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## Assignment 2

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

Ans : Two types are "true" and "false". In some language it resembles to values "1" and "0" sequentially mentioned

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

Ans : "And", "Or", "Not" are three 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 to).

Ans:

And=

True	True	1
True	False	0
False	False	0
False	True	0

Or =

True	True	1
True	False	1
False	False	0
False	True	1

Not =

True<1>	0
False<0>	1

4. What are the values of the following expressions?

`(5 > 4) and (3 == 5)` res: `false / '0'`

`not (5 > 4)` res: `false/"0"`

`(5 > 4) or (3 == 5)` res: `true/"1"`

`not ((5 > 4) or (3 == 5))` res: `false/"0"`

`(True and True) and (True == False)` res: `false/"0"`

`(not False) or (not True)` res: `true/"1"`

5. What are the six comparison operators?

Ans: 6 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.

Ans: `'='` is the assignment operator and `'=='` is the equal to operator

`let x = 1` means the value assigned in x is 1 but `if x == 1` then it is false

Let `x=10,y=20,z=20` then x is having value 10 but `x == y` is false and `y == z` is true.

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')
```

yellow: 1<sup>st</sup> block, green: 2<sup>nd</sup> block, Sky: 3<sup>rd</sup> block

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 = int(input("enter ur number :"))
```

```
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?

Ans: CTRL+C

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

Ans :

For break ex :

```

name = ['q','b','f','g','k']

for i in range(0,len(name)):

    if i == 3:

        break

    else :

        print(name[i])

```

output = q b f

For Continue ex:

```

name = ['q','b','f','g','k']

for i in range(0,len(name)):

    if i == 3:

        continue

    else :

        print(name[i])

```

output : q b f k

break : if cond is true it breaks the statement logic and returns to the start of the loop and ends execution there it self

continue: if cond is true then it skips the logical representation where the cond is true and continues excuting then after.

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

Ans : In for loop

1/Range(10) mean values [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]

```
a = []
```

```
for i in range(10):
```

```
    a.append(i)
```

2/ range(0,10) mean values [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]

```
a = []
```

```
for i in range(0,10):
```

```
    a.append(i)
```

3/ range(0,10,1) mean values [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]

```
a = []
```

```
for i in range(0,10,1):
```

```
    a.append(i)
```

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(0,11):
```

```
    print(i)
```

using While loop:

```
g = 1
```

```
while g < 11:
```

```
    print(g)
```

```
    g = g+1
```

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

Ans : bacon()