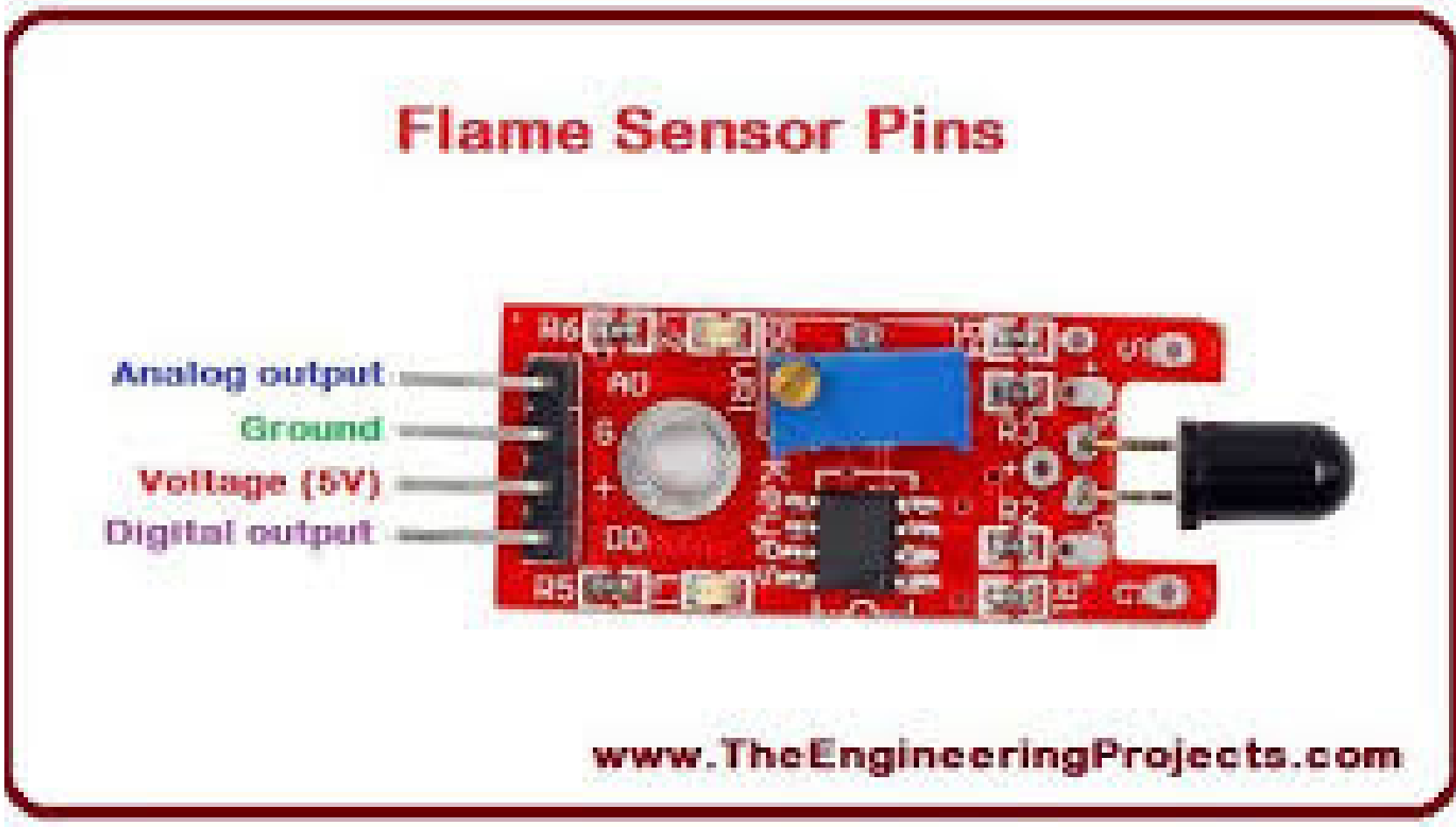
FIRE
SYSTEM

Fire Alarm System component :

- Flame Sensor Module 4 Pins
- Buzzer Alarm 3-24V 95D



How will we connect the system :

1\ connect the gnd of sensor to the gnd of esp32 in breadboard .

2\ connect the voltage of sensor to 5v of esp in breadboard .

3\connect Analog output of sensor to ones of analog pins in esp32 .

4\ connect Digital Output of sensor to ones of digital pens .

