

Assignment – 2

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

The two values in Boolean data type are 0 and 1.

We can represent them 0 as False and 1 as True.

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

The three different Boolean operators are

AND, OR, NOT

3. Make a list of each Boolean operator truth tables (i.e. every possible combination of Boolean values for the operator and what it evaluate).

Truth Tables of Boolean operators:

AND:

a	b	a and b
0	0	0
0	1	0
1	0	0
1	1	1

OR:

a	b	a or b
0	0	0
0	1	1
1	0	1
1	1	1

NOT:

a	b
0	1
1	0

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)

(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?

The six comparison operators are:

== (equal to)

> (Greater than)

< (Lesser than)

>= (greater than equal to)

<= (lesser than equal to)

!= (Not equals to)

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

Difference between == (equal to) and = (assignment) operators:

== is used to compare two values if two values are true then it will print true or if not it will print false.

Ex. 5==5

True

5==8

False

= is used to assign a value to the variable.

Ex. a = 10

Here 10 is assigning to the variable a with the help of assignment operator.

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')
```

The three blocks in the code are:

First block

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

Second block

```
print('bacon')
```

Third block

```
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 = int(input())
```

```
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?

If my program is stuck at endless loop, I will press

Ctrl + c

Ctrl + z

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

The difference between break and continue

The break statement will terminate from the loop

and continue statement will skips a single iteration in a loop.

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

range (10): It will print from 0 to until 10 excluding 10 that means from 1 to 9.

range (0,10): 0 is the starting index and the 10 is the ending index it will print 1 to 9.

range (0,10,1): 0 is the starting index 10 is the ending index and 1 is the step that means it will print 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.

Using for loop:

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

using while loop:

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

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

```
spam.bacon()
```