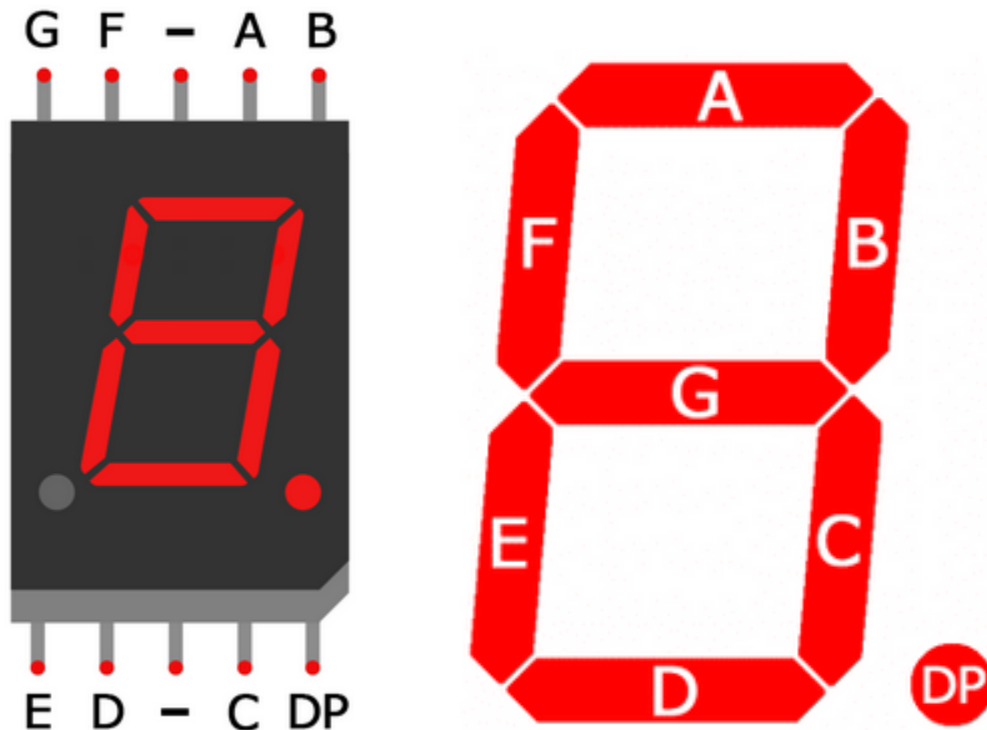


Lab 5 - Remote Control

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I set up the pin 2 as an input for the Infra-red Receiver, and configured the pins 4 to 11 to correspond to the segments A - G and the Decimal Point (DP) as can be seen in the diagrams below.



Code

```
#include <IRremote.h>

#define BUT_0 0xFF6897 // Defining IR number button codes
#define BUT_1 0xFF30CF
#define BUT_2 0xFF18E7
#define BUT_3 0xFF7A85
#define BUT_4 0xFF10EF
#define BUT_5 0xFF38C7
#define BUT_6 0xFF5AA5
#define BUT_7 0xFF42BD
#define BUT_8 0xFF4AB5
#define BUT_9 0xFF52AD
```

```

int RECV_PIN = 2;
IRrecv irrecv(RECV_PIN);
decode_results results;

void setup()
{
  Serial.begin(9600);
  irrecv.enableIRIn(); // Start the receiver
  irrecv.blink13(true); // Set inbuilt LED to blink when the IR receives a signal
  pinMode(4, OUTPUT); // Configure 7-segment pins to output state
  pinMode(5, OUTPUT);
  pinMode(6, OUTPUT);
  pinMode(7, OUTPUT);
  pinMode(8, OUTPUT);
  pinMode(9, OUTPUT);
  pinMode(10, OUTPUT);
  pinMode(11, OUTPUT);
}

void writeCode(int code){ // Take in a button code and pass corresponding 7-segment byte to print7seg()
through switch statement
  switch(code){
    case BUT_0: {
      Serial.println("0");
      print7seg(B11111100);
      break;
    }
    case BUT_1: {
      Serial.println("1");
      print7seg(B01100000);
      break;
    }
    case BUT_2: {
      Serial.println("2");
      print7seg(B11011010);
      break;
    }
    case BUT_3: {
      Serial.println("3");
      print7seg(B11110010);
      break;
    }
    case BUT_4: {
      Serial.println("4");
      print7seg(B01100110);
      break;
    }
    case BUT_5: {
      Serial.println("5");
      print7seg(B10110110);
      break;
    }
    case BUT_6: {
      Serial.println("6");
      print7seg(B10111110);
      break;
    }
    case BUT_7: {

