Circuit Diagram:

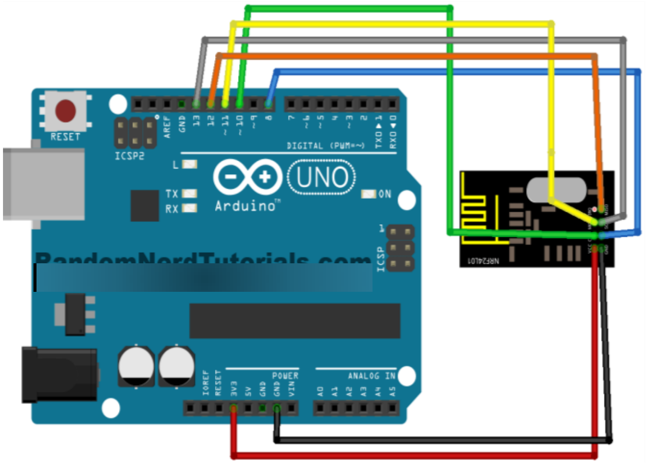


Figure:Transmitter

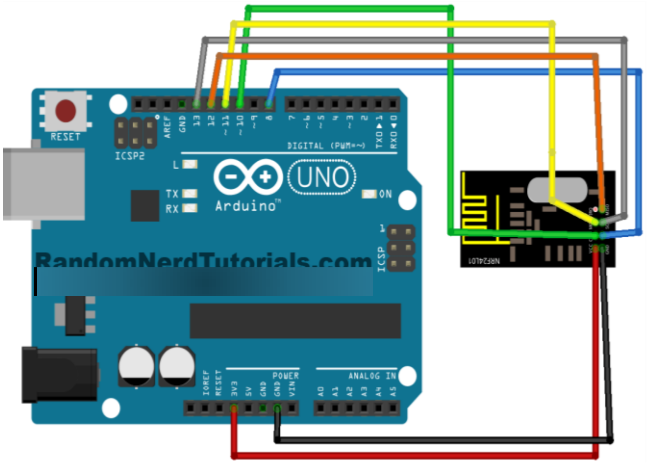
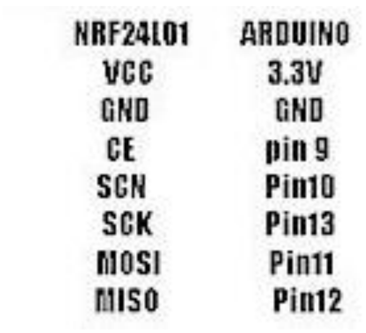
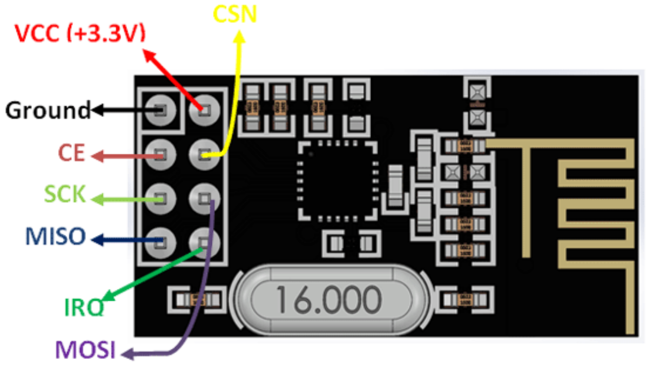


Figure:Receiver

Pin Diagram:



NRF24L01	ARDUINO
VCC	3.3V
GND	GND
CE	pin 9
SCN	Pin10
SCK	Pin13
MOSI	Pin11
MISO	Pin12



Source Code:

