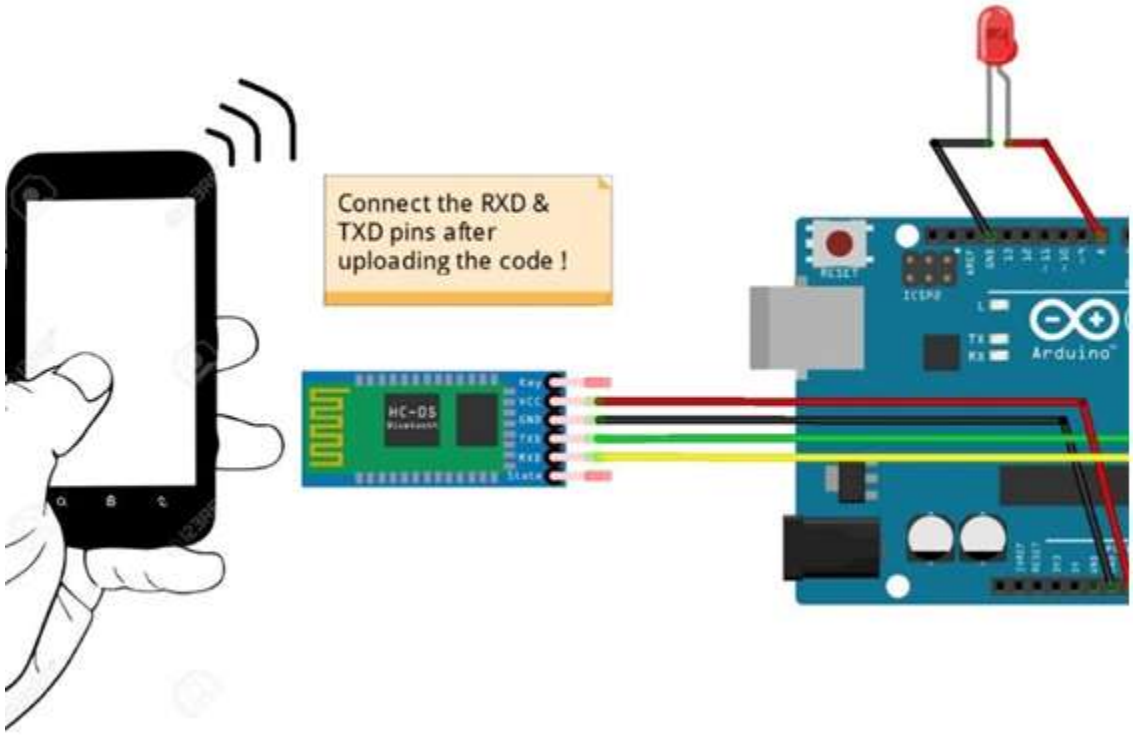
LED Controlling using Bluetooth



About this project

- In this project, we are showing you how to setup Bluetooth communication between Arduino and HC-06 (slave device).
- We will build simple circuit based on one LED with resistor and HC-06 connected to Arduino UNO.
- As the app used for communication between these two devices we will use app called: **Smart Bluetooth - Arduino Bluetooth Serial**

Working of Project

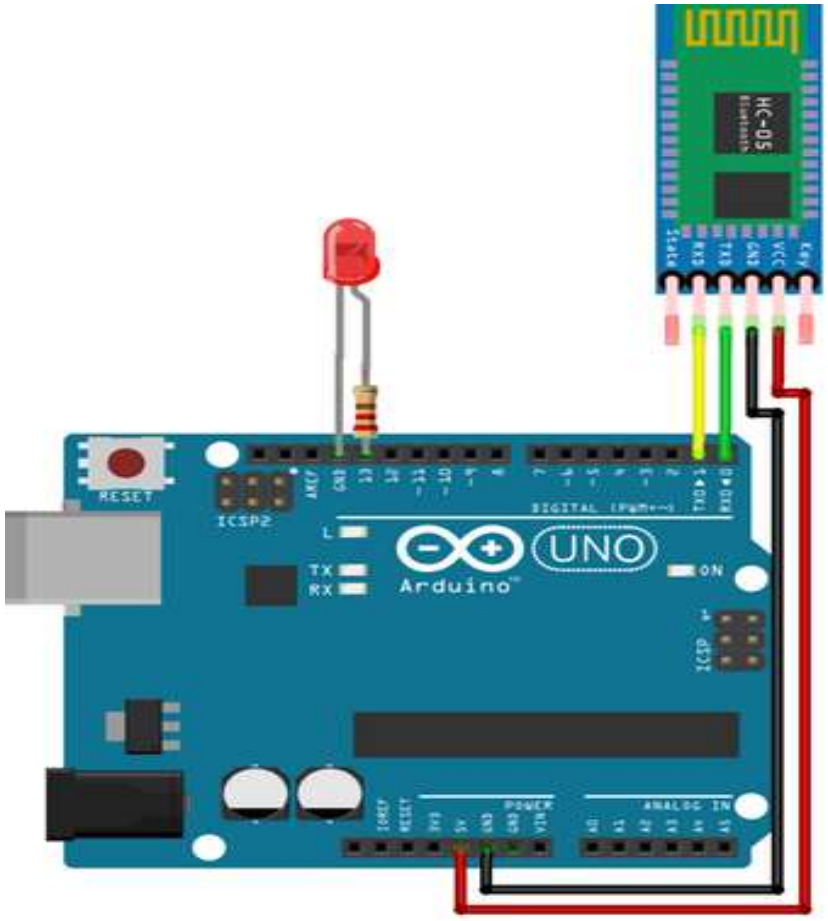
- HC 05/06 works on serial communication. Here the android app is designed sending serial data to the Bluetooth module when certain button is pressed.
- The Bluetooth module at other end receive the data and send to Arduino through the TX pin of Bluetooth module(RX pin of Arduino).
- The Code fed to Arduino check the received data and compares.
- If received data is 1 the LED turns on turns OFF when received data is 0.

Note: Don't Connect RX to RX and TX to TX of Bluetooth to Arduino you will receive no data , here TX means Transmit and RX means Receive.

Components Required

- Arduino board
- Breadboard
- Bluetooth module/sensor – HC05
- Couple of jumpers wires
- LED
- An ANDROID phone [not in kit]

Connection Diagram



Connections :-

Arduino Pins		Bluetooth Pins
RX (Pin 0)	———->	TX
TX (Pin 1)	———->	RX
5V	———->	VCC
GND	———->	GND

Connect a LED negative to GND of Arduino and positive to pin 13 with a resistance valued between 220Ω – 1KΩ.

Steps to Connect with Android Apk.

- Download: https://play.google.com/store/apps/details?id=com.kopunectomas.smartbluetooth
- Open the app, slide through the intro, hit SEARCH button and search for nearby devices.
- When your device is found, select it by clicking on it.
- Select preferred theme (dark or light) and hold the button you selected.
- Wait for the connection, if it fails, try to reconnect.
- After successful connection, tap on the big led in the first tab (led) and check the LED connected to your Arduino if it blinks.

Project Link : https://youtu.be/-vK_pKBSHbE