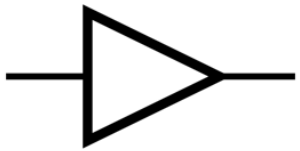
Logic Gates

Empower Digital Week

BUFFER

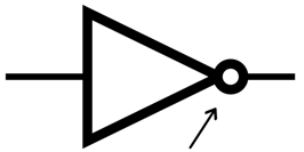
"Output = Input"



Input	Output
0	0
1	1

NOT

"Inverter"



"Opposite circle"

Input	Output
0	1
1	0

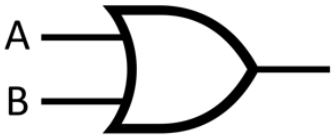
AND

"This and that"

A	B	Output
0	0	0
0	1	0
1	0	0
1	1	1

OR

"This or that"



A	B	Output
0	0	0
0	1	1
1	0	1
1	1	1

XOR

"This or that. Not both!"

(aka EXOR/ "Exclusive OR")

A	B	Output
0	0	0
0	1	1
1	0	1
1	1	0

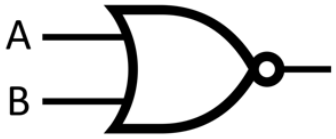
NAND

"NOT-AND"

A	B	Output
0	0	1
0	1	1
1	0	1
1	1	0

NOR

"NOT-OR"



A	B	Output
0	0	1
0	1	0
1	0	0
1	1	0

XNOR

"Exclusive NOT-OR"

(The inverse of an XOR gate)

A	B	Output
0	0	1
0	1	0
1	0	0
1	1	1