Connecting LEDs and an IR Sensor to Arduino UNO

Follow these steps to connect the **LEDs** and **IR sensor** to the **Arduino UNO** using a **breadboard**:

1. **LED Connections:**
    - The **anodes** of three **LEDs** (Blue, Orange, and Green) are connected to digital pins **2, 3, and 4** of the Arduino, respectively.
    - The **cathodes** are connected to **220-ohm resistors**, which are then linked to the **GND rail** of the breadboard.
2. **IR Sensor Connections:**
    - The **GND pin** (middle terminal) of the **IR sensor** is connected to the **GND** of the Arduino.
    - The **VCC pin** (third terminal) of the sensor is connected to the **5V** pin of the Arduino to provide power.
    - The **output pin** (first terminal) of the sensor is connected to **digital pin 12** of the Arduino.
3. **Power and Ground:**
    - The **GND pin** of the Arduino is also connected to the **GND rail** on the breadboard to establish a common ground.

Functionality and Simulation

Once all connections are completed, write and upload the code in **TinkerCAD**, then simulate the circuit. The **IR Remote** transmits **infrared**

signals, which are received and decoded by the **IR sensor** to execute commands.

- **Blue LED:** Turns **ON** with **Button 1** and **OFF** with **Button 2**.
- **Orange LED:** Turns **ON** with **Button 3** and **OFF** with **Button 4**.
- **Green LED:** Turns **ON** with **Button 5** and **OFF** with **Button 6**.