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/* -----Title-----

File: servo2.ino
Started: 11/11/13
Program Description: Control a servo position using a potentiometer
For servo signal waveforms, see:
http://cornerstonerobotics.org/arduino/Servo%20Signals.pdf
*/
// -----Initializations-----

int servo = 9; // Give pin 9 a name (servo).
int potpin = A0; // Give analog pin A0 the name potpin.
int x; // Variable to read the value from the analog p

void setup()
{
}

// -----Main Code-----


void loop()
{
    // Read the input on analog pin A0 (value between 0 and 1023):
    x =analogRead(potpin);
    // Re-map the value of x, (which goes from 0-1023)
    // to a value from 800 to 2300. The range of servo rotation is
    // set by changing these two numbers.
    // Syntax: map(value, fromLow, fromHigh, toLow, toHigh)
    x =map(x, 0, 1023, 800, 2300);
    // Create HIGH pulse between 800 microseconds (0.8 ms) and
    // 2300 microseconds (2.3 ms) long:
    digitalWrite(servo, HIGH);
    delayMicroseconds(x); // Wait x microseconds (800-2300 microsec
    // Create LOW pulse:
    digitalWrite(servo, LOW);
    delay(20); // Wait 20 ms
}

```