Transmitter:

```
#include <SPI.h>
#include "RF24.h"

RF24 myRadio (9, 10);
byte addresses[][6] = {"00100"};
struct package {
  int id = 1;
  float temperature = 18.3;
  char  text[500]="";
};

typedef struct package Package;
Package dataRecieve;
Package dataTransmit;

void setup() {
  Serial.begin(115200);
  delay(2000);
  myRadio.begin();
  myRadio.setChannel(115);
  myRadio.setPALevel(RF24_PA_MAX);
  myRadio.setDataRate( RF24_250KBPS );

  myRadio.openReadingPipe(1, addresses[0]);
  myRadio.startListening();
}

void loop() {
  if ( myRadio.available()) {
    while (myRadio.available()){
      myRadio.read( &dataRecieve, sizeof(dataRecieve) );
    }
    Serial.println("Recieve: ");
    Serial.print("Package:");
    Serial.print(dataRecieve.id);
    Serial.print("\n");
    Serial.println(dataRecieve.text);
    Serial.print("\n");
  }
  delay(2000);
  myRadio.stopListening();
  dataTransmit.id = dataTransmit.id + 1;
  dataTransmit.temperature =
dataTransmit.temperature+0.1;
  Serial.println("Transmit: ");
  Serial.print("Package:");
  Serial.print(dataTransmit.id);
  Serial.print("\n");
  Serial.println(dataTransmit.text);
  Serial.print("\n");
  char inData[500];
  int index = 0;
  while (Serial.available() >= 1) {
    if (index < 500) {
      inData[index] = Serial.read();
      index++;
      inData[index] = '\0';
      sprintf(dataTransmit.text, "%s", inData);
    }
  }
  myRadio.openWritingPipe(addresses[0]);
  myRadio.write(&dataTransmit, sizeof(dataTransmit));
  myRadio.openReadingPipe(1, addresses[0]);
  myRadio.startListening();
}
```

Receiver:

