#include <Servo.h>

//defining Servos

Servo servohori;

int servoh = 0;

int servohLimitHigh = 160;

int servohLimitLow = 20;

Servo servoverti;

int servov = 0;

int servovLimitHigh = 160;

int servovLimitLow = 20;

//Assigning LDRs

int ldrtopl = A2; //top left LDR green

int ldrtopr = A1; //top right LDR yellow

int ldrbotl = A3; // bottom left LDR blue

int ldrbotr = A0; // bottom right LDR orange

 void setup ()

 {

  servohori.attach(10);

  servohori.write(0);

  servoverti.attach(9);

  servoverti.write(0);

  Serial.begin(9600);

  delay(500);

 }

void loop()

{

  servoh = servohori.read();

  servov = servoverti.read();

  //capturing analog values of each LDR

  int topl = analogRead(ldrtopl);

  int topr = analogRead(ldrtopr);

  int botl = analogRead(ldrbotl);

  int botr = analogRead(ldrbotr);

  // calculating average

  int avgtop = (topl + topr) / 2; //average of top LDRs

  int avgbot = (botl + botr) / 2; //average of bottom LDRs

  int avgleft = (topl + botl) / 2; //average of left LDRs

  int avgright = (topr + botr) / 2; //average of right LDRs

   Serial.println(avgtop);

  if (avgtop < avgbot)

  {

    servoverti.write(servov +1);

    if (servov > servovLimitHigh)

     {

      servov = servovLimitHigh;

     }

    delay(10);

  }

  else if (avgbot < avgtop)

  {

    servoverti.write(servov -1);

    if (servov < servovLimitLow)

  {

    servov = servovLimitLow;

  }

    delay(10);

  }

  else

  {

    servoverti.write(servov);

  }

  if (avgleft > avgright)

  {

    servohori.write(servoh +1);

    if (servoh > servohLimitHigh)

    {

    servoh = servohLimitHigh;

    }

    delay(10);

  }

  else if (avgright > avgleft)

  {

    servohori.write(servoh -1);

    if (servoh < servohLimitLow)

     {

     servoh = servohLimitLow;

     }

    delay(10);

  }

  else

  {

    servohori.write(servoh);

  }

  delay(50);

}