1. If only one of the operant in AND operator is FALSE, the entire result is FALSE.

If only one of the operant in OR operator is True, the entire result is TRUE.

The result of the NOT operator would be opposite to the operant. i.e. if TRUE, then FALSE, otherwise, if FALSE, then TRUE.

1. Consider the below code. Write down what you think the expected output will be:

a = False

b = False

x = not(a)

y = not(b)

print(a or b)

print(x or y)

print(a or x)

print(x or b)

Ans: print(a or b) is FALSE

print(x or y) is TRUE

print(a or x) is TRUE

print(x or b) is TRUE

1. Consider the below code. Write down what you think the expected output will be:

a = False

b = False

x = not(a)

y = not(b)

print(a and b)

print(a and x)

print(y and b)

print(x and y)

Ans: print(a and b) is FALSE

print(x and y) is FALSE

print(y and b) is FALSE

print(x and y) is TRUE

1. Without referring back to the slides, write down the truth table for each of the three logical operators.

Truth table for

|  |  |  |
| --- | --- | --- |
| AND | OR | NOT |
| |  |  |  | | --- | --- | --- | | X | Y | Result | | T | T | T | | T | F | F | | F | T | F | | F | F | F | | |  |  |  | | --- | --- | --- | | X | Y | Result | | T | T | T | | T | F | T | | F | T | T | | F | F | F | | |  |  | | --- | --- | | X | NOT X | | T | F | | F | T | |

1. Please see the python solution.