Don Bosco Institute of Technology

Department of EXTC

AY 2021-2022

Mini project presentation

TOPIC: BADMINTON SCOREBOARD

Project guide: Jithin Issac

Group number: 13

Group members:

01: Abhishek Waghmare

15: Lovely Varshney

E-14: Dhanshree Pansare

E-15: Divya Sharma

Aim:

- To increment or reset score on 8*8 dot matrix using nRF24l01 transceiver module and push buttons.

Problem statement:

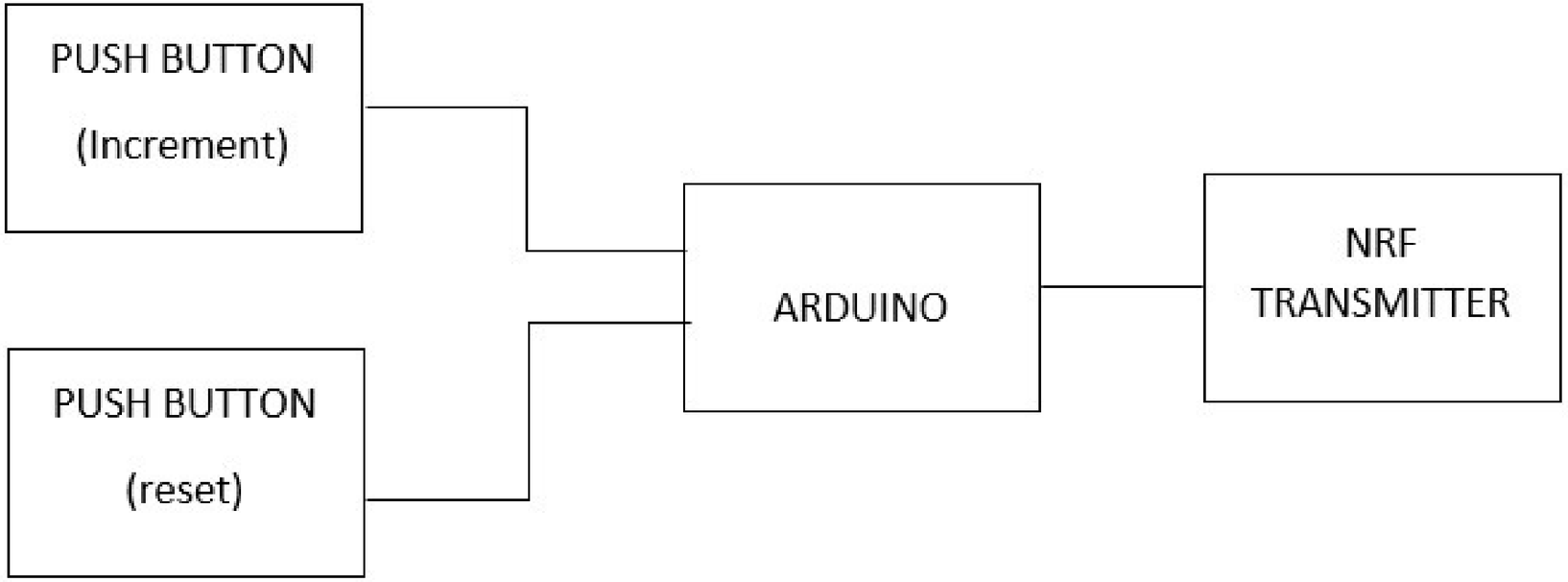
- To design a device to keep track of the badminton score with 8*8 dot matrix, 2-push buttons (one for each side), with points display from0 to 21.

Applications:

- Score board for indoor sport activities.
- Score board for outdoor sport activities.

Block diagram:

