

Sri Lanka Institute of Information Technology



**Lab Submission
<Worksheet No.8>**

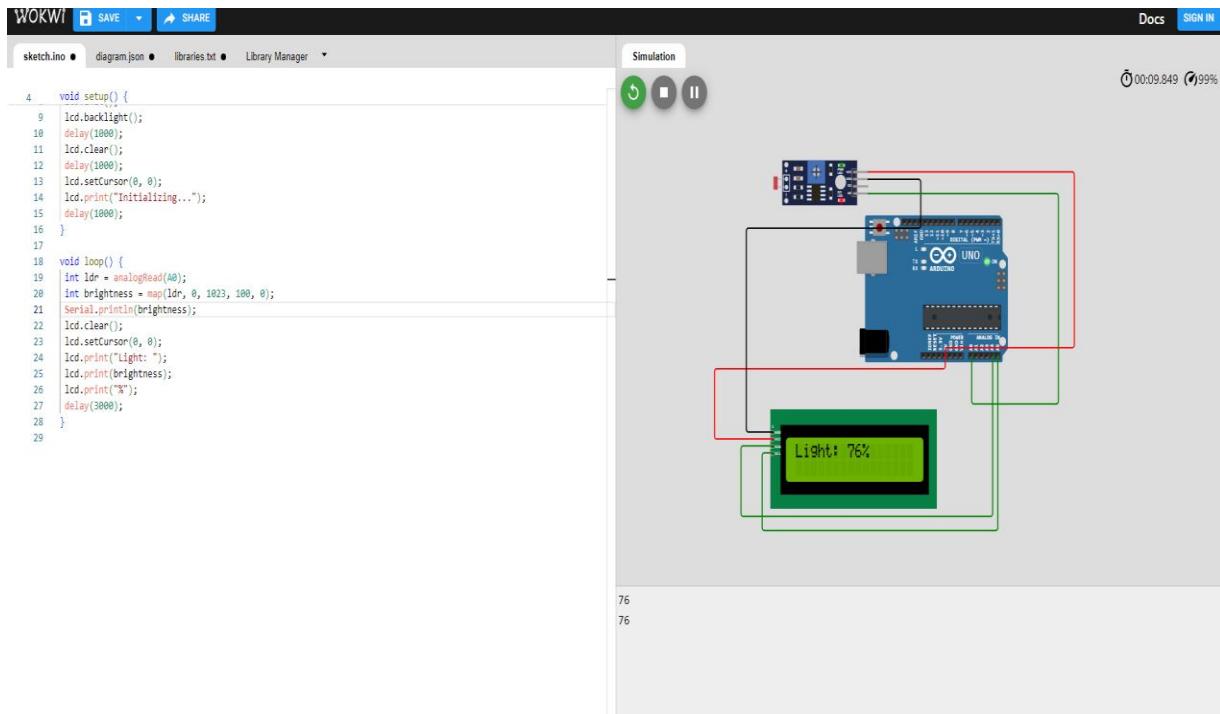
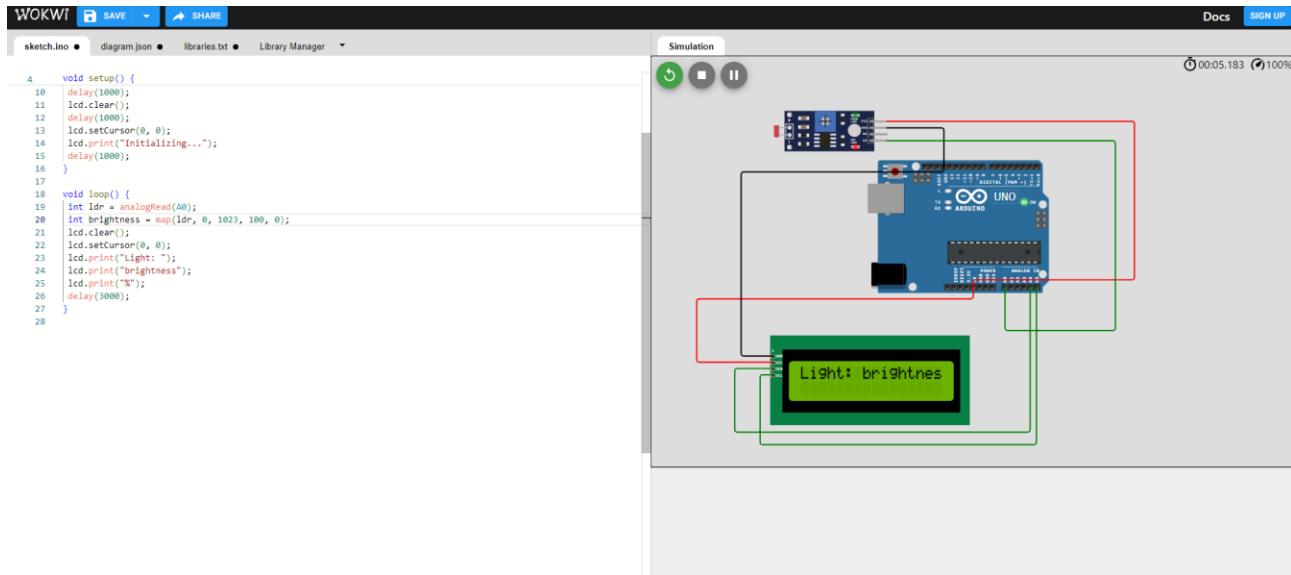
<IT24102555>

