# Description:

A program to read geo location using gps using the Iomatic IoT Development kit.

# Source Code:

// include the library code:

#include <LiquidCrystal.h>

// initialize the library with the numbers of the interface pins

LiquidCrystal lcd(11, 12, 14, 15, 16, 17);

char Input[200];

char Longitude[100];

char Latitude[100];

String serialResponse = "";

String arr[22];

int cnt=0;

void setup()

{

//SIM800 wakeup connected on pin 13 in IomaTic board

pinMode(13,OUTPUT);

//Initialize the SIM800 Module

digitalWrite(13, HIGH);

delay(1000);

//Sending wake up signal to SIM800 Module

digitalWrite(13, LOW);

delay(1000);

//Keeping SIM800 in active/wakeup state

digitalWrite(13, HIGH);

delay(3000);

//Initialize the LCD in 16x2 mode

lcd.begin(16, 2);

delay(100);

//Set cursor at first character/coloumn of first line/row

lcd.setCursor(0,0);

//Print the message as metioned cursor location

lcd.print(" IomaTic ");

//Set cursor at first character/coloumn of first line/row

lcd.setCursor(0,1);

//Print the message as metioned cursor location

lcd.print("GPS Location..");

//Initialize a serial communication with baud rate 9600

Serial.begin(9600);

delay(500);

Serial.print("AT+CGNSPWR=1\r\n");

delay(2000);

// Serial.print("AT+CGNSTST=1\r\n");

// delay(2000);

Serial.print("AT+CGNSSEQ=\"RMC\"\r\n");

delay(2000);

}

void loop()

{

GetLocation();

delay(1000);

}

void GetLocation()

{

// OPERATOR

Serial.print("AT+CGNSINF\r\n");

// find operator name between two double quotes

if (Serial.find("+CGNSINF: "))

{

serialResponse = Serial.readStringUntil('\r\n');

cnt=0;

char buf[sizeof(Input)];

serialResponse.toCharArray(buf, sizeof(buf));

char \*p = buf;

char \*str;

// delimiter is the semicolon

while ((str = strtok\_r(p, ",", &p)) != NULL)

{

Serial.println(str);

arr[cnt]=str;

cnt++;

}

lcd.clear();

//Set cursor at first character/coloumn of first line/row

lcd.setCursor(0,0);

lcd.print("Lon:");

//Print the message as metioned cursor location

lcd.print(arr[3]);

//Set cursor at first character/coloumn of first line/row

lcd.setCursor(0,1);

lcd.print("Lat:");

//Print the message as metioned cursor location

lcd.print(arr[4]);

}

}

# Libraries:

No additional libraries required..

# Functions:

*AT Commands:*

AT stands for Attention and these commands are used for controlling MODEMs.