdy')

else:

print('Greetings!')

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

Ans.> You can press Ctrl + C .

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

ANS.>

|  |  |  |
| --- | --- | --- |
|  | **break** | **continue** |
|  | The 'break 'stop the continuation of the loop. | The 'continue' does not stop the continuation of loop and it stops the current. |

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

Ans.> range(10) gives output as range(0,10)

range(0,10) gives output as range from 0 till 9.

range(0,10,1) gives output as range from 0 to 10 with step size 1

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.> #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?

Ans.> This function can be called with spam. bacon().