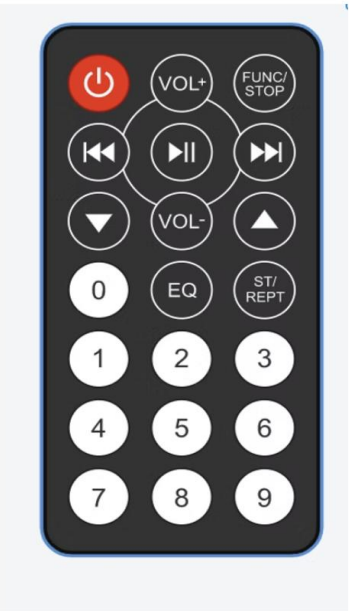
#6: Controlling LEDs using IR Remote and Arduino UNO on TinkerCAD

Components Required :

Arduino UNO

Breadboard

IR Remote :

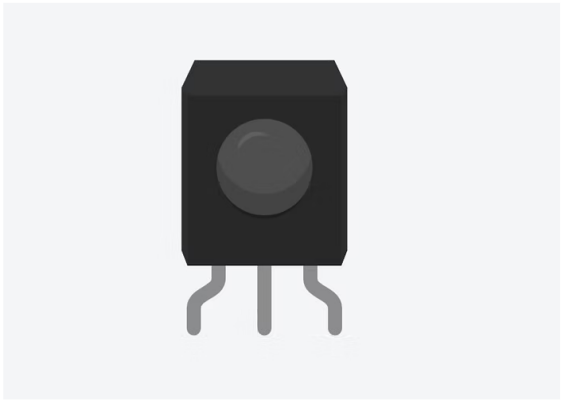


IR Remote

IR (InfraRed) remotes are a handheld wireless device to operate other electronic devices. #IR remotes act as a transmitter that carries signals from remote to the devices it controls. It emits lights in an infrared range that corresponds to specific commands, such as power on, volume

up, etc. The controlled device acts as a receiver. It decodes the infrared pulses of light and executes the command.

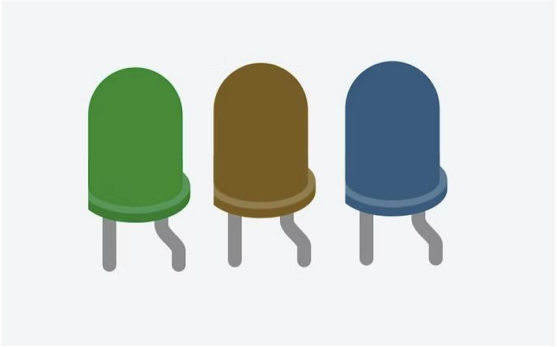
IR Sensors :



IR Sensors

IR (InfraRed) Sensors refers to an electronic device that measures and detects Infrared Radiations.

LEDs :



LEDs

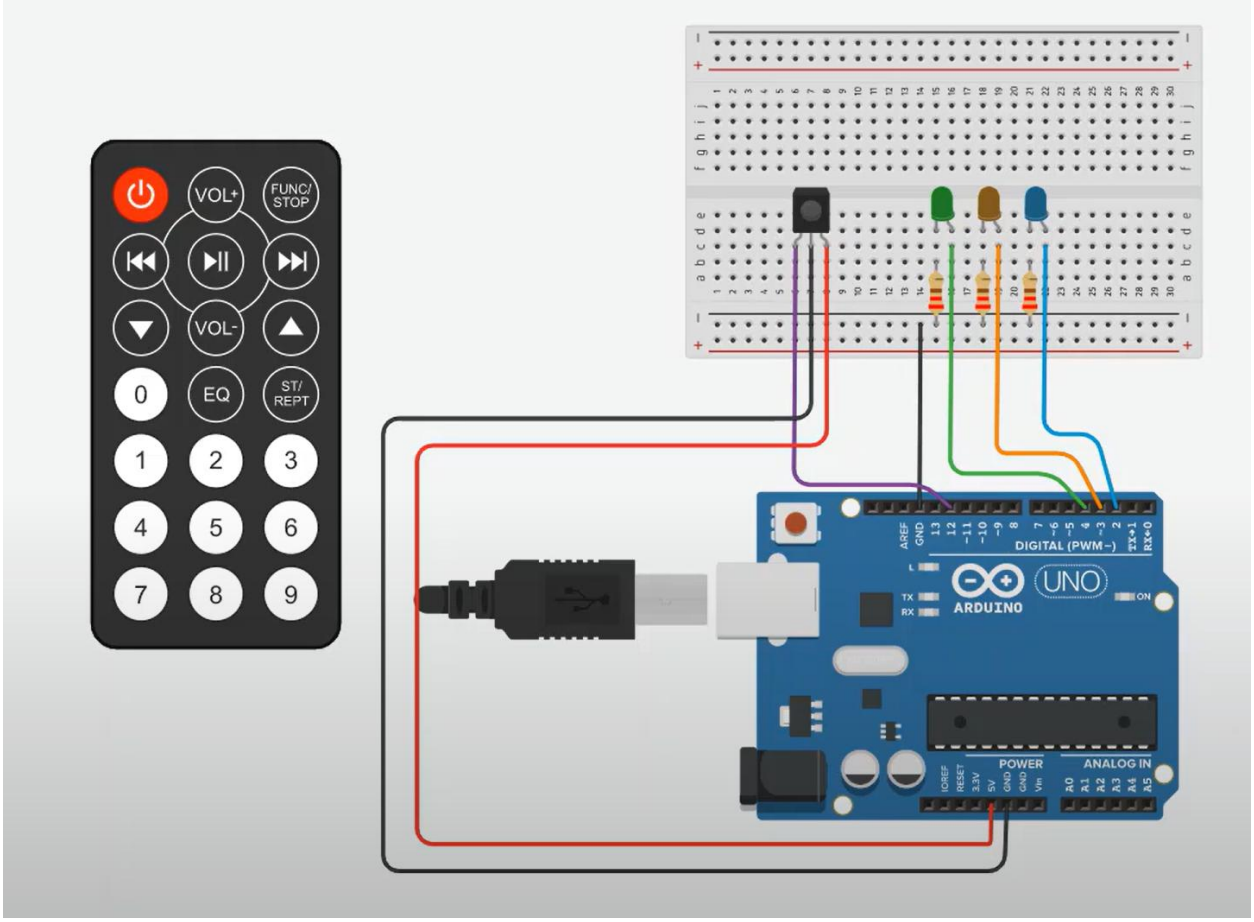
#LEDs (Light Emitting Diodes) are semiconductor devices that emit light whenever current flows through them. It consists of two leads - Cathode and Anode. Cathode lead is smaller as compared to the anode.

Resistors

CKT configurations:

Steps :

1. Anodes of the #LEDs are connected to pin 2, pin3, and pin4 of the Arduino UNO board respectively.
2. Cathodes of the LEDs are connected to a 220-ohm resistor which is further connected to the ground of the breadboard.
3. GND of the IR sensor (middle terminal) is connected to the ground of #Arduino UNO.
4. The power (third terminal) of the IR #Sensor is connected to the positive power supply (+5V) of the Arduino UNO board.
5. The output (first terminal) of the IR Sensor is connected to Pin12 of the Arduino board.
6. GND pin of the Arduino board is connected to the GND of the breadboard.



Code :

https://github.com/sami-118/tinker-cad-project.git