5\ we need another digital pin for the + terminal of buzzer and - terminal for the ground .

conclusion :

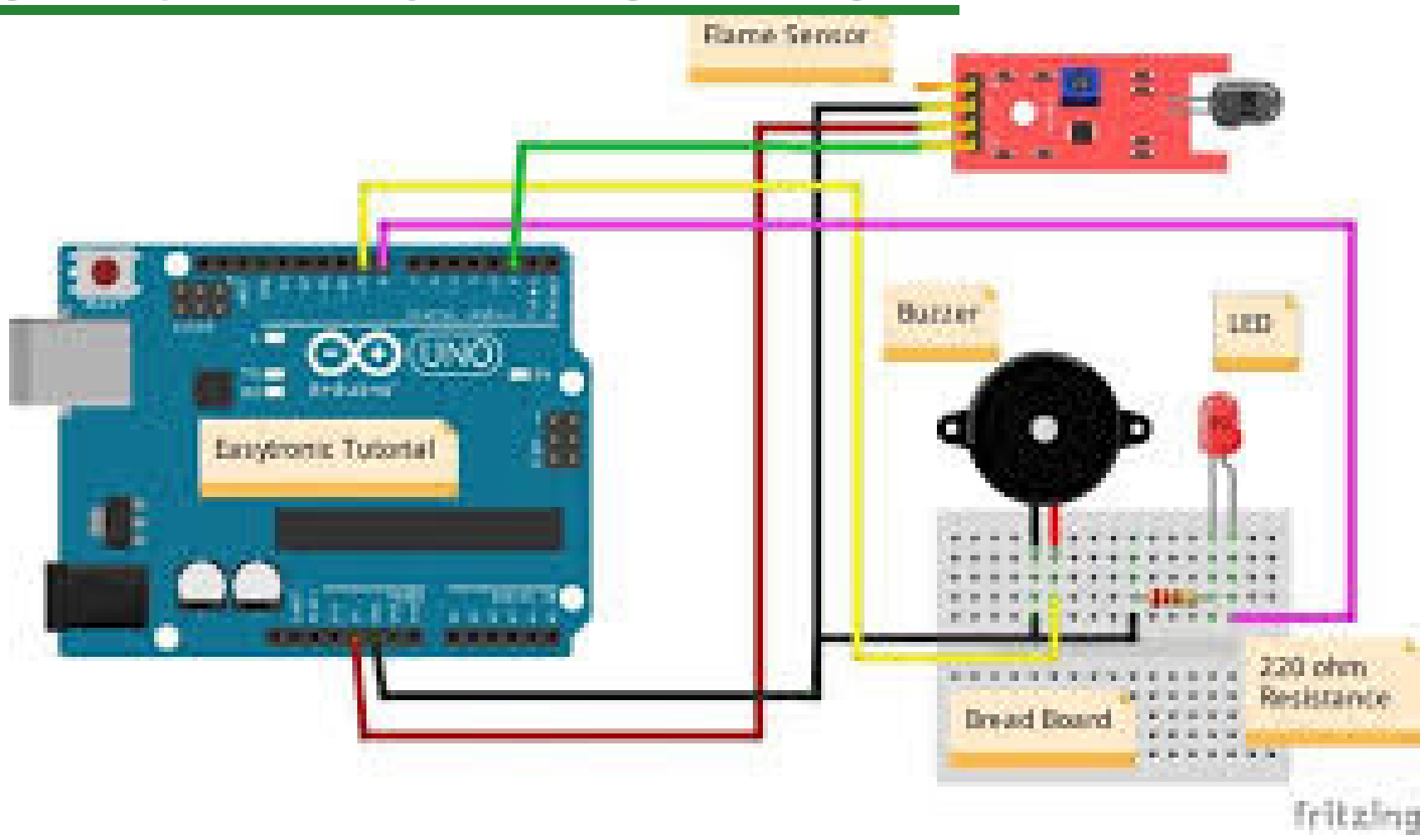
we need 3 pins of esp32 :

analog & digital pin for flame sensor.

