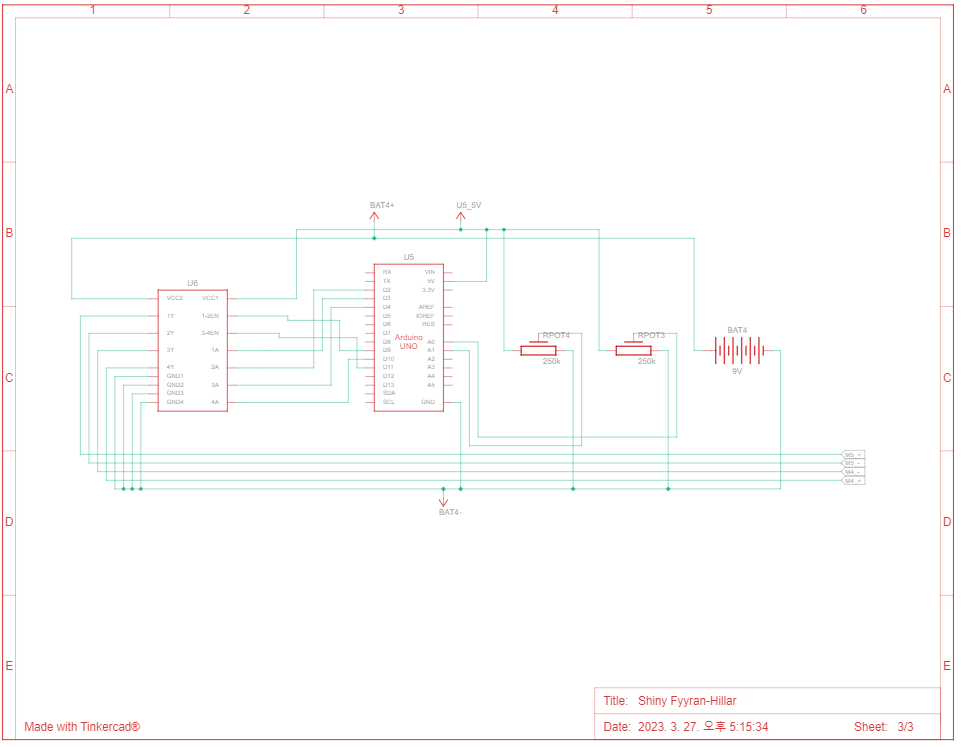
4-3 회로 응용

201522405 최준하

회로도:



구동코드:

const int right\_en =9;

const int left\_en =11;

const int r\_mc\_1 =3;

const int r\_mc\_2 =2;

const int l\_mc\_1 =10;

const int l\_mc\_2 =4;

const int r\_pot =0;

const int l\_pot =1;

int r\_val = 0;

int l\_val = 0;

int r\_velocity = 0;

int l\_velocity = 0;

void setup()

{

pinMode(right\_en, OUTPUT);

pinMode(left\_en, OUTPUT);

pinMode(r\_mc\_1, OUTPUT);

pinMode(r\_mc\_2, OUTPUT);

pinMode(l\_mc\_1, OUTPUT);

pinMode(l\_mc\_2, OUTPUT);

new\_break();

}

void loop()

{

r\_val = analogRead(r\_pot);

l\_val = analogRead(l\_pot);

check\_r();

check\_l();

}

void check\_r()

{

if(r\_val > 562)

{

r\_velocity = map(r\_val, 563, 1023,0,255);

forward("right",r\_velocity);

}

else if(r\_val < 462)

{

r\_velocity = map(r\_val, 461, 0, 0, 255);

reverse("right",r\_velocity);

}

else

{

new\_break();

}

}

void check\_l()

{

if(l\_val > 562)

{

l\_velocity = map(l\_val, 563, 1023,0,255);

forward("left",l\_velocity);

}

else if(l\_val < 462)

{

l\_velocity = map(l\_val, 461, 0, 0, 255);

reverse("left",l\_velocity);

}

else

{

new\_break(); //멈춤

}

}

void forward(String dir ,int rate) //정방향 함수

{

if(dir == "right")

{

digitalWrite(right\_en,LOW);

digitalWrite(r\_mc\_1,HIGH);

digitalWrite(r\_mc\_2,LOW);

analogWrite(right\_en, rate);

}

else if(dir == "left")

{

digitalWrite(left\_en,LOW);

digitalWrite(l\_mc\_1,HIGH);

digitalWrite(l\_mc\_2,LOW);

analogWrite(left\_en, rate);

}

}

void reverse(String dir,int rate) //역방향 함수

{

if(dir == "right")

{

digitalWrite(right\_en,LOW);

digitalWrite(r\_mc\_1,LOW);

digitalWrite(r\_mc\_2,HIGH);

analogWrite(right\_en, rate);

}

else if(dir == "left")

{

digitalWrite(left\_en,LOW);

digitalWrite(l\_mc\_1,LOW);

digitalWrite(l\_mc\_2,HIGH);

analogWrite(left\_en, rate);

}

}

void new\_break() //멈춤 함수

{

digitalWrite(right\_en,LOW);

digitalWrite(r\_mc\_1,LOW);

digitalWrite(r\_mc\_2,LOW);

digitalWrite(right\_en, HIGH);

digitalWrite(left\_en,LOW);

digitalWrite(l\_mc\_1,LOW);

digitalWrite(l\_mc\_2,LOW);

digitalWrite(left\_en, HIGH);

}

동작 화면:

