PYTHON: ASSIGNMENT 2

1.What are the two values of the Boolean data type? How do you write them?
SOLUTION- The two values of Boolean type are true and false. Write as- bool (value of any data type)

2. What are the three different types of Boolean operators?
SOLUTION- There are 3 types of Boolean operations: 1. AND Boolean operator | 2. NOT Boolean operator | 3. OR Boolean operator

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 evaluates).
SOLUTION-

1. AND

A	B	OUTPUT
0	0	0
1	0	0
0	1	0
1	1	1

2. NOT

A	OUTPUT
0	1
1	0

3. OR

A	B	OUTPUT
0	0	0
1	0	1
0	1	1
1	1	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)
SOLUTION-
(5 > 4) and (3 == 5): 0
not (5 > 4): 0
(5 > 4) or (3 == 5): 1
not ((5 > 4) or (3 == 5)): 0
(True and True) and (True == False): False
(not False) or (not True): True

5. What are the six comparison operators?
SOLUTION- The comparison operators are as follows:
1. Greater than > | Example: x > y
2. Less than < | Example: x < y
3. Equal to == | Example: x == y

4. Not equal to != | Example: x != y
5. Greater than equal to >= | Example: x >= y
6. Less than equal to <= | Example: x <= y

6. How do you tell the difference between the equal to and assignment operators? Describe a condition and when you would use one.
SOLUTION- While assigning a value we use the single equal to sign. Example: a = 10. But while using equal to condition we use double equal to sign. Example: if(a==b).

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")
The 1st block is 1st if statement, 2nd block is 2nd if statement and 3rd block is the else statement.

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 = 0
if spam == 1:
    print("Hello")
    if spam == 2:
        print("Howdy")
    else:
        print("Greetings!")
```

9.If your programme is stuck in an endless loop, what keys you'll press?
SOLUTION- CLRL +C

10. How can you tell the difference between break and continue?
SOLUTION- Both are used to skip the iteration of a loop but the difference is that the Break get out of that loop and skips the rest all iterations while Continue- It will skip that particular condition. It will not skip all the iterations.

11. In a for loop, what is the difference between range(10), range(0, 10), and range(0, 10, 1)?
SOLUTION- There is no difference between these three statements. The output for all these will be same which is 0,1,2,3,4,5,6,7,8,9.

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.
SOLUTION-

For Loop: While Loop:

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

1
2
3
4
5
6
7
8
9
10
```

```
i=0
while (i <10):
    i=i+1
    print(i)

1
2
3
4
5
6
7
8
9
10
```

13. If you had a function named bacon() inside a module named spam, how would you call it after importing spam?
SOLUTION- Then we can call like: spam.bacon()