TRANSMITTER



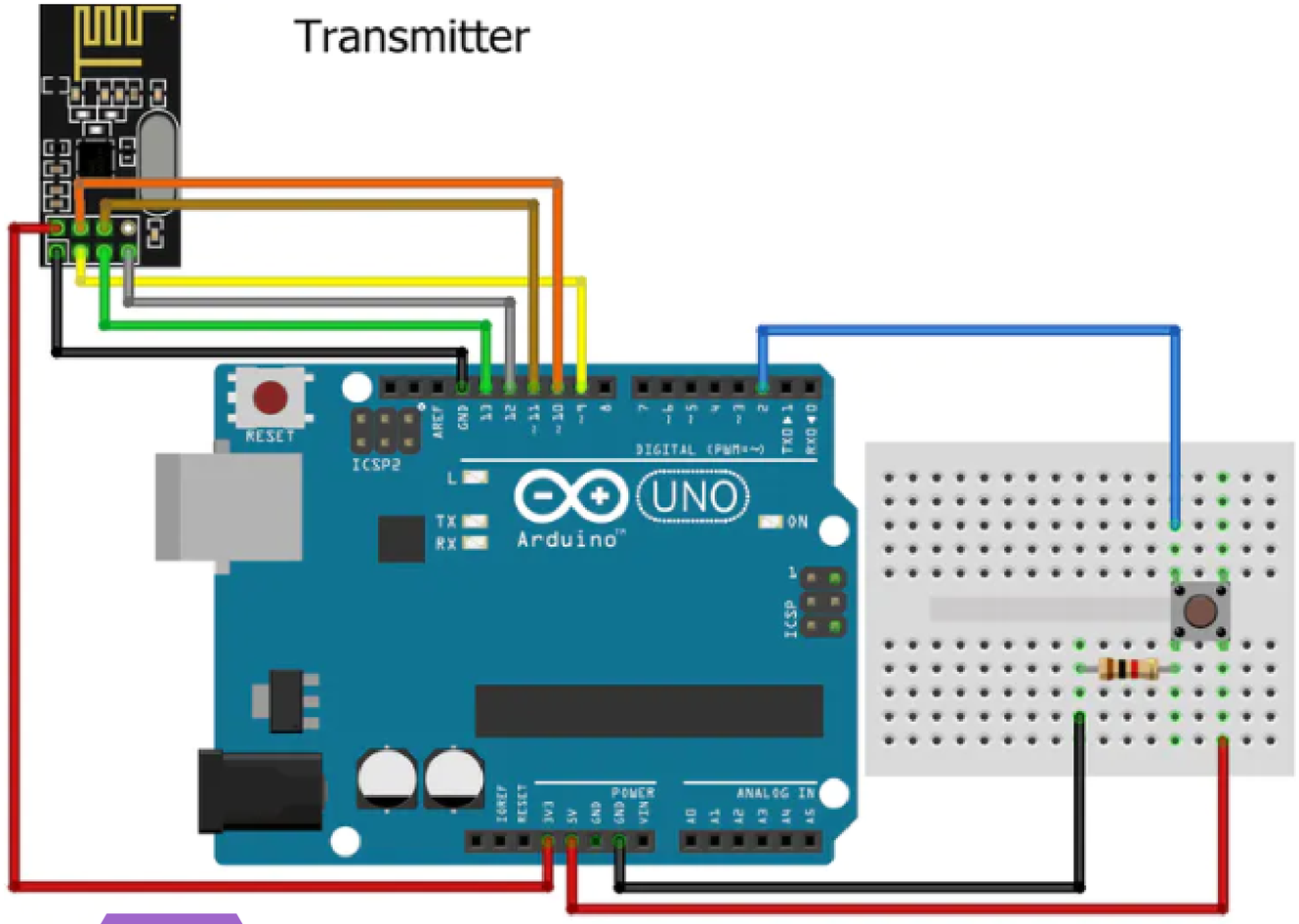
RECEIVER

Bill Of Materials

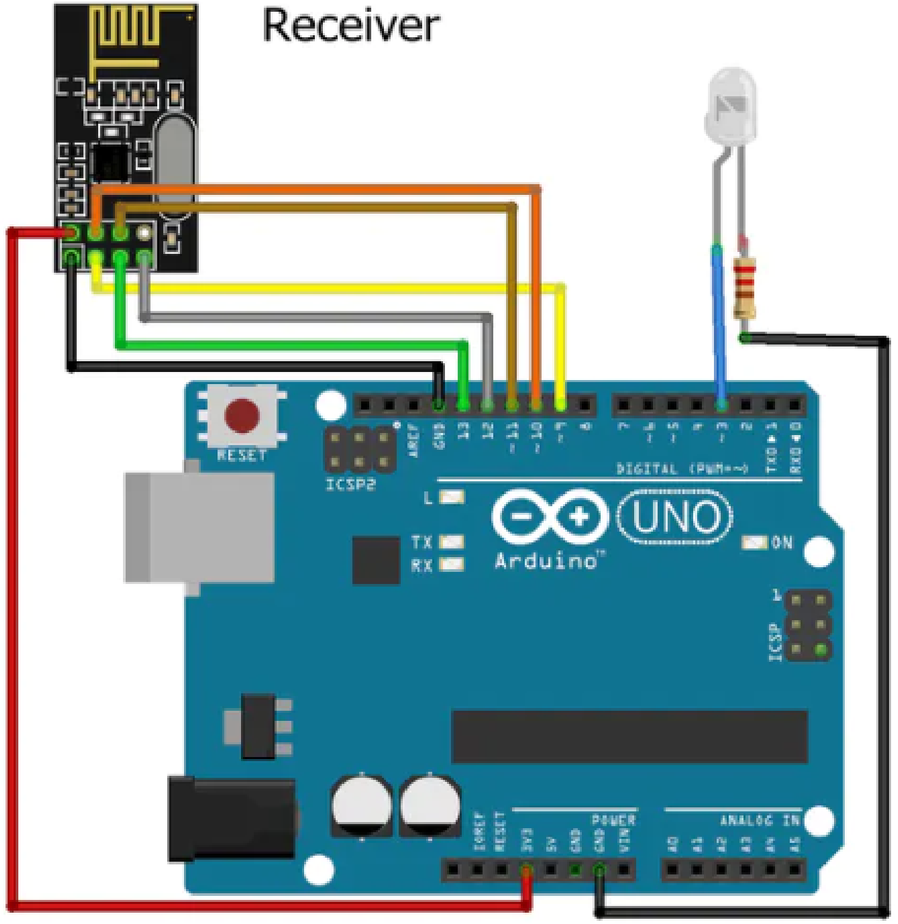
SERIAL NUMBER	COMPONENTS	QUANTITY	COST (RS.)
1	Arduino UNO	2	1298
2	8*8 Dot Matrix	1	165
3	nRf24l01 module	2	160
4	Push button	2	16
5	Jumper Wire	-	122
		TOTAL	RS. 1761

Connections:

Transmitter



Receiver



ARDUINO IDE

06

trans | Arduino 1.8.19 (Windows Store 1.8.57.0)

File Edit Sketch Tools Help

trans

```
#include <SPI.h>
#include <nRF24L01.h>
#include <RF24.h>
RF24 radio(9, 10);
const byte address[6] = "00001";
int button_pin = 2;
boolean button_state = 0;

void setup()
{
  pinMode(button_pin, INPUT);
  radio.begin();
  radio.openWritingPipe(address);
  radio.setPALevel(RF24_PA_MIN);
  radio.stopListening();
}


void loop()
{
  //INCREMENT BUTTON PIN
  button_state = digitalRead(button_pin);
  if (button_state == HIGH)
  {
    const char text[] = "Your Button State is HIGH";
```

1 Arduino Uno on COM4

rec | Arduino 1.8.19 (Windows Store 1.8.57.0)

File Edit Sketch Tools Help

