

ASSIGNMENT - 2

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

→ The Two Values of Boolean Data Types Are –

1. True
2. False

→ We can write them using print statement and we can initialize a Boolean type of data to a variable and we can use that variable

Ex:- `print(True), a= True`

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

→ 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).

AND		
A	B	C
TRUE	TRUE	TRUE
TRUE	FALSE	FALSE
FALSE	TRUE	FALSE
FALSE	FALSE	FALSE

OR		
A	B	C
TRUE	TRUE	TRUE
TRUE	FALSE	TRUE
FALSE	TRUE	TRUE
FALSE	FALSE	FALSE

NOT	
A	B
A = TRUE	A NOT = 0
A = FALSE	A NOT = 1

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))

→ True

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

→ False

(not False) or (not True)

→ True

5. What are the six comparison operators?

→ The 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.

→ The Operator for Assignment Operation to is = .

→ The Operator for equal to is == .

→ We will use Assignment Operator (=) when we are Initializing or assigning some data to a Variable . And we equal to operator (==) when comparing the data with other data.

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')
```

BLOCK-1:-

```
    if spam == 10:
```

```
        print('eggs')
```

BLOCK-2:-

```
if spam > 5:  
    print('bacon')
```

BLOCK-3:-

```
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.

```
spam = 1  
  
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?

ctrl + c

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

“break” is used to terminate the execution of a loop based on certain condition and “continue” is used to continue the looping in certain conditions.

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

range(10) :-

It produces output from 0 to 9

range(0, 10) :-

It also Produces output from 0 to 9. But here the starting value is mentioned, whereas we mention the starting value as to 5, the output that it produces will be 5 to 9.

`range(0, 10, 1) :-`

It is same as Above but here the difference is we are mentioning the Difference between the output numbers. As it is mentioned as 1 here it will print the values from 0 – 9. Let's say we provide the difference as 2, the output will be as follows – 0, 2, 4, 6, 8.

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.

For Loop :-

```
for i in range(1,11):  
    print(i)
```

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`?

```
spam.bacon()
```