#include <LiquidCrystal.h>

#include <stdio.h>

#include <SoftwareSerial.h>

int buzzer=5;

int IMB = 7;

int IGN=14;

char lan[15],lat[15];

int ignn=0;

char incomingByte;

String inputString;

LiquidCrystal lcd(8,9,10,11,12,13);

SoftwareSerial mySerial(2, 3);

int i,e=0;

char my()

{

while(!Serial.available());

return Serial.read();

}

void gps()

{

back:

while(my()!='$');

if(my()=='G')

{

if(my()=='P')

{

if(my()=='G')

{

if(my()=='G')

{

if(my()=='A')

{

int i=0;

do

{

lan[i]=my();

}while(lan[i++]!=',');

do

{

lan[i]=my();

}while(lan[i++]!=',');

lan[i]=0;

i=0;

do

{

lat[i]=my();

}while(lat[i++]!=',');

do

{

lat[i]=my();

}while(lat[i++]!=',');

lat[i]=0;

lcd.clear();

lcd.setCursor(0,0);

lcd.print(lan);

lcd.setCursor(0,1);

lcd.print(lat);

delay(1000);

}

else

{

goto back;

}

}

else

{

goto back;

}

}

else

{

goto back;

}

}

else

{

goto back;

}

}

else

{

goto back;

}

}void setup()

{

pinMode(buzzer,OUTPUT);

pinMode(IMB,OUTPUT);

pinMode(IGN,INPUT);

Serial.begin(9600);

mySerial.begin(9600);

lcd.begin(16, 2);

lcd.clear();

lcd.print("SMART VEHICLE ");

lcd.setCursor(0,1);

lcd.print("ALERT SYSTEM ");

delay(2000);

lcd.clear();

lcd.print("\*\*\* USING \*\*\* ");

lcd.setCursor(0,1);

lcd.print("GSM AND GPS");

delay(2000);

digitalWrite(buzzer, LOW);

digitalWrite(IMB, LOW);

}

void loop()

{

if(mySerial.available()){

delay(100);

while(mySerial.available()){

incomingByte = mySerial.read();

inputString += incomingByte;

}

delay(10);

if (inputString.indexOf("LOCK") > -1){

digitalWrite(IMB, LOW);

lcd.clear();

lcd.print("VEHICLE ");

lcd.setCursor(0,1);

lcd.print("LOCKED");

delay(1000);

digitalWrite(buzzer, HIGH);

}

if (inputString.indexOf("UNLOCK") > -1){

digitalWrite(IMB, HIGH);

digitalWrite(buzzer, LOW);

lcd.clear();

lcd.print("VEHICLE ");

lcd.setCursor(0,1);

lcd.print("UNLOCKED");

delay(1000);

digitalWrite(buzzer, LOW);

}

if (inputString.indexOf("LOCATION") > -1){

gps();

delay(2000);

lcd.clear();

lcd.print("MESSAGE SENDING");

mySerial.print('"');

mySerial.print("8341655559");

mySerial.print('"');

delay(500);

mySerial.println("GPS VALUES");

mySerial.println(" ");

mySerial.println(lan);

mySerial.println(lat);

delay(800);

mySerial.println("0x1A");

lcd.clear();

lcd.print("SENT SMS....");

delay(3000);

}

delay(50);

inputString = "";

}

if((digitalRead(IGN)==0))

{

lcd.clear();

lcd.setCursor(0,1);

lcd.print("IGNITION:ON");

delay(1000);

digitalWrite(IMB, HIGH);

if(ignn==1){

lcd.clear();

lcd.setCursor(0,1);

lcd.print("IGNITION:ON");

delay(2000);

ignn=0;

gps();

delay(2000);

lcd.clear();

lcd.print("MESSAGE SENDING");

mySerial.print('"');

mySerial.print("8341655559");

mySerial.print('"');

delay(500);

mySerial.println("GPS VALUES\r\n");

mySerial.println(" ");

mySerial.println(lan);

mySerial.println(lat);

delay(800);

mySerial.println("0x1A");

lcd.clear();

lcd.print("SENT SMS....");

delay(3000);

} }

if(!(digitalRead(IGN)==0))

{

lcd.clear();

lcd.setCursor(0,1);

lcd.print("IGNITION:OFF");

digitalWrite(IMB, LOW);

delay(2000);

if(ignn==0){

lcd.clear();

lcd.setCursor(0,1);

lcd.print("IGNITION:OFF");

delay(2000);

ignn=1;

gps();

delay(2000);

lcd.clear();

lcd.print("MESSAGE SENDING");

mySerial.print('"');

mySerial.print("8341655559");

mySerial.print('"');

delay(500);

mySerial.println("IGNITION:OFF\r\n");

delay(500);

mySerial.println("GPS VALUES\r\n");

mySerial.println(" ");

mySerial.println(lan);

mySerial.println(lat);

delay(800);

mySerial.println("0x1A");

lcd.clear();

lcd.print("SENT SMS....");

delay(3000);

} }

}