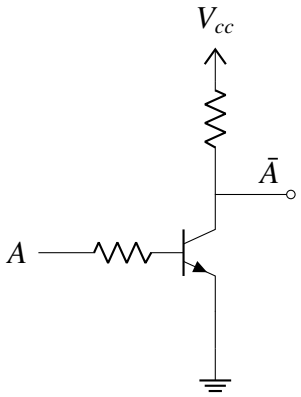
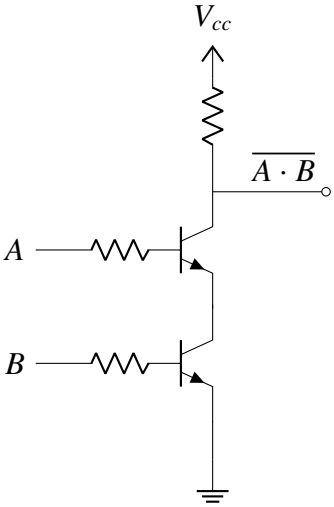
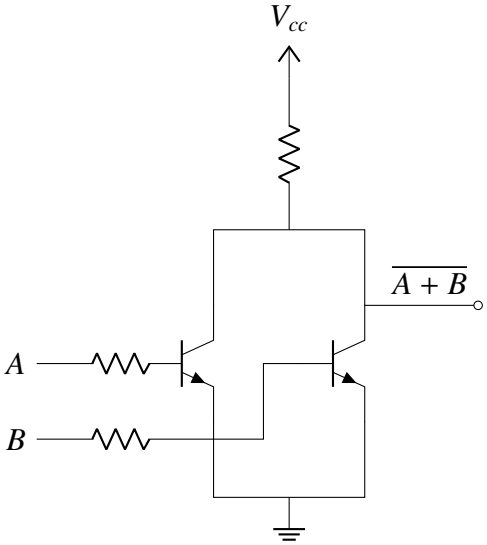
Resistor-Transistor-Logic (RTL) Gates



