Module B.4: Simple Procedure

**Integer times = 5**

**Integer value = 4**

**Integer times = Integer value (5 = 4)**

***Level 0 :-***

3. The number of times to blink the LED(int times) was stated as 5 and the blink value(int times Blinked)

was stated as 4 resulting the number of times to blink the LED(int times) equal to the blink value(int

times Blinked) causing the int times value to replace with the blink value( causing the LED to blink 4

times instead of 5).

***Level 1 :-***

3. “int times = value” states that the number of times to blink the LED is equal to the blink value causing to change the int times value to the blink value(causing the LED to blink 5 times).

4. a. The first int definition is always applied before the void setup and the second int definition

is applied in the void loop.

b. No, there is no overlap because the blink value is not equal to the int times and there

integer value being applied over and over again in the program.

**Level 2:**

int YellowLED =12;

int RedLED =11;

void setup() {

  pinMode(YellowLED, OUTPUT);

  pinMode(RedLED, OUTPUT);

  Serial.begin(9600);

}

void loop() {

  int timesBlinked = blink(4,YellowLED);

  timesBlinked = blink(5,RedLED);

  Serial.print("The LED was SUPPOSED to blink ");

  Serial.print(timesBlinked);

  Serial.print(" times BUT only blinked ");

  Serial.println(timesBlinked);

  delay(1000);

}

int blink(int value,int led) {

  for (int i = 0; i < value; i++) {

    digitalWrite(led, HIGH);   // turn the LED on (HIGH is the voltage level)

    delay(500);                       // wait for a second

    digitalWrite(led, LOW);    // turn the LED off by making the voltage LOW

    delay(500);                       // wait for a second

  }

  Serial.print("The LED blinked ");

  Serial.print(value);

  Serial.println(" times.");

  return value;

}

**Level 3**

int YellowLED = 12;

int RedLED = 11;

long randOn = 0;

long randOff = 0;

void setup()

{

 randomSeed (analogRead (0));

 pinMode(YellowLED, OUTPUT);

 pinMode(RedLED, OUTPUT);

 Serial.begin(9600);

}

void loop(){

 int value = random(1, 10);

 int led = random(11, 13);

 int timesBlinked = blink(value,led);

  Serial.print("The LED was SUPPOSED to blink ");

  Serial.print(timesBlinked);

  Serial.print(" times BUT only blinked ");

  Serial.println(timesBlinked);

  delay(1000);

}

int blink(int value,int led) {

  for (int i = 0; i < value; i++) {

    randOff = random (200, 900);

    digitalWrite(led, HIGH);   // turn the LED on (HIGH is the voltage level)

    delay(1000);                       // wait for a second

    digitalWrite(led, LOW);    // turn the LED off by making the voltage LOW

    delay(randOff);                       // wait for a second

  }

  Serial.print("The LED blinked ");

  Serial.print(value);

  Serial.println(" times.");

  Serial.print(led);

  return value;

}