**Assignment 2**

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

**Ans:** True, False are the 2 values for Boolean datatype.

A=True

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

**Ans:** AND operator -> If condition 1 and condition 2 both are true it will output true e.g. 1*2>11 AND 5 >4 = True*

OR operator-> If either of condition 1 or condition 2 is True than the outcome is True 12>11 OR 23<122 = True

NOT operator -> If a condition results in True than not will result false. NOT 12 > 11= False

**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).**

**Ans:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **X** | **Y** | **X AND Y** | **X OR Y** | **NOT X** |
| 0 | 0 | 0 | 0 | 1 |
| 0 | 1 | 0 | 1 | 1 |
| 1 | 0 | 0 | 1 | 0 |
| 1 | 1 | 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)**

**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:**

1. *greater than (a > b) =* checks if the preceding data is greater than succeeding data.
2. *greater than equal to (a >= b) =* checks if the preceding is greater than or equal to the succeeding data.
3. *Less than (a < b)* = checks if the preceding data is less than the succeeding data.
4. *Less than equal to (a <= b) =* check if the preceding data is less than or equal to the succeeding data.
5. *Equals (a == b) =* checks if the preceding data is equal to the succeeding data.
6. *Not Equals (a != b)* = checks if the preceding data is not equal to the succeeding data or not.

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

**Ans:** equal to comparison operator is used using ‘**==**’, whereas assignment operator is triggered using “**=**”.

‘==’ is used for comparing to values ( e.g. 12==’12’).

Whereas ‘=’ is used to assign a value to a variable. (e.g., a=1233)

**9.If your programme is stuck in an endless loop, what keys you’ll press?**

**Ans:** Ctrl + C or command + c

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

**Ans:** break statement breaks you out of the block (a loop for that matter), whereas a *continue* statement skips all the succeeding statement in the block and continues onto the next iteration of the loop.

**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:**

spam = 0

if spam == 10:

# First block starts here

print(‘eggs’)

if spam > 5:

#This is the 2nd block

print(‘bacon’)

#2nd block ends here

else:

#3rd block starts here

print(‘ham’)

print(‘spam’)

print(‘spam’)

#3rd block ends here

# 1st block ends here.

**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()

switch(spam):

case 1:

print(‘Hello’)

break

case 2:

print(‘Howdy’)

break

default:

print(‘Greetings’)