Components Used for making the IoT Based System

1. Colour Sensor (TCS230 TCS3200): Utilized for detecting colour changes in silica gel before and after moisture absorption. Commonly used in colour sorting and recognition applications.

2. Arduino Uno: An open-source microcontroller board employed for programming in embedded C, facilitating data processing and control functions.

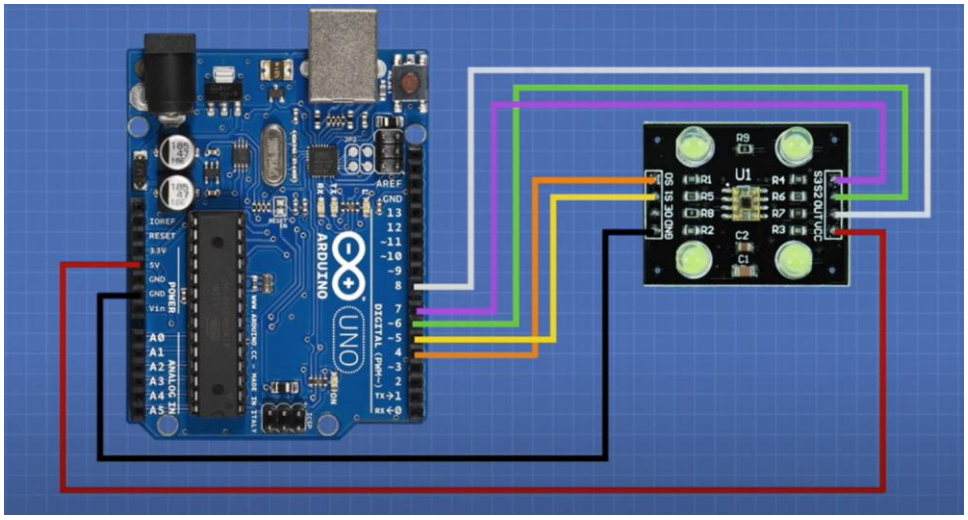
3. LoRa (SX1278): A low-power, long-range wireless communication technology designed for IoT applications, enabling data transmission over extended distances without the need for the internet.

4. NODE MCU: The NodeMCU is a low-cost open-source IoT (Internet of Things) platform based on the ESP8266 Wi-Fi module. It is designed to enable easy development and deployment of IoT applications, making it a popular choice for hobbyists, makers, and professionals working on IoT projects.

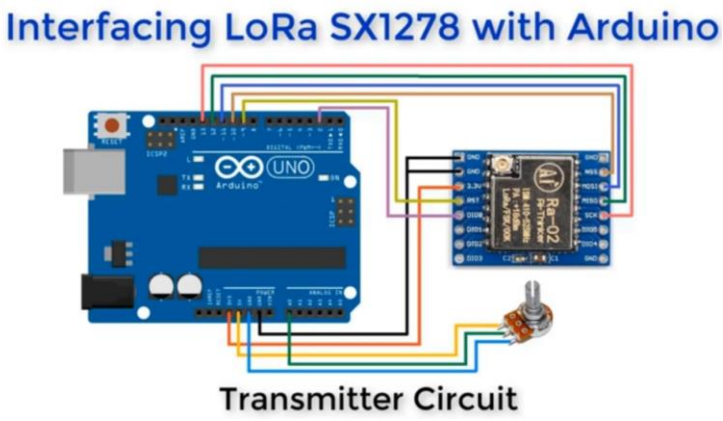
Links to Purchase the above products

- Colour Sensor (TCS230 TCS3200): https://amzn.eu/d/2LgbCim
- Arduino Uno: https://amzn.eu/d/5wXRro2
- LoRa (SX1278): https://robu.in/product/sx1278-lora-series-ra-02-spread-spectrum-wireless-module-2/
- NODE MCU: https://amzn.eu/d/48MP912
- Jumper Wires: https://amzn.eu/d/h9cMcdL

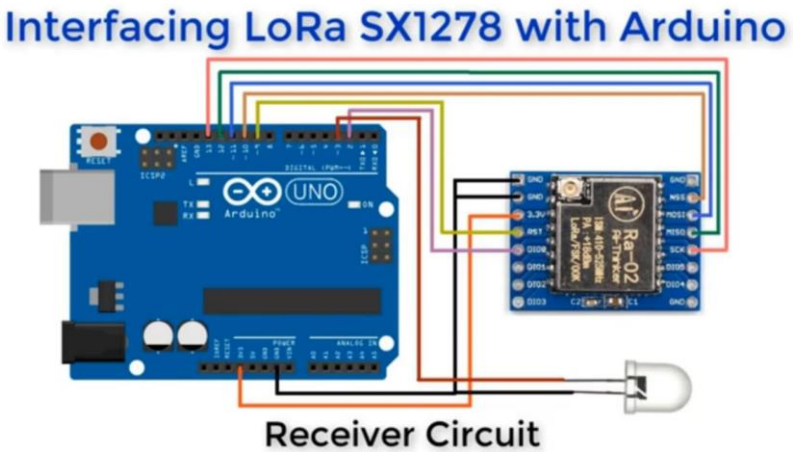
Connections for reference



Colour sensor to Arduino connections



LoRa transmitter to Arduino connections



LoRa receiver to Arduino connections