**Python Tasks – Day8**

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

**Ans:**

**The two values of the Boolean data type are true and false. They are written as such: True and False.**

1. **What are the three Boolean operators?**

**Ans:**

Python has three Boolean operators which are and , or , and not.

1. **Write out the truth tables of each Boolean operator (that is, every possible combination of Boolean values for the operator and what they evaluate to).**

**Ans:**

**the truth tables for each Boolean operator:**

**- AND operator:**

**```**

**A | B | A AND B**

**T | T | T**

**T | F | F**

**F | T | F**

**F | F | F**

**```**

**- OR operator:**

**```**

**A | B | A OR B**

**T | T | T**

**T | F | T**

**F | T | T**

**F | F | F**

**```**

**- NOT operator:**

**```**

**A | NOT A**

**T | F**

**F | T**

**```**

1. **What do the following expressions evaluate to?**

**(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) evaluates to False.**

**- not (5 > 4) evaluates to False.**

**- (5 > 4) or (3 == 5) evaluates to True.**

**- not ((5 > 4) or (3 == 5)) evaluates to False.**

**- (True and True) and (True == False) evaluates to False.**

**- (not False) or (not True) evaluates to True.**

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

**Ans:**

**The six comparison operators are:**

**- Greater than (>)**

**- Less than (<)**

**- Greater than or equal to (>=)**

**- Less than or equal to (<=)**

**- Equal to (==)**

**- Not equal to (!=)**

1. **What is the difference between the equal to operator and the assignment operator?**

**Ans:**

The assignment operator is used to assign the values to the variable. Equality Operator: The equality operator is used to compare the values of both the variables and the result is true or false.

1. **Explain what a condition is and where you would use one.**

**Ans:**

A condition in programming is the state of something in the program that’s true or false. [For example, when looking at the condition of a computer variable, you can use a conditional statement to evaluate the condition of the variable](https://www.computerhope.com/jargon/c/condition.htm)