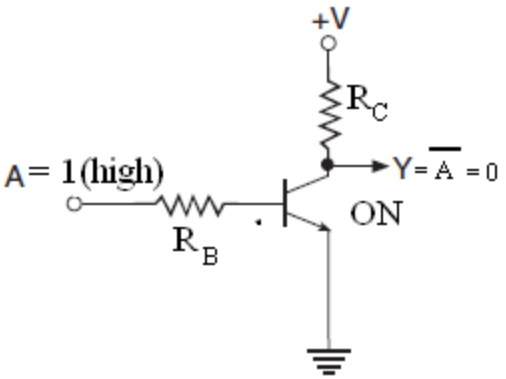
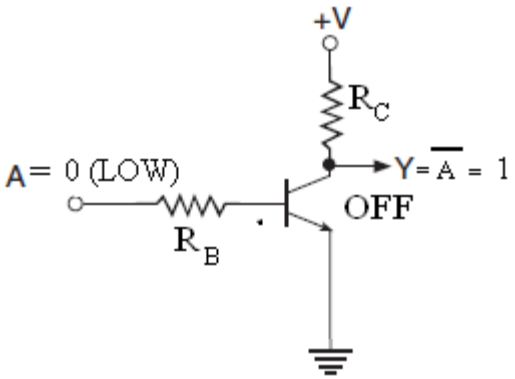
Resistor Transistor Logic(RTL)

- RTL is the earliest logic family but it has become absolute hour
- Combination of resistor and transistor to designed the logic family
- Invertors (NOT GATE)





Resistor Transistor Logic(RTL)

- For NOR Gate ;

A	B		O/P
0	0		1
0	1		0
1	0		0
1	1		0

- If A= B = 0 both transistor remain off. the current through Rc is zero so drop across it is zero. Then output Y= 1
- If A= 0 B = 1 Transistor Q1is OFF and Q2 is goes saturation. Then output Y= 0
- If A= 1 B = 0 Transistor Q1is saturation and Q2 is turned off . So the output voltage $V_{CE1(sat)}$. Then output Y= 0
- If A= B = 1 both transistor are saturation and The output voltage is equal to saturation voltage Y= 0