General Assembly

LOGICAL OPERATORS AND BOOLEANS

Logical Operators and Booleans

Comparison and Equality Operators

Operator	Meaning	True expressions
===	Equality	(2 * 5) === 10
!==	Inequality	'10' !== 10
>	Greater than	20 > 10
>=	Greater than or equal to	'10' >= 10
<	Less than	10 < 30
<=	Less than or equal to	'10'<= 10

Undefined and Null

» When a variable is created but is not assigned a value, it will be evaluated as **undefined**.

» We can assign a variable the value **null** as a way to "reset" the value of a variable to "nothing."

Logical Operators

Below are the exact rules Boolean operators follow when dealing with non-Boolean input values.

> Logical operators

» NOT(**!**): If the value is *truthy*, return **false**; if the value is *falsey*, return **true**.

» OR (**||**): Return the first *truthy* value; if both values are *falsey*, return the last *falsey* value. OR is nicknamed the "default operator" (can you explain why?)

» AND (**&&**): Return the first *falsey* value; if both values are *truthy*, return the last *truthy* value. AND is nicknamed the "guard operator" (can you explain why?)

AND operator &&

Condition 1	Condition 2	Result
true	true	true
true	false	false
false	true	false
false	false	false

OR operator ||

Condition 1	Condition 2	Result
true	true	true
true	false	true
false	true	true
false	false	false

NOT operator !

Condition	Result
true	false
false	true

We can use parentheses to change the order of operations for logical operators, just like we do in mathematics.