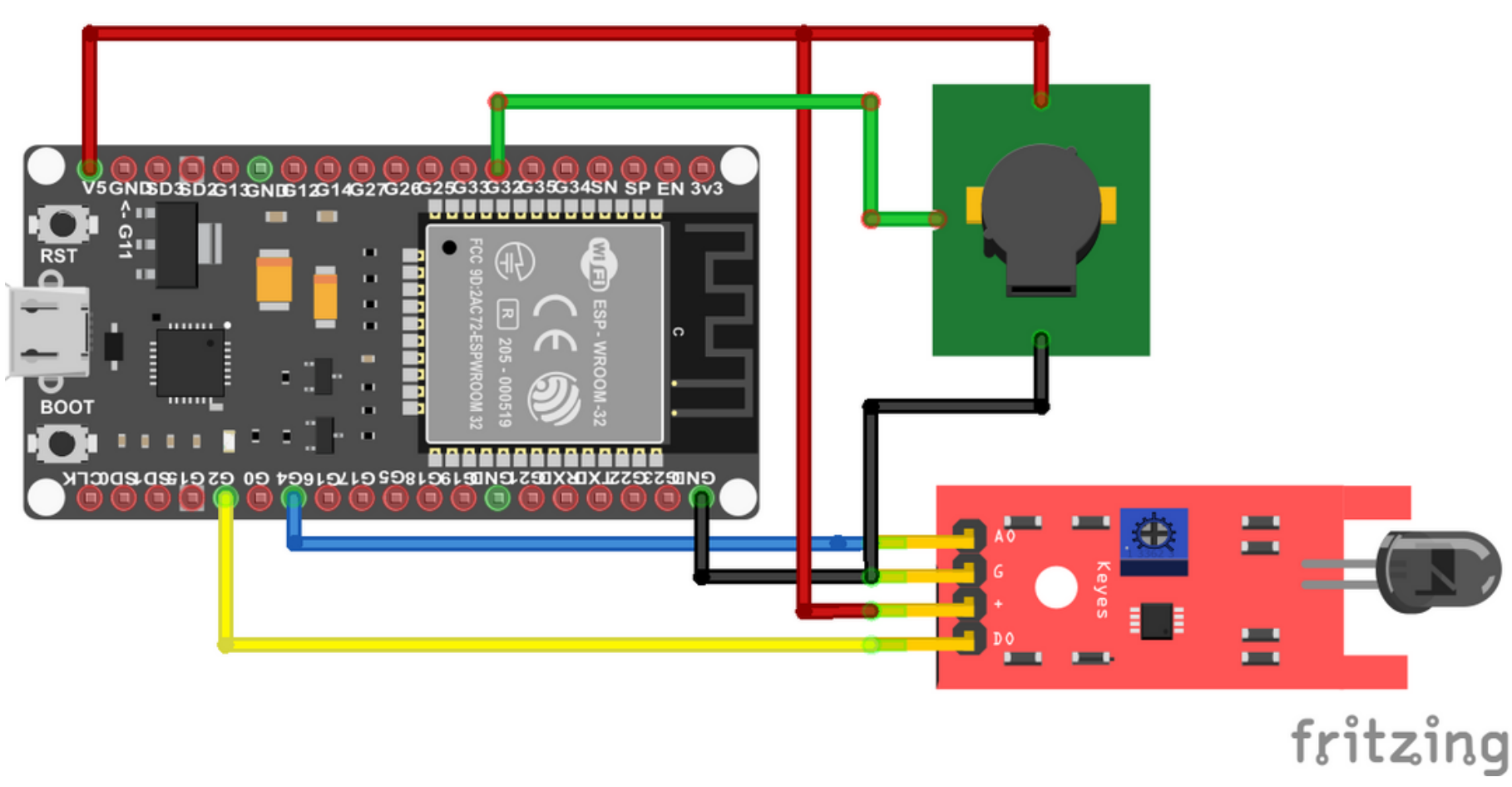
digital pin for buzzer .

And volt of 5v .

Simulation at Arduino uno :



Simulation at esp 32 :



The scenario :

1) Firstly , Our system will be in the second floor of our maqette this For ease of testing, bring the fire closer to the sensor

2)In regular conditions flame sensor is meauring a wave lenght in range of 900 to 1000 but when we bring the fire closer to the sensor wave length will dicreased to a little vales dont exceed 100.

3)This is our main idea , when wave length decreased we will make an if codition to fire the buzzer (making alarm) and send a notification for our web server .

4)we can get benfit from the lighting system to changing the color of our led to the red color(only in condition of rgb leds) .
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Extras

5) we can regulate that when the fire occured order the servo motor in garage and main door to open .
In order not to conflict with security system, Openinig the door will be only when the fire still for 5minutes or more and If the source of the fire stay away from the sensor ->close the door

6) In codition of Having servo motor in windows we can regular it with fire system as when fire occured -> open the windows .

THANKS..

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