**Assignment 2**

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

1. The 2 Boolean values are true (1) and false (0) and the correct syntax for them is “True” and” False” respectively.

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

1. The 3 types of Boolean logical operators are **AND**, **OR** & **NOT.**

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).

**AND** truth table

|  |  |  |
| --- | --- | --- |
| **a** | **b** | **Returns** |
| True | True | True |
| True | False | False |
| False | True | False |
| False | False | False |

**OR** truth table

|  |  |  |
| --- | --- | --- |
| **a** | **b** | **Returns** |
| True | True | True |
| True | False | True |
| False | True | True |
| False | False | False |

**NOT** truth table

|  |  |  |
| --- | --- | --- |
| **not** | **a** | **Returns** |
| not | True | False |
| not | False | True |

4. What are the values of the following expressions?

(5 > 4) and (3 == 5)

1. False

not (5 > 4)

1. False

(5 > 4) or (3 == 5)

1. True

not ((5 > 4) or (3 == 5))

1. False

(True and True) and (True == False)

1. False

(not False) or (not True)

1. True

5. What are the six comparison operators?

A) The 6 comparison operators are:

**<** (less than)

**>** (greater than)

**!=** (not equal to)

**<=** (less than or equal to)

**>=** (greater than or equal to)

**==** (equal to).

6. How do you tell the difference between the equal to and assignment operators? Describe a

condition and when you would use one.

* “= ” is an assignment operator used to assign values to variables.

a = 10

b = 20

* “== ” is a comparison operator used in conditional statements to check whether the expressions match or not.

eg: if (a == b):

print(“Both the amount matches”)

7. Identify the three blocks in this code:

spam = 0

if spam == 10:

print('eggs') 🡨 Indented Block 1

if spam > 5:

print('bacon') 🡨 Indented Block 2

else:

print('ham')

print('spam') 🡨 Indented Block 3

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 = 11

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?

A) To break the infinite loop, I will press “ctrl + C”.

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

A) The primary difference between the two is that if **break** is encountered in a code, it will exit the whole loop. While if **continue** is encountered then it exits the current iteration and moves to the next iteration in the loop.

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

A) Other than being syntactically different, all the three range(10), range(0, 10), and range(0, 10, 1) will generate the same output when used in a loop.

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.

A)

**for** loop:-

for i in range(10):

print(i+1)

**while** loop:-

i = 1

while i<=10:

print(i)

i += 1

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

importing spam?

1. from spam import bacon