Master Code Arduino 2 (MEC)

```
#include <Wire.h>

void setup()
{
  Wire.begin(); // join i2c bus (address optional for master)
}

byte x = 1;

void loop()
{
  Wire.beginTransmission(4);          // transmit to device #4
  Wire.write(x);                      // sends one byte
  Wire.endTransmission();     // stop transmitting
  delay(5000);
  Wire.beginTransmission(4);          // transmit to device #4
  Wire.write(x);                      // sends one byte
  Wire.endTransmission();     // stop transmitting
  delay(2000);
  Wire.beginTransmission(4);          // transmit to device #4
  Wire.write(x);                      // sends one byte
  Wire.endTransmission();     // stop transmitting
  delay(1000);
}
```

Slave 1 Arduino 1 (SLC1)

```
#include <Wire.h>
int green = 11;
int yellow = 12;
int red = 13;

byte state = 2; // 0 - Green, 1 - Yellow, 2 - Red
byte counter = 3;

void setup()
{
  pinMode(red,OUTPUT);
  pinMode(yellow,OUTPUT);
  pinMode(green,OUTPUT);
  Wire.begin(4);              // join i2c bus with address #4
  Wire.onReceive(receiveEvent); // register event
  Serial.begin(9600);         // start serial for output
}

void loop()
{
  if (state == 0){
    digitalWrite(green, HIGH);
    digitalWrite(yellow, LOW);
```

```
    digitalWrite(red, LOW);
  }
  else if (state == 1){
    digitalWrite(green, LOW);
    digitalWrite(yellow, HIGH);
    digitalWrite(red, LOW);
  }
  else if (state == 2){
    digitalWrite(green, LOW);
    digitalWrite(yellow, LOW);
    digitalWrite(red, HIGH);
  }
  delay(100);
}

void receiveEvent(int howMany)
{
  int x = Wire.read();              // receive byte as an integer
  counter = counter + x;
  if (counter < 3) {
    state = state + 1;
  }
  counter = counter % 6;
  if (counter == 0){
    state = 0;
  }
}
```

Slave 2 Arduino 3 (SLC2)

```
#include <Wire.h>
int green = 11;
int yellow = 12;
int red = 13;

byte state = 0; // 0 - Green, 1 - Yellow, 2 - Red
byte counter = 0;

void setup()
{
  pinMode(red,OUTPUT);
  pinMode(yellow,OUTPUT);
  pinMode(green,OUTPUT);
  Wire.begin(4);                // join i2c bus with address #4
  Wire.onReceive(receiveEvent); // register event
  Serial.begin(9600);           // start serial for output
}

void loop()
{
  if (state == 0){
```

```
    digitalWrite(green, HIGH);
    digitalWrite(yellow, LOW);
    digitalWrite(red, LOW);
   }
   else if (state == 1){
    digitalWrite(green, LOW);
    digitalWrite(yellow, HIGH);
    digitalWrite(red, LOW);
   }
   else if (state == 2){
    digitalWrite(green, LOW);
    digitalWrite(yellow, LOW);
    digitalWrite(red, HIGH);
   }
   delay(100);
}

void receiveEvent(int howMany)
{
   int x = Wire.read();              // receive byte as an integer
   counter = counter + x;
   if (counter < 3) {
    state = state + 1;
   }
   counter = counter % 6;
   if (counter == 0){
    state = 0;
   }
   Serial.println(x);         // print the integer
}
```