// connect motor controller pins to Arduino digital pins

// motor one

int enA = 10;

int in1 = 9;

int in2 = 8;

// motor two

int enB = 5;

int in3 = 7;

int in4 = 6;

void setup()

{

// set all the motor control pins to outputs

pinMode(enA, OUTPUT);

pinMode(enB, OUTPUT);

pinMode(in1, OUTPUT);

pinMode(in2, OUTPUT);

pinMode(in3, OUTPUT);

pinMode(in4, OUTPUT);

}

void demoOne()

{

// this function will run the motors in both directions at a fixed speed

// turn on motor A

digitalWrite(in1, HIGH);

digitalWrite(in2, LOW);

// set speed to 200 out of possible range 0~255

analogWrite(enA, 200);

// turn on motor B

digitalWrite(in3, HIGH);

digitalWrite(in4, LOW);

// set speed to 200 out of possible range 0~255

analogWrite(enB, 200);

delay(2000);

// now change motor directions

digitalWrite(in1, LOW);

digitalWrite(in2, HIGH);

digitalWrite(in3, LOW);

digitalWrite(in4, HIGH);

delay(2000);

// now turn off motors

digitalWrite(in1, LOW);

digitalWrite(in2, LOW);

digitalWrite(in3, LOW);

digitalWrite(in4, LOW);

}

void demoTwo()

{

// this function will run the motors across the range of possible speeds

// note that maximum speed is determined by the motor itself and the operating voltage

// the PWM values sent by analogWrite() are fractions of the maximum speed possible

// by your hardware

// turn on motors

digitalWrite(in1, LOW);

digitalWrite(in2, HIGH);

digitalWrite(in3, LOW);

digitalWrite(in4, HIGH);

// accelerate from zero to maximum speed

for (int i = 0; i < 256; i++) {

analogWrite(enA, i);

analogWrite(enB, i);

delay(20);

}

// decelerate from maximum speed to zero

for (int i = 255; i > 0; --i)

{

analogWrite(enA, i);

analogWrite(enB, i);

delay(20);

}

// now turn off motors

digitalWrite(in1, LOW);

digitalWrite(in2, LOW);

digitalWrite(in3, LOW);

digitalWrite(in4, LOW);

}

void loop()

{

demoOne();

delay(1000);

demoTwo();

delay(1000);

}