



```
Serial.println("LoRa Sender");  
if (!LoRa.begin(433E6)) {  
    Serial.println("Starting LoRa failed!");  
    while (1);  
}  
LoRa.setTxPower(20);  
pulseSensor.analogInput(PulseWire);  
pulseSensor.setThreshold(Threshold);  
if (pulseSensor.begin()) {  
    Serial.println("We created a pulseSensor Object !");  
}  
}
```

```
void loop() {  
    d=digitalRead(7);  
    if(d==0)  
    {  
        while (gpsSerial.available() > 0)  
            if (gps.encode(gpsSerial.read()))  
                if (gps.location.isValid())  
                {  
                    Serial.println("Sending to LoRa");  
                    LoRa.beginPacket();  
                    LoRa.print("Lat: ");
```

```
    LoRa.print(gps.location.lat(), 6);  
    LoRa.print("\n");  
    LoRa.print("Long: ");  
    LoRa.print(gps.location.lng(), 6);  
    LoRa.print("\n");  
    Serial.print("Sent via LoRa");  
    LoRa.endPacket();  
}  
}  
  
int myBPM = pulseSensor.getBeatsPerMinute();  
if (pulseSensor.sawStartOfBeat()) {  
    Serial.println("♥ A HeartBeat Happened !");  
    Serial.print("BPM: ");  
    Serial.println(myBPM);  
}  
    delay(20);  
}
```

## **Receiver Code:**

```
#include <ESP8266WiFi.h>  
#include <FirebaseArduino.h>  
#include <SPI.h>  
#include <LoRa.h>
```

```
#define FIREBASE_HOST "locate-228a3.firebaseio.com"

#define FIREBASE_AUTH
"opI68e5raFm9qqDO5twlqQFIQklhfG2hWdL1228V"

#define WIFI_SSID "Haaa"

#define WIFI_PASSWORD "12345678"

#define Nss 15

#define rst 16

#define dio0 4

void setup() {
    Serial.begin(115200);
    LoRa.setPins(Nss, rst, dio0);
    if (!LoRa.begin(433E6)) {
        Serial.println("Starting LoRa failed!");
        while (1);
    }
    WiFi.begin(WIFI_SSID, WIFI_PASSWORD);
    Serial.print("Connecting to ");
    Serial.print(WIFI_SSID);
    while (WiFi.status() != WL_CONNECTED) {
        Serial.print(".");
        delay(500);
    }
    Serial.println();
    Serial.print("Connected to ");
    Serial.println(WIFI_SSID);
```

```
Serial.print("IP Address is : ");  
Serial.println(WiFi.localIP());  
Firestore.begin(FIREBASE_HOST, FIREBASE_AUTH);  
}
```

```
void loop() {  
int packetSize = LoRa.parsePacket();  
if (packetSize) {  
Serial.print("Received packet ");  
delay(1000);  
while (LoRa.available()) {  
Serial.print((char)LoRa.read());  
delay(1000);  
String locatn = String((char)LoRa.read());  
Firestore.pushString("location", locatn);  
}  
Serial.print(" with RSSI ");  
Serial.println(LoRa.packetRssi());  
}  
}
```