Logic Gate	Symbol	Description	Boolean
AND		Output is at logic 1 when, and only when all its inputs are at logic 1,otherwise the output is at logic 0.	X = A•B
OR		Output is at logic 1 when one or more are at logic 1.If all inputs are at logic 0,output is at logic 0.	X = A+B
NAND		Output is at logic 0 when, and only when all its inputs are at logic 1, otherwise the output is at logic 1	X = A•B
NOR	→	Output is at logic 0 when one or more of its inputs are at logic 1. If all the inputs are at logic 0, the output is at logic 1.	X = A+B
XOR		Output is at logic 1 when one and Only one of its inputs is at logic 1. Otherwise is it logic 0.	X=A⊕B
XNOR		Output is at logic 0 when one and only one of its inputs is at logic1.Otherwise it is logic 1. Similar to XOR but inverted.	$X = A \oplus B$
NOT		Output is at logic 0 when its only input is at logic 1, and at logic 1 when its only input is at logic 0. That's why it is called and INVERTER	$X = \overline{A}$