```

```

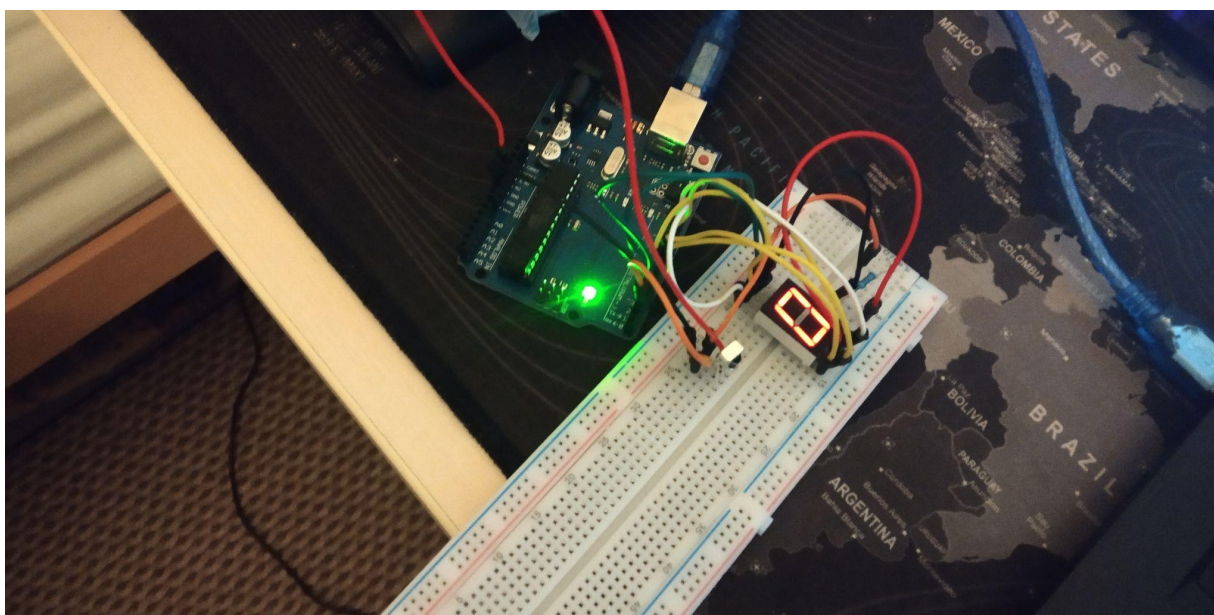
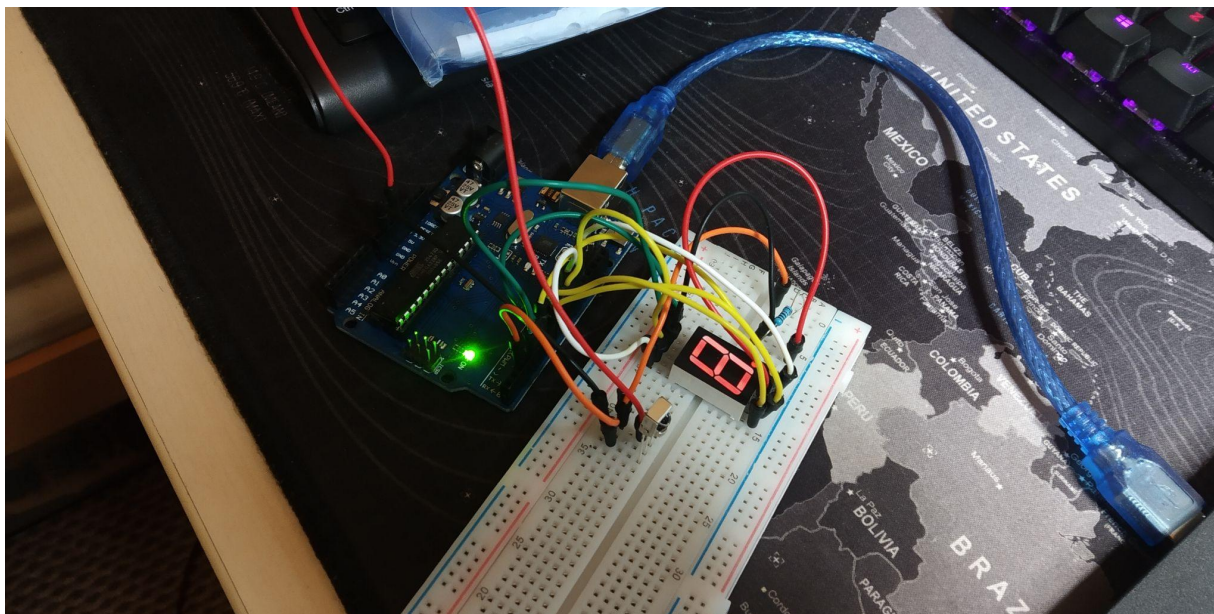
        Serial.println("7");
        print7seg(B11100000);
        break;
    }
    case BUT_8: {
        Serial.println("8");
        print7seg(B11111110);
        break;
    }
    case BUT_9: {
        Serial.println("9");
        print7seg(B11110110);
        break;
    }
