Alex Crotts **ECGR 4161/5196 Lab #2 Report** **Due 01/31/22**
acrotts2@uncc.edu
Luis Umana
lumana@uncc.edu

Lab Objective

The objective of this lab was to become familiar with the Energia IDE and to ensure that code can be successfully compiled and uploaded to each RSLK board.

Commentary and Conclusion

One of the problems encountered in this lab was forgetting to put delays after turning on or off the LED. This caused the light to not stay on or off for the correct amount of time. A lesson that was learned was that commenting on all functions and important commands was key to creating readable code.

Lab Code

```
/*
  Blink - Verifying both partners are able to upload code to the MSP432
board via LED Test
  Luis Umana and Alex Crotts, 2022-01-29
*/
#define RED 75    // Define RED of the tri-color LED as pin 75
#define GREEN 76  // Define GREEN of the tri-color LED as pin 76
#define BLUE 77   // Define BLUE of the tri-color LED as pin 77

void setup() {        // put your setup code here, to run once:
  // initialize one digital pin as outputs.
  pinMode(RED, OUTPUT);    //RED LED
  pinMode(GREEN, OUTPUT);    //GREEN LED
  pinMode(BLUE, OUTPUT);    //BLUE LED
}

void ALL_OFF() {           // All LEDS are off
  digitalWrite(RED, LOW);  // turn the RBG (RED) LED OFF
  digitalWrite(GREEN, LOW);  // turn the RBG (GREEN) LED OFF
  digitalWrite(BLUE, LOW);  // turn the RBG (BLUE) LED OFF
}

void ALL_ON() {           // All LEDS are ON
  digitalWrite(RED, HIGH); // turn the RBG (RED) LED ON
  digitalWrite(GREEN, HIGH);  // turn the RBG (GREEN) LED ON
  digitalWrite(BLUE, HIGH); // turn the RBG (BLUE) LED ON
}

void Red() {           // Red LED Function
  digitalWrite(RED, HIGH); // turn the RBG (RED) LED ON
  delay(500);              // wait for half a second
}

void Blue() {          // Blue LED Function
  digitalWrite(BLUE, HIGH); // turn the RBG (BLUE) LED ON
  delay(500);              // wait for half a second
}
```

acrotts2@uncc.edu
Luis Umana
lumana@uncc.edu

```
38
39 void Green() {          // Green LED Function
40   digitalWrite(GREEN, HIGH); // turn the RBG (GREEN) LED ON
41   delay(500);             // wait for half a second
42 }
43
44 void Red_Green() {          // Red and Green LED Function
45   digitalWrite(RED, HIGH); // turn the RBG (RED) LED ON
46   digitalWrite(GREEN, HIGH); // turn the RBG (GREEN) LED ON
47   delay(500);             // wait for half a second
48 }
49
50 void Blue_Green() {          // Blue and Green LED Function
51  digitalWrite(BLUE, HIGH); // turn the RBG (BLUE) LED ON
52  digitalWrite(GREEN, HIGH); // turn the RBG (GREEN) LED ON
53  delay(500);             // wait for half a second
54 }
55
56 void Red_Blue() {          // Red and Blue LED Function
57   digitalWrite(RED, HIGH); // turn the RBG (RED) LED ON
58   digitalWrite(BLUE, HIGH); // turn the RBG (BLUE) LED ON
59   delay(500);             // wait for half a second
60 }
61
62 void loop() {    // put your main code here, to run repeatedly:
63   delay(500);             // wait for half a second
64   ALL_OFF();              // All LEDs off
65   delay(500);             // wait for half a second
66   Red();                  // Red LED function
67   ALL_OFF();              // All LEDs off
68   Blue();                 // Blue LED function
69   ALL_OFF();              // All LEDs off
70   Green();                // Green LED function
71   ALL_OFF();              // All LEDs off
72   Red_Green();            // Red and Green LED function
73   ALL_OFF();              // All LEDs off
74   Blue_Green();           // Blue and Green LED function
75   ALL_OFF();              // All LEDs off
76   Red_Blue();             // Red and Blue LED function
77   ALL_OFF();              // All LEDs off
78   ALL_ON();               // All LEDs on
  }
```