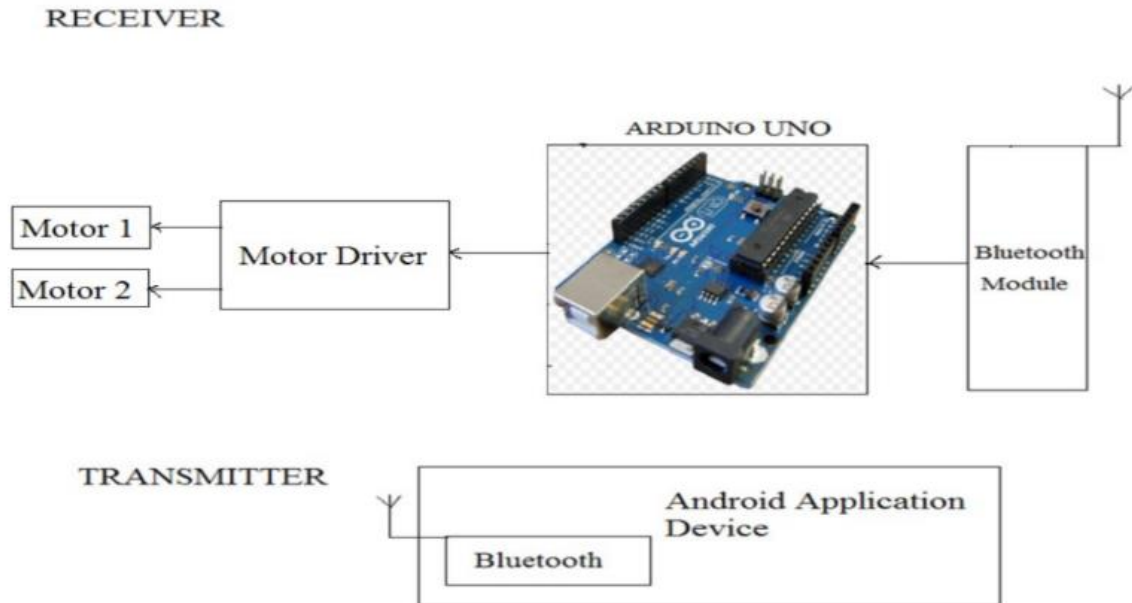# Exp. 4 Smart Phone

## Block Diagram:

RECEIVER



## Theory:
### Concept Used:

The Arduino Bluetooth module at the other end receives the data and sends it to the Arduino through the TX pin of the Bluetooth module (connected to RX pin of Arduino). The code uploaded to the Arduino checks the received data and compares it. If the received data is 1, the LED turns ON.

### Learning & Observations:

 Arduino Pins | Bluetooth Pins

RX (Pin 0) ———> TX

TX (Pin 1) ———> RX

5V ———> VCC

GND ———> GND

We learned how to use the HC-05 module for controlling Arduino via Bluetooth communication.

## Problems & Troubleshooting :

1. Some errors in the circuit like connection of wires to the wrong ports were to be corrected in order to attain a working circuit.

2. Errors in the code for pin connections occurred that were resolved after some corrections.

## Precautions:

• Check every connection twice.

• Grounds should be connected, unless you know you want them separated.

• Don't plug in an LED without a current limiting resistor.

• Don't plug it into unknown circuit.

## Learning Outcomes:

• Familiar with Arduino environment and its applications.

• Getting familiar with the working of light sensor.

• Able to Design Smart systems applications.