    default :Serial.println("unknown");
}
}

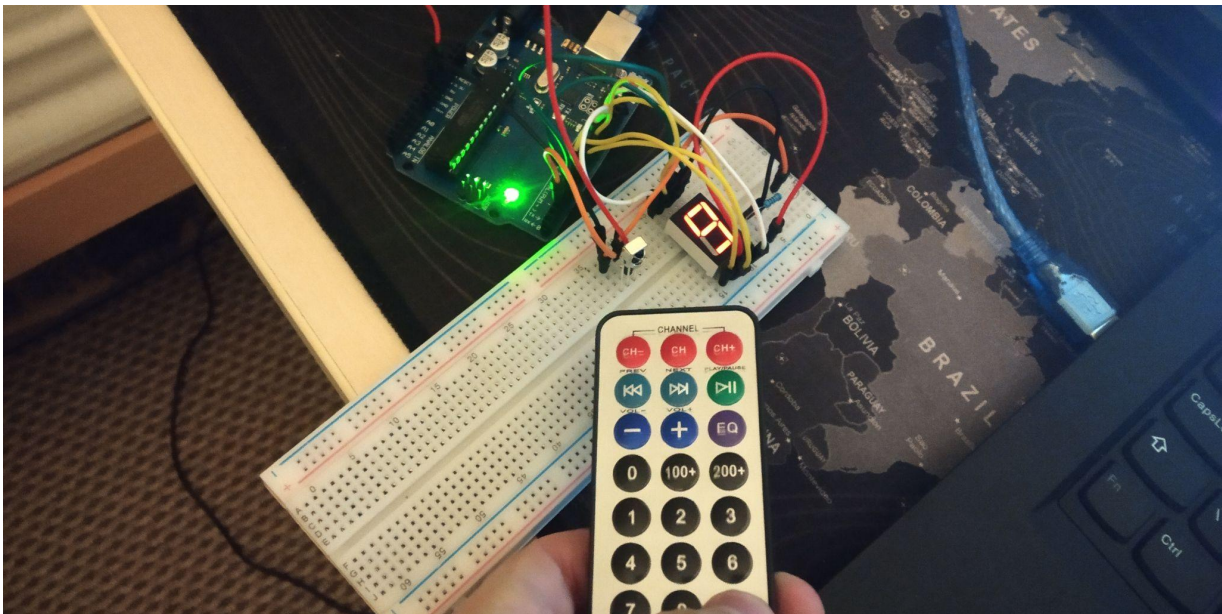
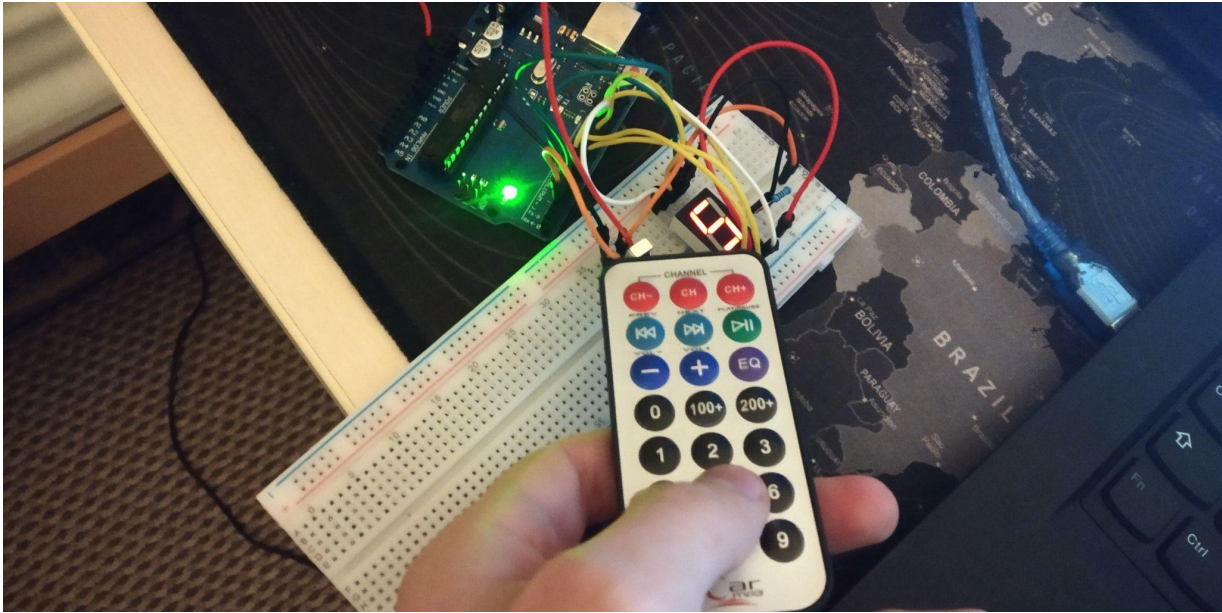
void print7seg(int pins){// Loops through bits to decide whether to light each segment (from right to
left, hence decreasing for loop)
    for(int i = 11; i > 3; i--){
        if(1 & pins){
            digitalWrite(i, LOW);
        }
        else{
