LoRa Example Program

VCC	ESP32 3.3V
GND	ESP32 GND
NSS/SS	GPIO 5
RESET	GPIO 14
MOSI	GPIO 23
MISO	GPIO 19
DIO0	GPIO 2
SCK	GPIO 18

LoRa Sender

This code initializes a LoRa (Long Range) communication module to send a "Hello, receiver!" message every 2 seconds over the 433 MHz frequency. It configures the LoRa module with specific pin connections and checks if initialization is successful. If successful, it repeatedly transmits the message and prints "Message Sent" to the serial monitor.

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

#define NSS_PIN 5
#define RESET_PIN 14
#define DIO0_PIN 2

void setup()
{
  Serial.begin(9600);
  while (!Serial);

  LoRa.setPins(NSS_PIN, RESET_PIN, DIO0_PIN);

  if (!LoRa.begin(433E6))
  {
    Serial.println("LoRa initialization failed. Check your connections.");
    while (1);
  }

  Serial.println("LoRa Initialized");
}

void loop()
 {
  String message = "Hello, receiver!";

  LoRa.beginPacket();
  LoRa.print(message);
  LoRa.endPacket();

  Serial.println("Message Sent");
  delay(2000); // Adjust as needed
}
```

LoRa Receiver

This code initializes a LoRa module for receiving messages over the 433 MHz frequency. It sets up the LoRa module using specified pins and checks if initialization is successful. In the `loop()` function, it continuously listens for incoming packets. When a packet is received, it reads and prints the message to the serial monitor.

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

#define NSS_PIN 5    // Choose any GPIO pin for NSS
#define RESET_PIN 14 // Choose any GPIO pin for RESET
#define DIO0_PIN 2   // Choose any GPIO pin for DIO0

void setup()
 {
  Serial.begin(9600);
  while (!Serial);

  LoRa.setPins(NSS_PIN, RESET_PIN, DIO0_PIN);

  if (!LoRa.begin(433E6))
 {
    Serial.println("LoRa initialization failed. Check your connections.");
    while (1);
  }

  Serial.println("LoRa Initialized");
}

void loop()
 {
  if (LoRa.parsePacket())
{
    // Received a packet
    while (LoRa.available())
 {
      Serial.print((char)LoRa.read());
    }
    Serial.println();
  }
}
```