<Weerathunga B.A>

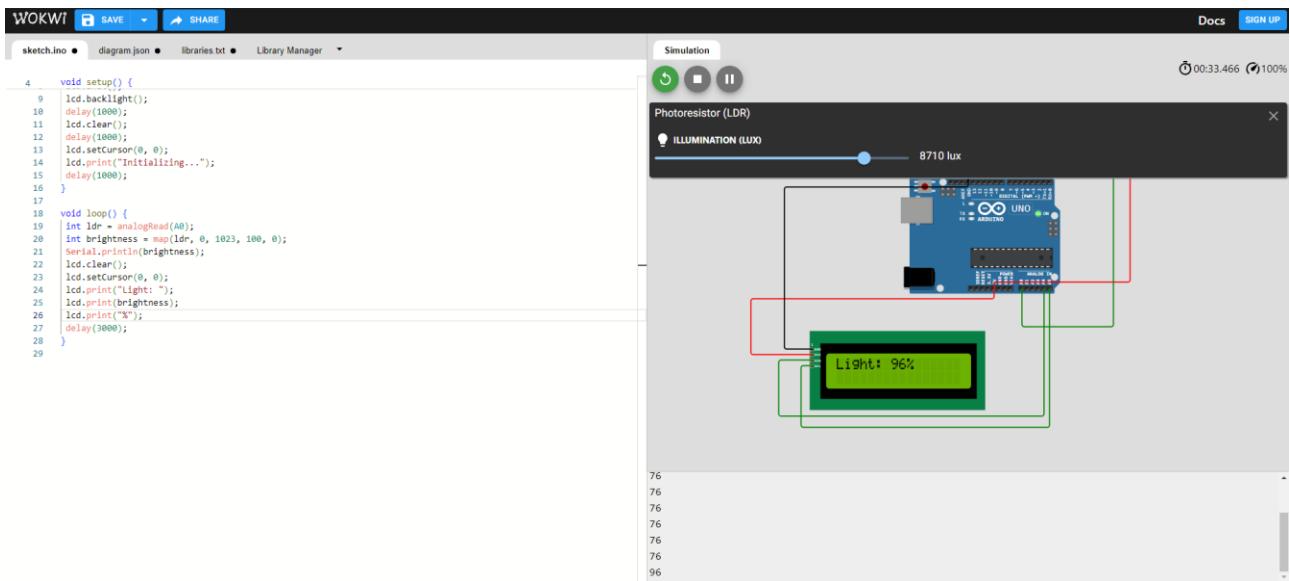
Fundamentals of Computing | IT1140

B.Sc. (Hons) in Information Technology

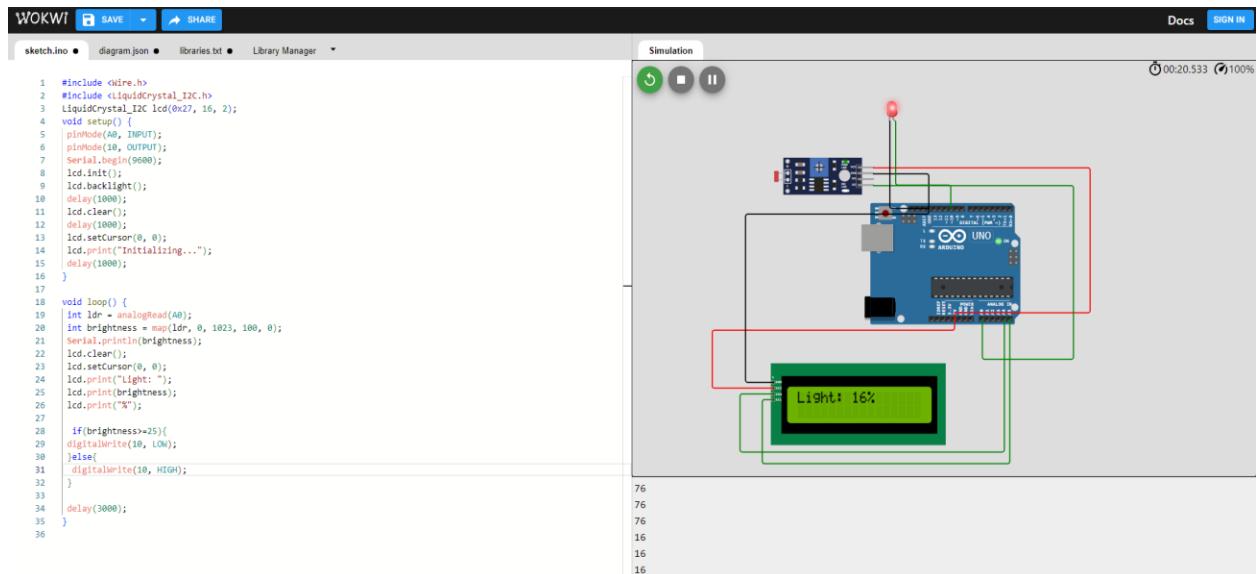
Activity 1



d) 3. lcd.clear() is used to reset the LCD Screen.



f) When simulating the circuit, the brightness percentage display on the LCD changes in response to the light intensity measured by the LDR. As the light level decreases, the LDR outputs a higher analog value, which is mapped to a higher percentage on the LCD.



Activity 2

The screenshot shows the WOKWI web-based simulation environment. On the left, the code editor displays the following Arduino sketch:

```
1 #include <Servo.h>
2 int ser_pin = 9;
3 int pos = 0;
4 Servo servol;
5
6 void setup() {
7   pinMode(12, INPUT);
8   servol.attach(ser_pin);
9   Serial.begin(115200);
10 }
11
12 void loop() {
13   int motion = digitalRead(12);
14   Serial.println(motion);
15   if (motion == HIGH) { // Line A
16     for (int i=0; i<180; i++) { // Line B
17       pos = i;
18       servol.write(pos);
19       delay(30);
20     }
21     delay(3000);
22     for (int i=180; i>=0; i--) { // Line C
23       pos = i;
24       servol.write(pos);
25       delay(30);
26     }
27     delay(30);
28   }
29 }
```

The simulation window on the right shows a blue Arduino Uno board with a servo attached. A PIR Motion Sensor is connected to digital pin 12. The servo is connected to digital pin 9 and ground. The Arduino is connected to a computer via USB. The simulation interface includes buttons for play/pause, simulation status, and a serial monitor.

This screenshot is identical to the one above, showing the same WOKWI simulation setup and code. The only difference is the state of the servo, which is now positioned at approximately 90 degrees, indicated by the red line in the simulation window.