// PROJECT  :MotorSpeedControl

// PURPOSE  :In class demonstration of DC (Hobby) Motor Speed Control

// COURSE   :ICS3U

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// MCU      :328P

// STATUS   :Working

// REFERENCE:http://darcy.rsgc.on.ca/ACES/FramePlayer/DCMotors/index.html

#define POTPIN    A1

#define SPEEDPIN  3

uint16\_t rawReading;      //10-bit reading from the pot

uint8\_t voltage;          //8-bit PWM parameter scaled from 10-bit ADC reading

void setup() {

  Serial.begin(9600);       //enable the monitoring of the data

  DDRC |= 1<<PC0 | 1<<PC2;  //pinMode(A0&A2,OUTPUT)

  PORTC |= 1<<PC0;          //digitalWrite(A2,HIGH);

}

void loop() {

  rawReading = analogRead(POTPIN);    //0..1023

  voltage = rawReading >> 2;          //0..255

  analogWrite(SPEEDPIN,voltage);      //deliver the speed

  Serial.print(rawReading+String('\t'));

  Serial.println(voltage);

}