rec

```
#include <SPI.h>
#include <nRF24L01.h>
#include <RF24.h>
#include <LedControl.h>


int DIN = 5;
int CS =  6;
int CLK = 7;

RF24 radio(9, 10);
const byte address[6] = "00001";
boolean button_state = 0;
int led_pin = 3;


byte zero[8] = {0x00, 0xEE, 0xAA, 0xAA, 0xAA, 0xAA, 0xAA, 0xEE};
byte one[8] = {0x00, 0xE4, 0xAC, 0xA4, 0xA4, 0xA4, 0xA4, 0xEE};
byte two[8] = {0x00, 0xEE, 0xA2, 0xA2, 0xAE, 0xA8, 0xA8, 0xEE};
byte three[8] = {0x00, 0xEE, 0xA2, 0xA2, 0xAE, 0xA2, 0xA2, 0xEE};
byte four[8] = {0x00, 0xE2, 0xA6, 0xAA, 0xAF, 0xA2, 0xA2, 0xE2};
byte five[8] = {0x00, 0xEE, 0xA8, 0xA8, 0xAE, 0xA2, 0xA2, 0xEE};
byte six[8] = {0x00, 0xEE, 0xA8, 0xA8, 0xAE, 0xAA, 0xAA, 0xEE};
byte seven[8] = {0x00, 0xEE, 0xA2, 0xA2, 0xA2, 0xA2, 0xA2, 0xE2};
byte eight[8] = {0x00, 0xEE, 0xAA, 0xAA, 0xAE, 0xAA, 0xAA, 0xEE};
```

8 Arduino Uno on COM4

Output:

The project is divided in two parts:

1) To use push button for controlling 8*8 dot matrix
2) Making this entire circuitry wireless using nRF24l01 Transceiver module