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//Sample using LiquidCrystal library
#include <LiquidCrystal.h>
#include <Servo.h>

/*****

This program will test the LCD panel and the buttons
Mark Bramwell, July 2010

*****/

// select the pins used on the LCD panel
LiquidCrystal lcd(8, 9, 4, 5, 6, 7);

// define some values used by the panel and buttons
int lcd_key    = 0;
int adc_key_in = 0;
#define btnRIGHT  0
#define btnUP     1
#define btnDOWN   2
#define btnLEFT   3
#define btnSELECT 4
#define btnNONE   5

Servo myservo1;
Servo myservo2;

int servo1;
int servo2;

// read the buttons
int read_LCD_buttons()
{
  adc_key_in = analogRead(0);    // read the value from the sensor
  // my buttons when read are centered at these valies: 0, 144, 329, 504, 741
  // we add approx 50 to those values and check to see if we are close
  if (adc_key_in > 1000) return btnNONE; // We make this the 1st option for speed reasons since it will
be the most likely result
  // For V1.1 us this threshold
  if (adc_key_in < 50)   return btnRIGHT;
  if (adc_key_in < 250) return btnUP;
  if (adc_key_in < 450) return btnDOWN;
  if (adc_key_in < 650) return btnLEFT;
  if (adc_key_in < 850) return btnSELECT;
}

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// For V1.0 comment the other threshold and use the one below:
/*
  if (adc_key_in < 50)   return btnRIGHT;
  if (adc_key_in < 195) return btnUP;
  if (adc_key_in < 380) return btnDOWN;
  if (adc_key_in < 555) return btnLEFT;
  if (adc_key_in < 790) return btnSELECT;
*/

return btnNONE; // when all others fail, return this...
}

void setup()
{
  lcd.begin(16, 2);           // start the library
  lcd.setCursor(0, 0);
  lcd.print("Push the buttons"); // print a simple message
  myservo1.attach(12);
  myservo2.attach(13);
  pinMode(19, OUTPUT);
}

void loop()
{
  digitalWrite(19, LOW);
  lcd.setCursor(9, 1);       // move cursor to second line "1" and 9 spaces over
  lcd.print(millis() / 1000); // display seconds elapsed since power-up

  lcd.setCursor(0, 1);      // move to the beginning of the second line
  lcd_key = read_LCD_buttons(); // read the buttons

  switch (lcd_key)          // depending on which button was pushed, we perform an action
  {
    case btnRIGHT:
      {
        digitalWrite(19, HIGH);
        myservo1.write(servo1);
        myservo2.write(servo2);
        // digitalWrite(19, LOW);
        lcd.print("RIGHT ");
        break;
      }
  }
}

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}
case btnLEFT:
{
servo1 = 0;
servo2 = 0;
digitalWrite(19, HIGH);
myservo1.write(servo1);
myservo2.write(servo2);
// digitalWrite(19, LOW);
lcd.print("LEFT  ");
break;
}
case btnUP:
{
servo1 = 45;
servo2 = 45;
digitalWrite(19, HIGH);
myservo1.write(servo1);
myservo2.write(servo2);
// digitalWrite(19, LOW);
lcd.print("UP   ");
break;
}
case btnDOWN:
{
servo1 = 90;
servo2 = 90;
digitalWrite(19, HIGH);
myservo1.write(servo1);
myservo2.write(servo2);
// digitalWrite(19, LOW);
lcd.print("DOWN ");
break;
}
case btnSELECT:
{
servo1 = 180;
servo2 = 180;
digitalWrite(19, HIGH);
myservo1.write(servo1);
myservo2.write(servo2);
// digitalWrite(19, LOW);
lcd.print("SELECT");
break;
}

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    }  
    case btnNONE:  
    {  
        lcd.print("NONE ");  
        break;  
    }  
}  
  
}
```