Physical Computing:

Lab 1.

**Task 1**

Complete, and signed off

**Task 2**

void loop() { // read the value of the switch

switchstate = digitalRead(2);

if (switchstate == LOW) { // button is not pressed

digitalWrite(3, HIGH); // green LED

digitalWrite(4, LOW); // red LED

digitalWrite(5, LOW); // red LED

} else { // button is pressed

digitalWrite(3, LOW);

digitalWrite(4, LOW);

digitalWrite(5, HIGH);

delay(500); // wait for a half second

// toggle red LEDs

digitalWrite(4, HIGH);

digitalWrite(5, LOW);

delay(500); // wait for a half second

}

**Task 3**

**int switchstate = 0;**

**void setup() { // declare the LED pins as outputs**

**pinMode(3, OUTPUT);**

**pinMode(4, OUTPUT);**

**pinMode(5, OUTPUT);**

**// declare the switch pin as an input**

**pinMode(2, INPUT);**

**}**

**void loop() { // read the value of the switch**

**switchstate = digitalRead(2);**

**if (switchstate == LOW) { // button is not pressed**

**digitalWrite(3, LOW); // green LED**

**digitalWrite(4, HIGH); // red LED**

**digitalWrite(5, HIGH); // red LED**

**delay(500); // wait for a half second**

**//TOGGLE THE LEDS**

**digitalWrite(3, HIGH); // green LED**

**digitalWrite(4, LOW); // red LED**

**digitalWrite(5, LOW); // red LED**

**delay(500); // wait for a half second**

**} else { // button is pressed**

**digitalWrite(3, LOW);**

**digitalWrite(4, LOW);**

**digitalWrite(5, LOW);**

**}**

**} // go back to the beginning of the loop**

**Task 4**

**int switchstate = 0;**

**int switch2state = 0;**

**void setup() { // declare the LED pins as outputs**

**pinMode(3, OUTPUT);**

**pinMode(4, OUTPUT);**

**pinMode(5, OUTPUT);**

**// declare the switch pin as an input**

**pinMode(2, INPUT);**

**pinMode(1, INPUT);**

**}**

**void loop() { // read the value of the switch**

**switchstate = digitalRead(2);**

**switch2state = digitalRead(1);**

**if (switchstate == HIGH && switch2state == HIGH) { // both buttons are pressed**

**digitalWrite(3, LOW);**

**digitalWrite(4, LOW);**

**digitalWrite(5, LOW);**

**} else { // both buttons pressed or no buttons pressed**

**digitalWrite(3, LOW); // green LED**

**digitalWrite(4, HIGH); // red LED**

**digitalWrite(5, HIGH); // red LED**

**delay(500); // wait for a half second**

**//TOGGLE THE LEDS**

**digitalWrite(3, HIGH); // green LED**

**digitalWrite(4, LOW); // red LED**

**digitalWrite(5, LOW); // red LED**

**delay(500); // wait for a half second**

**}**

**} // go back to the beginning of the loop**