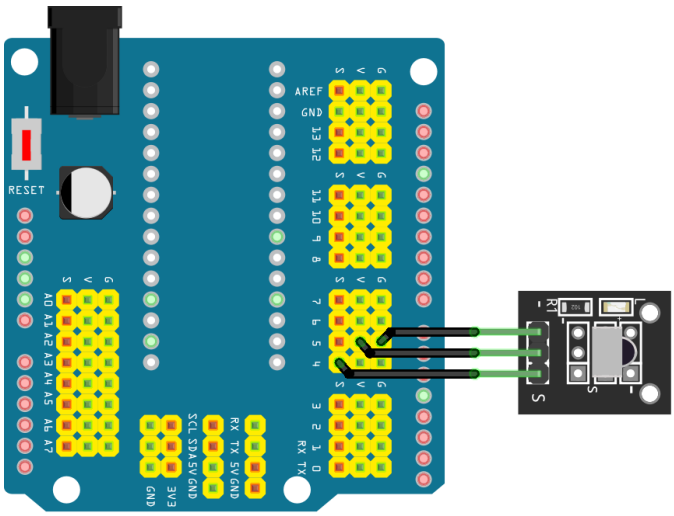
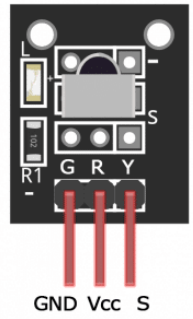
Task.1. Connect the circuit as shown in the picture:





Arduino board	KY-22 board
+5V	Vcc
GND	GND
DIO4	S

This module consists of a V1838B IR receiver, a 1kΩ resistor, and a IR diode. It works together with the KY-005 IR transmitter module.

- operating voltage: 2.7 to 5.5V
- operating current : 0.4 to 1.5mA
- reception distance: 18m
- reception angle: ±45º
- carrier frequency: 38kHz
- ambient light filter: up to 500lx

Code example:

```
#include <IRremote.h>

#define IR_PIN 4
#define BAUDRATE 115200

long p_millis = 0;
#define IR_DELAY 1000

void setup() {
Serial.begin(BAUDRATE);
IrReceiver.begin(IR_PIN, ENABLE_LED_FEEDBACK); }

void loop() {
if(millis() - p_millis > IR_DELAY) {
  if(IrReceiver.decode()) {
   IrReceiver.printIRResultShort(&Serial);
   Serial.print(F("rawdata = 0x"));
         Serial.println(IrReceiver.decodedIRData.decodedRawData,
HEX);
   Serial.print(F("command = 0x"));
   Serial.println(IrReceiver.decodedIRData.command, HEX);
   Serial.println(F("OK"));
```

```
      IrReceiver.resume();      //receiver reset
      p_millis = millis();
    }
  }
  }
```

Reference:

github.com/Arduino-IRremote/Arduino-IRremote

Task 2. Identify all key codes and commands.

Task 3. Create a program for the Arduino board that allows You to control the servo with IR remote control.

Task.4. Create a program for the Arduino board that allows You to control (turn on and off) every cell on the LCD.

Task.5. Create a program for controlling the gauge on the Node-RED-based interface.

For those interested:

1. How to use an IR receiver and remote with Arduino:

   www.makerguides.com/ir-receiver-remote-arduino-tutorial/

2. Sparkfun tutorials - IR Communication:

   learn.sparkfun.com/tutorials/ir-communication