**TimeLine**

Project 1: Grade 6 – December 2015

Title: Arduino Light Display

Project Description: A simple circuit with 6 LEDs and a buzzer, which are controlled by the Arduino microcontroller to flash and sound according to several predefined patterns

Location: School Hall

Event: Middle School Electronics Exhibition

Schematic Diagram:

Code:

void setup() {

 pinMode(8, OUTPUT); //LED1 as Output

 pinMode(7, OUTPUT); //LED2 as Output

 pinMode(6, OUTPUT); //LED3 as Output

 pinMode(5, OUTPUT); //LED4 as Output

 pinMode(4, OUTPUT); //LED5 as Output

 pinMode(3, OUTPUT); //Buzzer as Output

}

void loop() {

 digitalWrite(8, HIGH); //LED ON

 digitalWrite(7, LOW);  //LED OFF

 digitalWrite(6, LOW);  //LED OFF

 digitalWrite(5, LOW);  //LED OFF

 digitalWrite(4, LOW);  //LED OFF

 digitalWrite(3, LOW);  //LED OFF

 delay(500);

 digitalWrite(8, LOW);  //LED OFF

 digitalWrite(7, HIGH);  //LED ON

 digitalWrite(6, LOW);  //LED OFF

 digitalWrite(5, LOW);  //LED OFF

 digitalWrite(4, LOW);  //LED OFF

 digitalWrite(3, LOW);  //Buzzer OFF

 delay(500);

 digitalWrite(8, LOW);  //LED OFF

 digitalWrite(7, LOW);  //LED OFF

 digitalWrite(6, HIGH);  //LED ON

 digitalWrite(5, LOW);  //LED OFF

 digitalWrite(4, LOW);  //LED OFF

 digitalWrite(3, LOW);  //Buzzer OFF

 delay(500);

 digitalWrite(8, LOW);  //LED OFF

 digitalWrite(7, LOW);  //LED OFF

 digitalWrite(6, LOW);  //LED OFF

 digitalWrite(5, HIGH);  //LED ON

 digitalWrite(4, LOW);  //LED OFF

 digitalWrite(3, LOW);  //Buzzer OFF

 delay(500);

 digitalWrite(8, LOW);  //LED OFF

 digitalWrite(7, LOW);  //LED OFF

 digitalWrite(6, LOW);  //LED OFF

 digitalWrite(5, LOW);  //LED OFF

 digitalWrite(4, HIGH);  //LED ON

 digitalWrite(3, LOW);  //Buzzer OFF

 delay(500);

 digitalWrite(8, LOW);  //LED OFF

 digitalWrite(7, LOW);  //LED OFF

 digitalWrite(6, LOW);  //LED OFF

 digitalWrite(5, LOW);  //LED OFF

 digitalWrite(4, LOW);  //LED OFF

 digitalWrite(3, HIGH);  / Buzzer ON

 delay(500);

}

Materials required: 1. Arduino x1

2. LEDs x6

3. Buzzer x1

4. Jumper Wires  
 5. 270 Ω Resistors x6 (Not required if using an Arduino Nano or Micro as the DPIO output voltage is 3.3 V

