|  |
| --- |
| #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 = 2; //top left LDR green |
|  | int ldrtopr = 1; //top right LDR yellow |
|  | int ldrbotl = 3; // bottom left LDR blue |
|  | int ldrbotr = 0; // bottom right LDR orange |
|  |  |
|  | void setup () |
|  | { |
|  | servohori.attach(10); |
|  | servohori.write(0); |
|  | servoverti.attach(9); |
|  | servoverti.write(0); |
|  | 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 |
|  |  |
|  | 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); |
|  | } |