**Assignment 2**

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

The Boolean data type is a data type that can have only two values: true or false.

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

There are three different types of Boolean operators: and, or, and not. These operators are used to perform logical operations on Boolean values.

1. **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).**

**AND Operator**

1. **True and True True**

True and False False

False and True False

False and False False

**OR Operator**

True and True True

True and False True

False and True True

False and False False

**Not Operator**

Not true False

Not false True

**4. What are the values of the following expressions?**

**(5 > 4) and (3 == 5) -> true and false = false**

**not (5 > 4) -> Not True**

**(5 > 4) or (3 == 5) true or false true**

**not ((5 > 4) or (3 == 5)) -> not( true or false) -> not true = false**

**(True and True) and (True == False) -> true and false = false**

**(not False) or (not True) true or false = true**

1. **What are the six comparison operators?**

**==**

**!=**

**>**

**<**

**>=**

**<=**

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

The equal to operator == is used to compare the values of two expressions and determine whether they are equal. It is not an assignment operator.

Example:

x = 5 y = 10 # (**the assignment operator**)

if x == y: # **(the equal to**)

print("x is equal to y")

else:

print("x is not equal to y")

**7. Identify the three blocks in this code:**

**spam = 0**

**if spam == 10:**

**Block 1**

**print(‘eggs’)**

**if spam == 5:**

**Block 2**

**print(‘bacon’)**

**else:**

**Block 3**

**print(‘ham’)**

**print(‘spam’)**

**print(‘spam’)**

1. **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.**
2. spam = int(input("Enter the number: "))
3. if spam ==1:
4. print("Hello")
5. elif spam ==2:
6. print("Howdy")
7. else:
8. print("Greeting!")

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

you can try pressing the CTRL + C keys to stop the program and exit the loop.

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

the break and continue statements are used to control the flow of a loop. They are often used in combination with if statements to perform certain actions based on certain conditions.

Here is an example of how you might use the break statement:

for i in range(10):

if i == 5:

break

print(i)

Here is an example of how you might use the continue statement:

for i in range(10):

if i % 2 == 0:

continue

print(i)

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

All the above mentioned will give the same answer.

**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.**

**For Loop**

for i in range(1,11):

  print(i)

**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?**