/\* 3.3V accelerometer self test

analog 1: z-axis

analog 2: y-axis

analog 3: x-axis

5V : VCC

Gnd: GND

\*/

#include<LiquidCrystal.h>

LiquidCrystal lcd(12,11,A2,A3,A4,A5);

int contr\_pin=9;

const int xpin = A0; // x-axis of the accelerometer

const int ypin = A1; // y-axis

int X=0,Y=0,Z=0,speed1=75,speed2=75;

void setup()

{

lcd.begin(16,2);

analogWrite(contr\_pin,10);

Serial.begin(9600);

pinMode(2,OUTPUT);

pinMode(4,OUTPUT);

pinMode(7,OUTPUT);

pinMode(8,OUTPUT);

pinMode(9,OUTPUT);

pinMode(10,OUTPUT);

pinMode(A0,INPUT);

pinMode(A1,INPUT);

lcd.clear();

lcd.setCursor(0,0);

lcd.print("X= ");

}

void loop()

{

X=analogRead(xpin);

Y=analogRead(ypin);

// print the sensor values:

\

Serial.print(X);

// print a tab between values:

Serial.print("\t");

Serial.print(Y);

// print a tab between values:

Serial.print("\t");

Serial.print(Z);

Serial.println();

lcd.clear();

lcd.setCursor(0,0);

lcd.print("X= ");

lcd.print(X);

lcd.setCursor(0,1);

lcd.print("Y= ");

lcd.print(Y);

//Ref X=220 AND Y=240

if((Y>220)&&(Y<255))

{

if(X>255)

{

left();

}

else if(X<220)

{

right();

}

else

{

halt();

}

}

else if((X>220)&&(X<255))

{

if(Y>255)

{

fwd();

}

else if(Y<220)

{

back();

}

else

{

halt();

}

}

delay(100);

}

void fwd()

{

Serial.println("I m in Forward");

lcd.clear();

lcd.setCursor(0,0);

lcd.print("X= ");

lcd.setCursor(0,7);

lcd.print("Y= ");

lcd.setCursor(1,0);

lcd.print("Moving Forward");

digitalWrite(2,HIGH);

digitalWrite(4,LOW);

digitalWrite(7,HIGH);

digitalWrite(8,LOW);

analogWrite(9,speed1);

analogWrite(10,speed2);

delay(1000);

}

void back()

{

Serial.println("I m in back");

lcd.setCursor(0,0);

lcd.print("X= ");

lcd.setCursor(0,7);

lcd.print("Y= ");

lcd.setCursor(1,0);

lcd.print("Moving Backward");

digitalWrite(2,LOW);

digitalWrite(4,HIGH);

digitalWrite(7,LOW);

digitalWrite(8,HIGH);

analogWrite(9,speed1);

analogWrite(10,speed2);

delay(1000);

}

void right()

{

Serial.println("I m in right");

lcd.setCursor(0,0);

lcd.print("X= ");

lcd.setCursor(0,7);

lcd.print("Y= ");

lcd.setCursor(1,0);

lcd.print("Turning Right");

digitalWrite(2,HIGH);

digitalWrite(4,LOW);

digitalWrite(7,LOW);

digitalWrite(8,HIGH);

analogWrite(9,75);

analogWrite(10,75);

delay(1000);

}

void left()

{

Serial.println("I m in left");

lcd.setCursor(0,0);

lcd.print("X= ");

lcd.setCursor(0,7);

lcd.print("Y= ");

lcd.setCursor(1,0);

lcd.print("Turning Left");

digitalWrite(2,LOW);

digitalWrite(4,HIGH);

digitalWrite(7,HIGH);

digitalWrite(8,LOW);

analogWrite(9,75);

analogWrite(10,75);

delay(1000);

}

void halt()

{

Serial.println("I m in Halt");

digitalWrite(2,LOW);

digitalWrite(4,LOW);

digitalWrite(4,LOW);

digitalWrite(8,LOW);

analogWrite(9,0);

analogWrite(10,0);

delay(100);

}