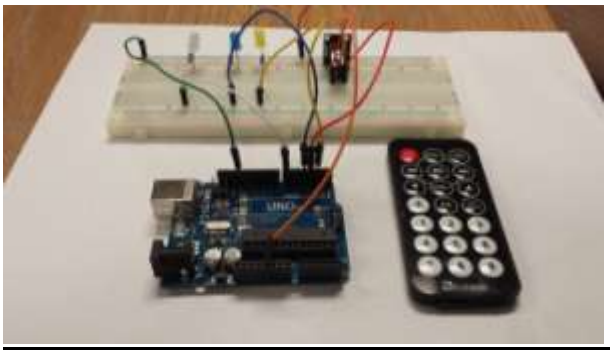
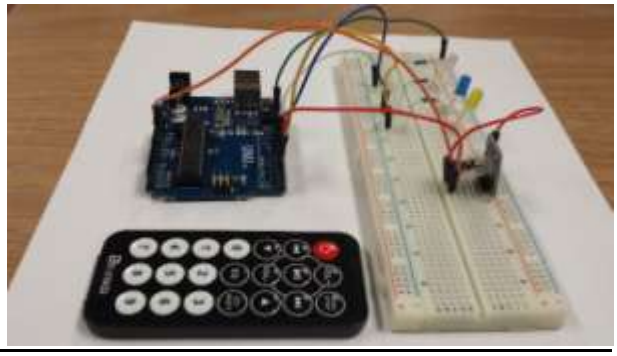
IR REMOTE CONTROLLED LED LIGHTS

COMPONENTS:

1. Arduino Uno
2. Breadboard
3. Three LED Lights with 330ohm resistor each
4. IR Receiver
5. IR Remote
6. Jumper Wires

SETUP:





STEPS:

1. Connect two jumper wires from the GND and 5V pins on the Arduino to the Negative and Positive Rail pins on the Breadboard respectively.
2. Insert the three LEDs onto the Breadboard with the shorter leg in the Negative Rail of the breadboard.
3. Insert three 330 ohm resistors in-line with the positive legs of the LEDs.
4. Connect the end of each resistor to Digital Pins 2, 3, 4 on the Arduino using jumper wires
5. Insert the IR Receiver onto the Breadboard.

6. Connect the negative (-) pin of the Receiver to the negative Rail of the Breadboard using a jumper wire. Connect the positive (+) pin of the Receiver to the positive rail of the Breadboard using a jumper wire. Connect the signal(S) pin of the Receiver to Digital Pin 7 on the Arduino.

7. This completes the wiring. Upload the Code below onto your Arduino.

8. If the wiring id done well, Pressing #s 1, 2, 3 on the Remote will turn the LEDs ON, and pressing the same numbers again will turn OFF the LEDs.

CODE:

```
#include <IRremote.h>


int RECV_PIN = 7; // the pin where you connect the output pin of TSOP4838
int led1 = 2;
int led2 = 3;
int led3 = 4;
int itsONled[] = {0,0,0,0};
/* the initial state of LEDs is OFF (zero)
the first zero must remain zero but you can
change the others to 1's if you want a certain
led to light when the board is powered */
#define code1  0xFF30CF // code received from button 1
#define code2  0xFF18E7  // code received from button 2
#define code3  0xFF7A85  // code received from button 3


IRrecv irrecv(RECV_PIN);


decode_results results;


void setup()
{
  Serial.begin(9600);   // you can comment this line
```

```
  irrecv.enableIRIn();  // Start the receiver
  pinMode(led1, OUTPUT);
  pinMode(led2, OUTPUT);
  pinMode(led3, OUTPUT);
}

void loop() {
  if (irrecv.decode(&results)) {
    unsigned int value = results.value;
    switch(value) {
      case code1:
        if(itsONled[1] == 1) {       // if first led is on then
          digitalWrite(led1, LOW);   // turn it off when button is pressed
          itsONled[1] = 0;           // and set its state as off
        } else {                     // else if first led is off
           digitalWrite(led1, HIGH); // turn it on when the button is pressed
           itsONled[1] = 1;          // and set its state as on
        }
         break;
      case code2:
        if(itsONled[2] == 1) {
          digitalWrite(led2, LOW);
          itsONled[2] = 0;
        } else {
           digitalWrite(led2, HIGH);
           itsONled[2] = 1;
        }
         break;
      case code3:
```

```
        if(itsONled[3] == 1) {
          digitalWrite(led3, LOW);
          itsONled[3] = 0;
        } else {
           digitalWrite(led3, HIGH);
           itsONled[3] = 1;
        }
        break;
    }
    Serial.println(value); // you can comment this line
    irrecv.resume(); // Receive the next value
  }
}
```