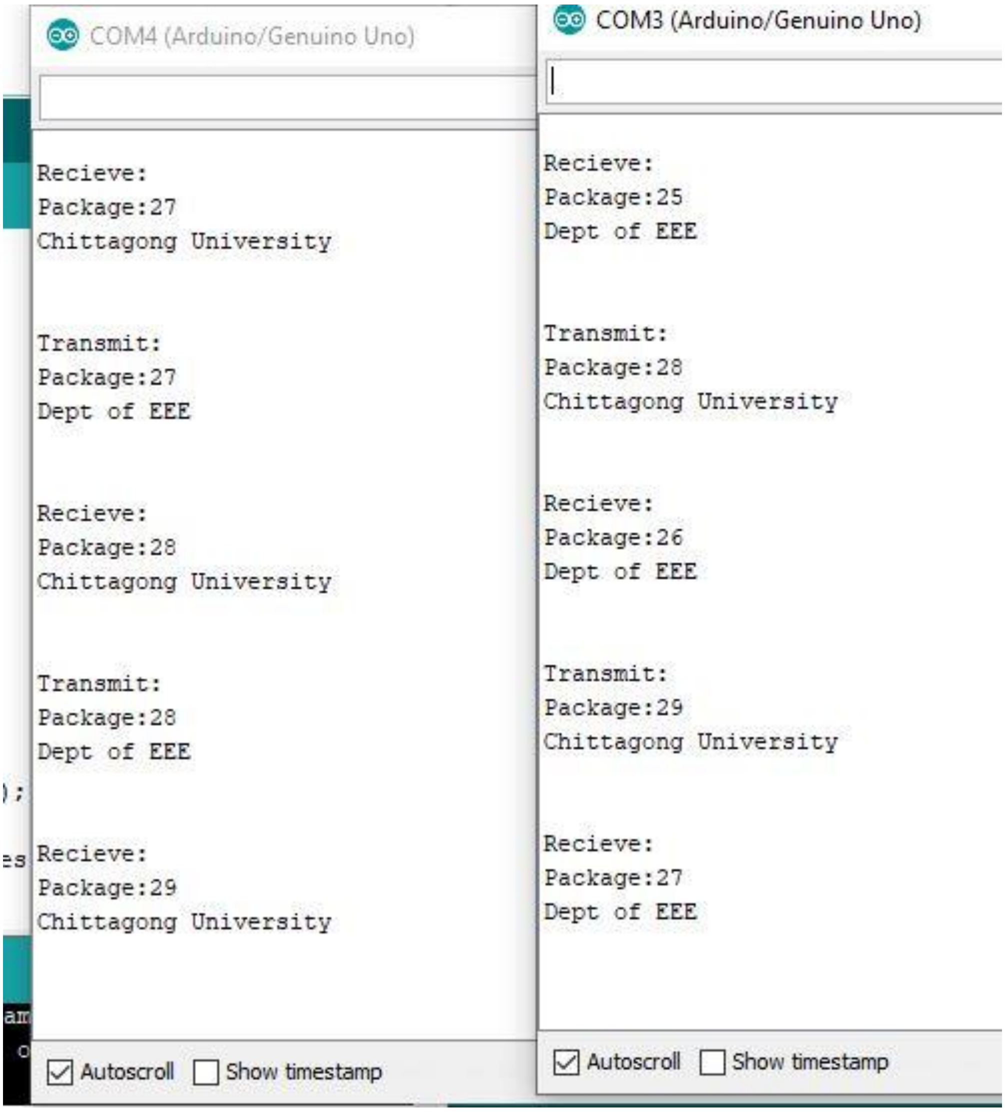
```
#include <SPI.h>
#include "RF24.h"

RF24 myRadio (9, 10);
byte addresses[][6] = {"00100"};
struct package {
  int id = 1;
  float temperature = 18.3;
  char  text[500]="";
};
typedef struct package Package;
Package dataRecieve;
Package dataTransmit;

void setup() {
  Serial.begin(115200);
  delay(2000);
  myRadio.begin();
  myRadio.setChannel(115);
  myRadio.setPALevel(RF24_PA_MAX);
  myRadio.setDataRate( RF24_250KBPS );

  myRadio.openReadingPipe(1, addresses[0]);
  myRadio.startListening();
}
void loop() {
  if ( myRadio.available()) {
    while (myRadio.available()){
      myRadio.read( &dataRecieve, sizeof(dataRecieve) );
    }
    Serial.println("Recieve: ");
    Serial.print("Package:");
    Serial.print(dataRecieve.id);
    Serial.print("\n");
    Serial.println(dataRecieve.text);
    Serial.print("\n");
  }
  delay(2000);
  myRadio.stopListening();
  dataTransmit.id = dataTransmit.id + 1;
  dataTransmit.temperature =
dataTransmit.temperature+0.1;
  Serial.println("Transmit: ");
  Serial.print("Package:");
  Serial.print(dataTransmit.id);
  Serial.print("\n");
  Serial.println(dataTransmit.text);
  Serial.print("\n");
  char inData[500];
  int index = 0;
  while (Serial.available() >= 1) {
    if (index < 500) {
      inData[index] = Serial.read();
      index++;
      inData[index] = '\0';
      sprintf(dataTransmit.text, "%s", inData);
    }
  }
  myRadio.openWritingPipe(addresses[0]);
  myRadio.write(&dataTransmit, sizeof(dataTransmit));
  myRadio.openReadingPipe(1, addresses[0]);
  myRadio.startListening();
}
```

Serial Monitor:



COM4 (Arduino/Genuino Uno)

```
Recieve:
Package:27
Chittagong University


Transmit:
Package:27
Dept of EEE


Recieve:
Package:28
Chittagong University


Transmit:
Package:28
Dept of EEE


Recieve:
Package:29
Chittagong University
```

COM3 (Arduino/Genuino Uno)

```
Recieve:
Package:25
Dept of EEE


Transmit:
Package:28
Chittagong University


Recieve:
Package:26
Dept of EEE


Transmit:
Package:29
Chittagong University


Recieve:
Package:27
Dept of EEE
```