            digitalWrite(i, HIGH);
        }
        pins = pins >> 1;
    }
}

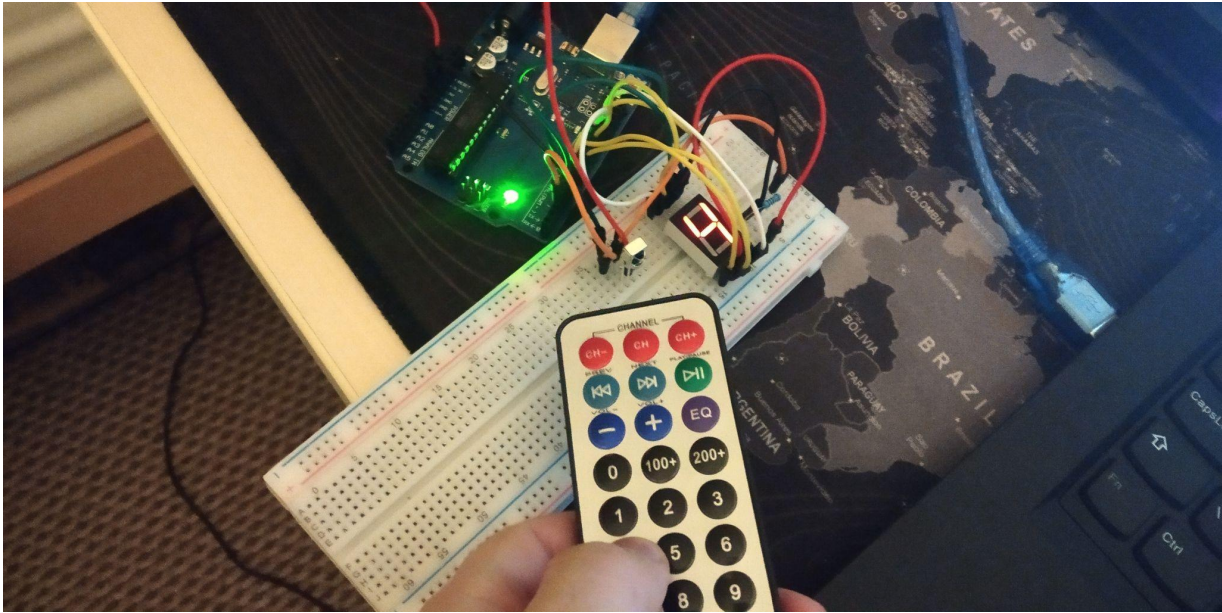
void loop() {
    if (irrecv.decode(&results)) {
        Serial.println(results.value, HEX);
        writeCode(results.value);
        irrecv.resume(); // Receive the next value
    }
}

```

Pictures







Video

Link : <https://youtu.be/jYQyrmcWUZA>