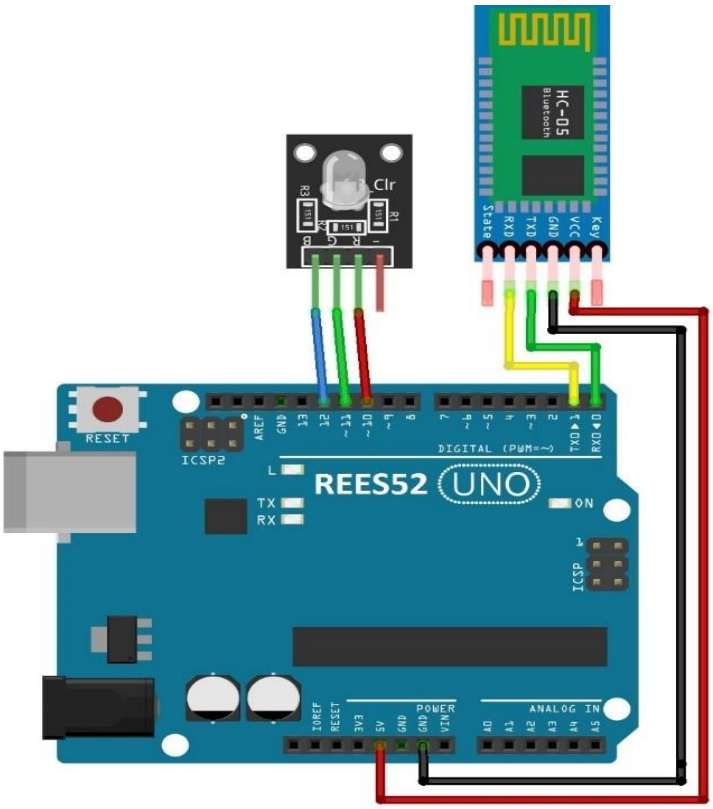

[CONTROL AN LED WITH SMART PHONE]

[Experiment 4]

ABSTRACT

The android app is designed sending serial data to the Bluetooth module when certain button is pressed.

Ritul Singh

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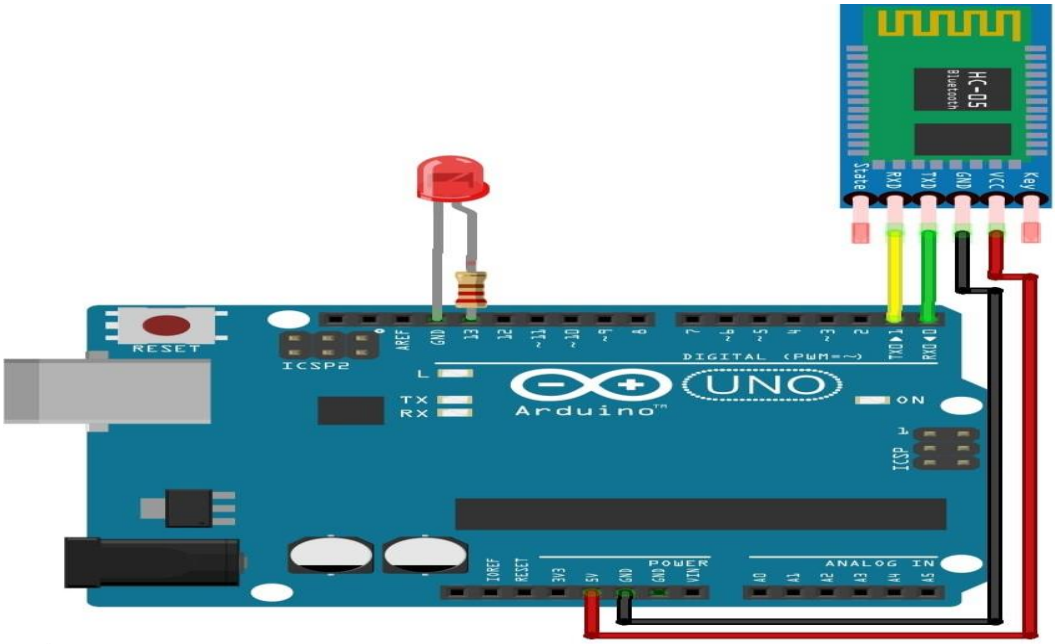
Stream: CSE(G&G) GROUP: A
University: CHANDIGARH UNIVERSITY

