Code for transmitter module:

#include <nRF24L01.h>

#include <printf.h>

#include <RF24.h>

#include <RF24\_config.h>

#include<Wire.h>

#include<SPI.h>

#include<nRF24L01.h>

int CE\_pin=7, CSN\_pin=8;

RF24 myRadio(CE\_pin,CSN\_pin);

const byte pipe [6] = "00001";

const int MPU\_addr=0x68; int16\_t AcX,AcY,AcZ,Tmp,GyX,GyY,GyZ;

int minVal=265; int maxVal=402;

double x; double y; double z;

void setup(){

Wire.begin();

Wire.beginTransmission(MPU\_addr);

Wire.write(0x6B); Wire.write(0);

Wire.endTransmission(true);

Serial.begin(9600);

myRadio.begin();

myRadio.setChannel(115);

myRadio.setPALevel(RF24\_PA\_MAX);

myRadio.openWritingPipe(pipe);

myRadio.stopListening();

delay(1000);

}

void loop(){

int res=0;

Wire.beginTransmission(MPU\_addr);

Wire.write(0x3B);

Wire.endTransmission(false);

Wire.requestFrom(MPU\_addr,14,true);

AcX=Wire.read()<<8|Wire.read();

AcY=Wire.read()<<8|Wire.read();

AcZ=Wire.read()<<8|Wire.read();

int xAng = map(AcX,minVal,maxVal,-90,90);

int yAng = map(AcY,minVal,maxVal,-90,90);

int zAng = map(AcZ,minVal,maxVal,-90,90);

x= RAD\_TO\_DEG \* (atan2(-yAng, -zAng)+PI);

y= RAD\_TO\_DEG \* (atan2(-xAng, -zAng)+PI);

z= RAD\_TO\_DEG \* (atan2(-yAng, -xAng)+PI);

//Serial.print("AngleX= "); Serial.println(x);

// Serial.print("AngleY= "); Serial.println(y);

//Serial.print("AngleZ= "); Serial.println(z);

delay(8000);

if (x >= 90 && x <=100 )

{

res=1;

}

myRadio.write(&res,sizeof(res));

Serial.println(res);

}

Code for receiver module:

#include<SPI.h>

#include<nRF24L01.h>

#include<RF24.h>

#include <LiquidCrystal.h>

/\* Create object named lcd of the class LiquidCrystal \*/

LiquidCrystal lcd(13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3); /\* For 8-bit mode \*/

//LiquidCrystal lcd(13, 12, 11, 6, 5, 4, 3); /\* For 4-bit mode \*/

unsigned char Character1[8] = { 0x04, 0x1F, 0x11, 0x11, 0x1F, 0x1F, 0x1F, 0x1F }; /\* Custom Character 1 \*/

unsigned char Character2[8] = { 0x01, 0x03, 0x07, 0x1F, 0x1F, 0x07, 0x03, 0x01 }; /\* Custom Character 2 \*/

int CE\_pin=7, CSN\_pin=8;

RF24 myRadio(CE\_pin,CSN\_pin);

const byte pipe [6] = "00001";

void setup()

{

lcd.begin(16,2); /\* Initialize 16x2 LCD \*/

lcd.clear(); /\* Clear the LCD \*/

lcd.createChar(0, Character1); /\* Generate custom character \*/

lcd.createChar(1, Character2);

Serial.begin(9600);

delay(1000);

myRadio.begin();

myRadio.setChannel(115);

myRadio.setPALevel(RF24\_PA\_MIN);

myRadio.openReadingPipe(0,pipe);

myRadio.startListening();

delay(1000);

}

void loop()

{

if (myRadio.available())

{ int res=0;

myRadio.read(&res,sizeof(res));

Serial.println("printing ");

Serial.println(res);

lcd.setCursor(0,0); /\* Set cursor to column 0 row 0 \*/

lcd.print("hello!!!");/\* Print data on display \*/

lcd.setCursor(0,1);

switch (res)

{

case 1:

lcd.print("water needed");

Serial.print("ok");

break;

case 2:

lcd.print("food needed");

break;

case 3:

lcd.print("fan on/off");

break;

case 4:

lcd.print("call doctor");

break;

default:

lcd.print("out");

break;

}

}

}