#include <LiquidCrystal.h>

// Pin definitions

const int enterButton = 2;

const int exitButton = 3;

const int selectButton = 4;

const int potPin = A0;

const int ledPin = 9;

// LCD setup

LiquidCrystal lcd(7, 8, 9, 10, 11, 12);

// Variables

int menuOption = 0;

int brightness = 128;

int volume = 50;

bool inSettings = false;

bool adjusting = false;

void setup() {

pinMode(enterButton, INPUT\_PULLUP);

pinMode(exitButton, INPUT\_PULLUP);

pinMode(selectButton, INPUT\_PULLUP);

pinMode(ledPin, OUTPUT);

analogWrite(ledPin, brightness);

lcd.begin(16, 2);

updateDisplay();

}

void loop() {

if (digitalRead(enterButton) == LOW) {

inSettings = true;

updateDisplay();

delay(200);

}

if (digitalRead(exitButton) == LOW) {

inSettings = false;

adjusting = false;

updateDisplay();

delay(200);

}

if (inSettings) {

int potValue = analogRead(potPin) / 512; // Map to 0-1 for two options

if (!adjusting) {

menuOption = potValue;

updateDisplay();

}

if (digitalRead(selectButton) == LOW) {

adjusting = !adjusting;

delay(200);

}

if (adjusting) {

int adjValue = analogRead(potPin) / 4; // Map to 0-255

if (menuOption == 0) {

brightness = adjValue;

analogWrite(ledPin, brightness);

} else if (menuOption == 1) {

volume = map(adjValue, 0, 255, 0, 100); // Map to 0-100

}

updateDisplay();

}

}

}

void updateDisplay() {

lcd.clear();

if (!inSettings) {

lcd.print("Press to enter");

} else if (!adjusting) {

lcd.print(menuOption == 0 ? "Brightness" : "Volume");

lcd.setCursor(0, 1);

lcd.print("Press to adjust");

} else {

lcd.print(menuOption == 0 ? "Brightness: " : "Volume: ");

lcd.print(menuOption == 0 ? brightness : volume);

}

}