Experiment: - 4 (Smart Phone)

Circuit Diagram:



Theory:

CONCEPT USED:

I. The android app is designed sending serial data to the Bluetooth module when certain button is pressed.

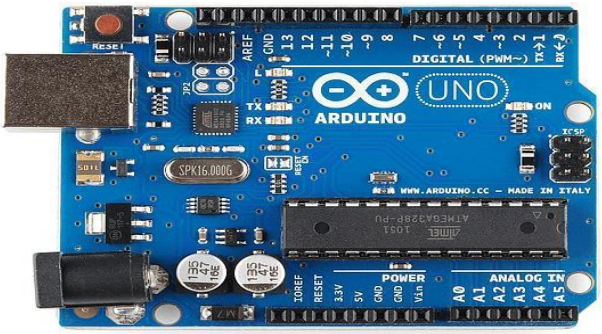
II. The Bluetooth module at other end receives the data and send to Arduino through the TX pin of Bluetooth module (RX pin of Arduino).

III. The Code fed to Arduino checks the received data and compares.

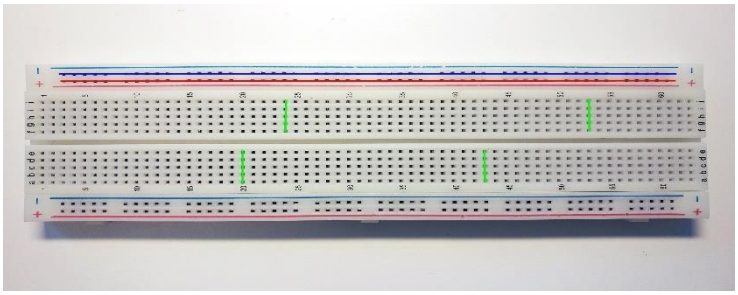
IV. If received data is 1 the LED turns on turns OFF when received data is 0.

Hardware Required

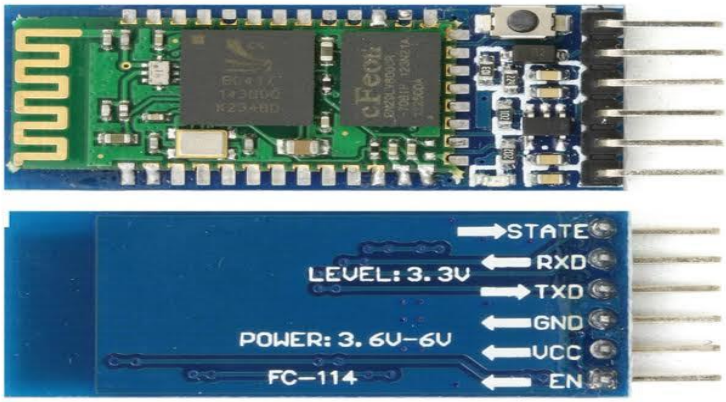
I. Arduino



II. Breadboard



III. Bluetooth



LEARNING & OBSERVATION:

I. How to control Arduino and its coding.
II. Controlling of LED through Bluetooth.
III. Relation between software and hardware.
IV. Connect Arduino to smartphone Wirelessly.

PROBLEMS & TROUBLESHOOTING:

I. To select the right port and type of Arduino.
II. To check the loose connections.
III. To check the connections according to the codes.
IV. To check the continuity of the circuit.
V. To check the flow of current in the circuit.
VI. Errors in code.

PRECAUTIONS:

The problems faced by me while doing this task are:

I. Handle tools carefully
II. Remove Bluetooth module Tx Rx connection before uploading the program.
III. Do not connect Arduino till the circuit is complete.
IV. Do not connect LEDs without a variable resistor.
V. Appropriate Bluetooth module to be used.

LEARNING OUTCOMES:

I. How the waves are sent and received by sensor when object is detected.
II. How to make connections between Arduino and Bluetooth device using Breadboard.
III. Connect Arduino to phone wirelessly.

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