

Python Basics

Assignment - 2

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

Ans : True and False are the values of Boolean data type. It is used to represent the result of an expression.

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

Ans : And(&& or “and”) , Or(// or “or”) , Not(not) are three types of boolean operators.

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).

Ans :

A	Not A	Return value
True	not(True)	False
False	not(False)	True

A	B	A or B
True	True	True
True	False	True
False	False	False
False	True	True

A	B	A and B
True	True	True
True	False	False
False	False	False
False	True	False

4. What are the values of the following expressions?

Ans : (5 > 4) and (3 == 5) → False

not (5 > 4) → **False**
(5 > 4) or (3 == 5) → **True**
not ((5 > 4) or (3 == 5)) → **False**
(True and True) and (True == False) → **False**
(not False) or (not True) → **True**

5. What are the six comparison operators?

Ans : comparison operators - operators that compare values and return true or false. They are > , < , >= , <= , == , and != .

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 used to assign a value to the variable. Equal to (==) checks whether the two given operands are equal or not, and it returns true or false.

Ex:

```
int main()
{
    int a = 10, b = 4;

    // equal to
    if (a == b)
        printf("a is equal to b\n");
    else
        printf("a and b are not equal\n");

    return 0;
}
```

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')

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("enter a value: ")
 if spam == 1:
 print("hello")
 elif spam == 2:
 print("how r u")
 else:
 print("Greetings")

9.If your program is stuck in an endless loop, what key you'll press?

Ans : we can press Ctrl + C to break the loop

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

Ans : break statement terminates the loop, simply it exit out of the loop and control flows to the statement after the body of the loop.
Continue terminates the current iteration and continues with the next iteration.

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

Ans : range(10) values are taken from 1 - 9
 range(0, 10) start value=0 , stop value=10 values are from 0 - 9
 range(0, 10, 1) step=1 , start value=0, stop value=10
 Values are 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.

Ans : using for loop: for num in range(1,11):
 print(num)

Using while loop: **input = 1**

```
while input <= 10:  
    print(input)  
    input += 1
```

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

Ans : The function can be called with `spam.bacon()`