**CODE**

#include <avr/io.h>

#include <util/delay.h>

#include "lib/lcd/lcd.h"

#include "lib/sim300/sim300.h"

void Halt();

int main(void)

{

//Initialize LCD Module

LCDInit(LS\_NONE);

//Intro Message

LCDWriteString("SIM300 Demo !");

LCDWriteStringXY(0,1,"By Bhumika");

\_delay\_ms(1000);

LCDClear();

//Initialize SIM300 module

LCDWriteString("Initializing ...");

int8\_t r= SIM300Init();

\_delay\_ms(1000);

//Check the status of initialization

switch(r)

{

case SIM300\_OK:

LCDWriteStringXY(0,1,"OK !");

break;

case SIM300\_TIMEOUT:

LCDWriteStringXY(0,1,"No response");

Halt();

case SIM300\_INVALID\_RESPONSE:

LCDWriteStringXY(0,1,"Inv response");

Halt();

case SIM300\_FAIL:

LCDWriteStringXY(0,1,"Fail");

Halt();

default:

LCDWriteStringXY(0,1,"Unknown Error");

Halt();

}

\_delay\_ms(1000);

//IMEI No display

LCDClear();

char imei[16];

r=SIM300GetIMEI(imei);

if(r==SIM300\_TIMEOUT)

{

LCDWriteString("Comm Error !");

Halt();

}

LCDWriteString("Device IMEI:");

LCDWriteStringXY(0,1,imei);

\_delay\_ms(1000);

//Manufacturer ID

LCDClear();

char man\_id[48];

r=SIM300GetManufacturer(man\_id);

if(r==SIM300\_TIMEOUT)

{

LCDWriteString("Comm Error !");

Halt();

}

LCDWriteString("Manufacturer:");

LCDWriteStringXY(0,1,man\_id);

\_delay\_ms(1000);

//Manufacturer ID

LCDClear();

char model[48];

r=SIM300GetModel(model);

if(r==SIM300\_TIMEOUT)

{

LCDWriteString("Comm Error !");

Halt();

}

LCDWriteString("Model:");

LCDWriteStringXY(0,1,model);

\_delay\_ms(1000);

//Check Sim Card Presence

LCDClear();

LCDWriteString("Checking SIMCard");

\_delay\_ms(1000);

r=SIM300IsSIMInserted();

if (r==SIM300\_SIM\_NOT\_PRESENT)

{

//Sim card is NOT present

LCDWriteStringXY(0,1,"No SIM Card !");

Halt();

}

else if(r==SIM300\_TIMEOUT)

{

//Communication Error

LCDWriteStringXY(0,1,"Comm Error !");

Halt();

}

else if(r==SIM300\_SIM\_PRESENT)

{

//Sim card present

LCDWriteStringXY(0,1,"SIM Card Present");

\_delay\_ms(1000);

}

//Network search

LCDClear();

LCDWriteStringXY(0,0,"SearchingNetwork");

uint8\_t nw\_found=0;

uint16\_t tries=0;

uint8\_t x=0;

while(!nw\_found)

{

r=SIM300GetNetStat();

if(r==SIM300\_NW\_SEARCHING)

{

LCDWriteStringXY(0,1,"%0%0%0%0%0%0%0%0%0%0%0%0%0%0%0%0");

LCDWriteStringXY(x,1,"%1");

LCDGotoXY(17,1);

x++;

if(x==16) x=0;

\_delay\_ms(50);

tries++;

if(tries==600)

break;

}

else

break;

}

LCDClear();

if(r==SIM300\_NW\_REGISTERED\_HOME)

{

LCDWriteString("Network Found");

}

else

{

LCDWriteString("Cant Connt to NW!");

Halt();

}

\_delay\_ms(1000);

LCDClear();

//Show Provider Name

char pname[32];

r=SIM300GetProviderName(pname);

if(r==0)

{

LCDWriteString("Comm Error !");

Halt();

}

LCDWriteString(pname);

\_delay\_ms(1000);

//Send MSG

LCDClear();

LCDWriteString("Sending Msg");

uint8\_t ref;

r=SIM300SendMsg("+918559923771","Test",&ref); // can Change phone number

if(r==SIM300\_OK)

{

LCDWriteStringXY(0,1,"Success");

LCDWriteIntXY(9,1,ref,3);

}

else if(r==SIM300\_TIMEOUT)

{

LCDWriteStringXY(0,1,"Time out !");

}

else

{

LCDWriteStringXY(0,1,"Fail !");

}

\_delay\_ms(2000);

//Wait for MSG

uint8\_t id;

UFlushBuffer();

while(1)

{

LCDClear();

LCDWriteStringXY(0,0,"Waiting for msg");

x=0;

int8\_t vx=1;

while(SIM300WaitForMsg(&id)!=SIM300\_OK)

{

LCDWriteStringXY(0,1,"%0%0%0%0%0%0%0%0%0%0%0%0%0%0%0%0");

LCDWriteStringXY(x,1,"%1");

LCDGotoXY(17,1);

x+=vx;

if(x==15 || x==0) vx=vx\*-1;

}

LCDWriteStringXY(0,1,"MSG Received ");

\_delay\_ms(1000);

//Now read and display msg

LCDClear();

char msg[300];

r=SIM300ReadMsg(id,msg);

if(r==SIM300\_OK)

{

LCDWriteStringXY(0,0,msg);

\_delay\_ms(3000);

}

else

{

LCDWriteString("Err Reading Msg !");

\_delay\_ms(3000);

}

//Finally delete the msg

if (SIM300DeleteMsg(id)!=SIM300\_OK)

{

LCDWriteString("Err Deleting Msg !");

\_delay\_ms(3000);

}

}

Halt();

}

void Halt()

{

while(1);

}