(a) RTL NOT Gate

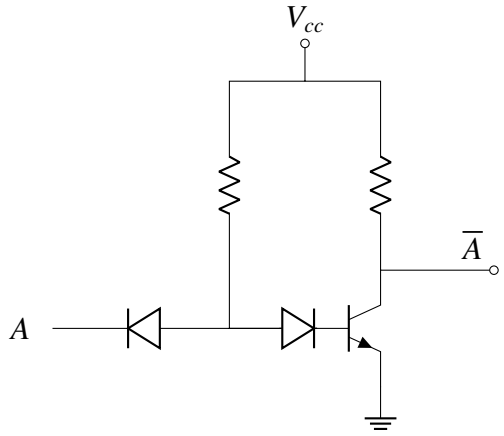


(b) RTL NAND Gate

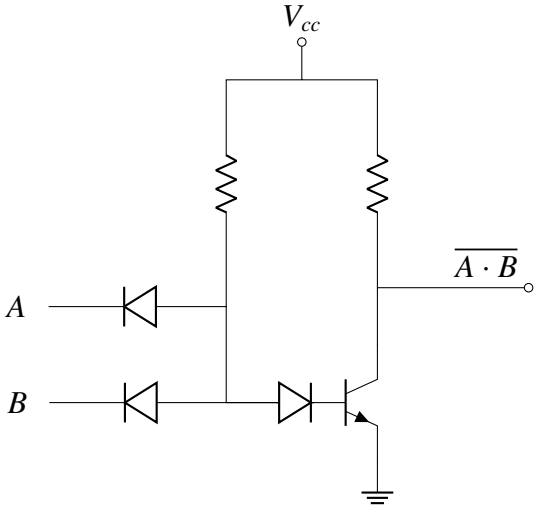


(c) RTL NOR Gate

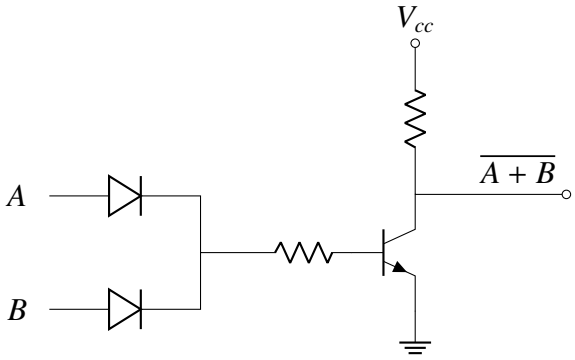
Diode-Transistor-Logic (DTL) Gates



(a) DTL NOT Gate

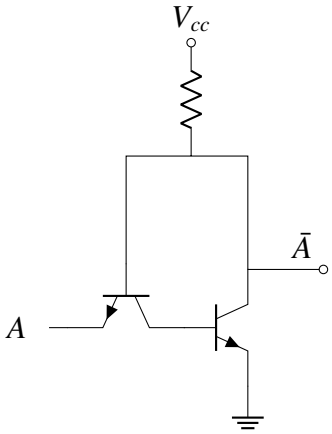


(b) DTL NAND Gate

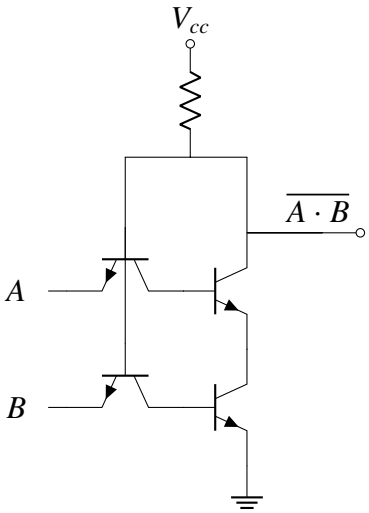


(c) DTL NOR Gate

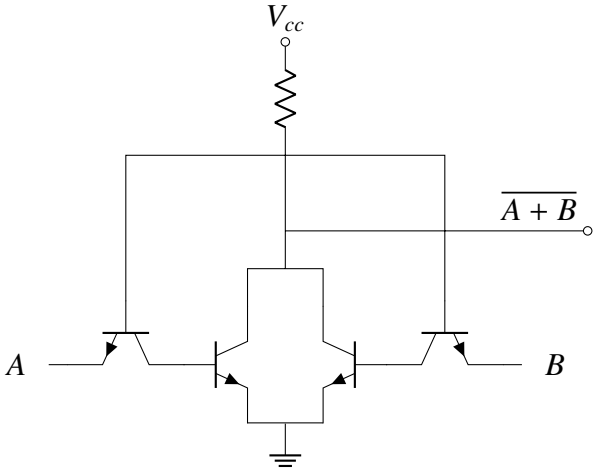
Transistor-Transistor-Logic (TTL) Gates



(a) TTL NOT Gate

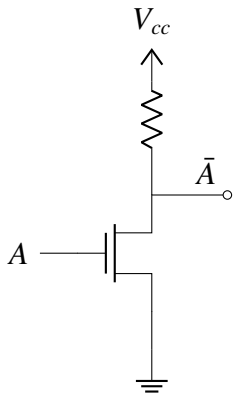


(b) TTL NAND Gate

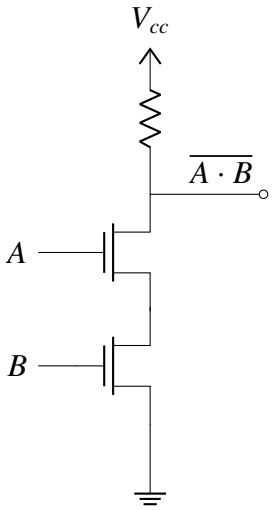


(c) TTL NOR Gate

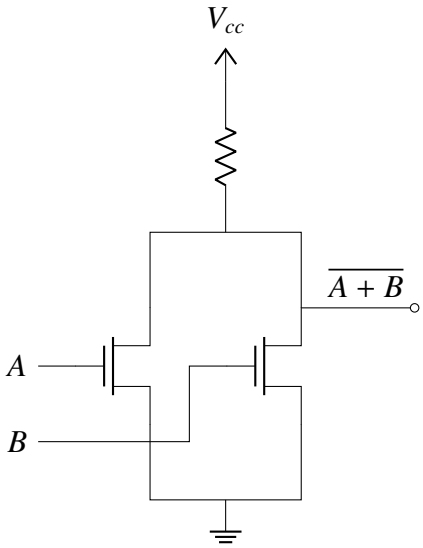
NMOS Gates



(a) NMOS NOT Gate



(b) NMOS NAND Gate



(c) NMOS NOR Gate

Why NMOS technology is prefered over the PMOS?

The electrons, the majority charge carriers in the NMOS, have a much higher mobility than those of the holes, which form the majority charge carriers in PMOS technology.