

# Earthquake Alert System

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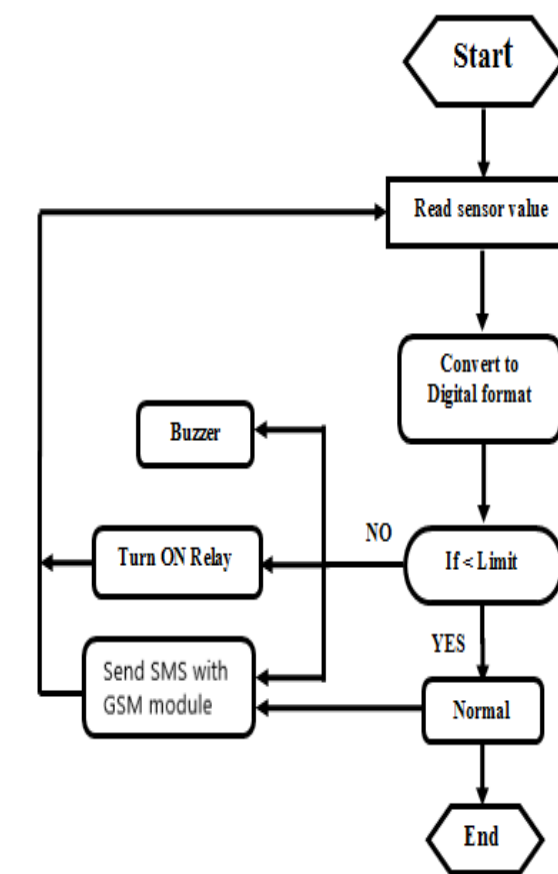
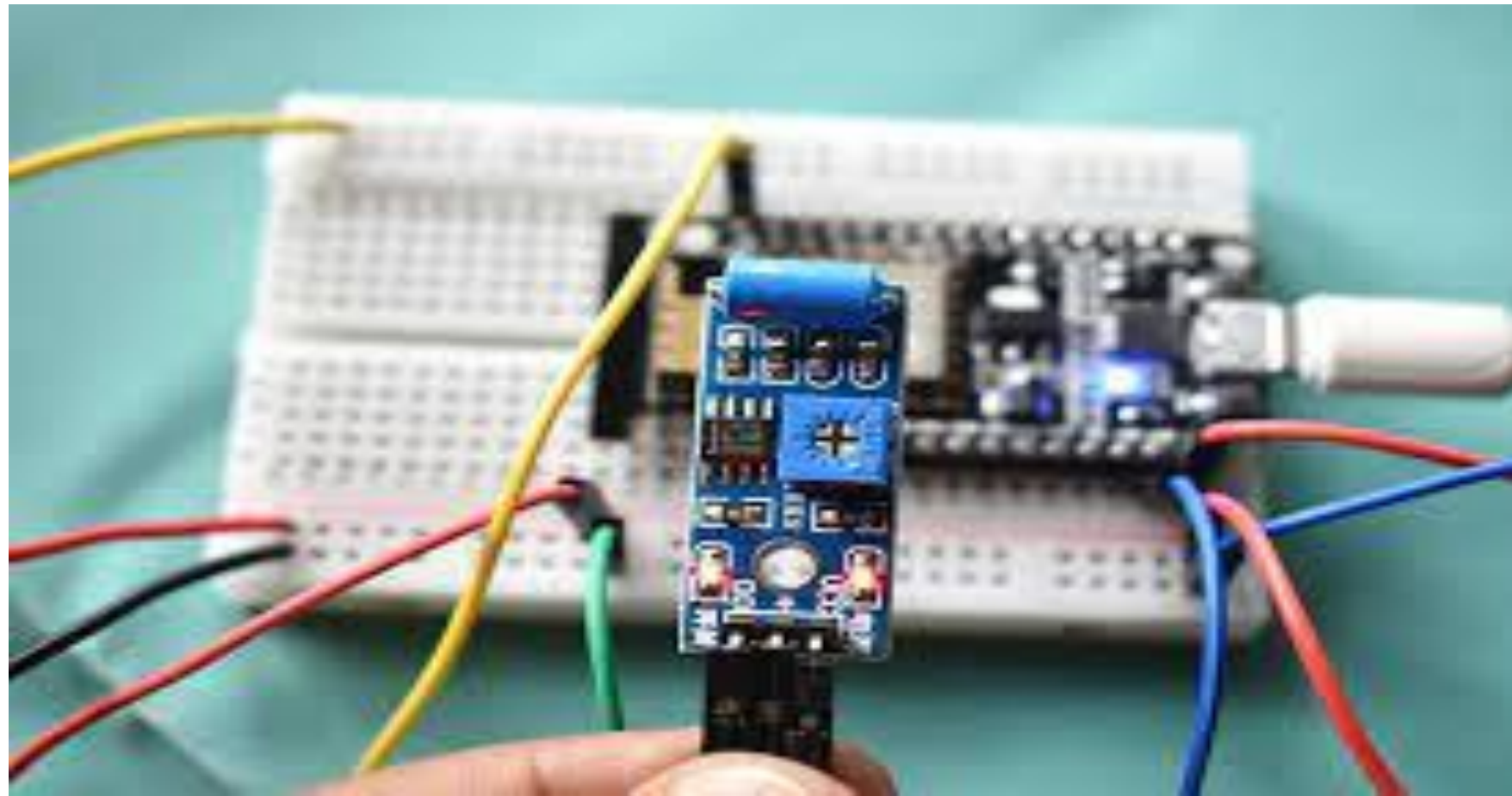
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## Abstract

Earthquake Alert System is an electrical and electronic system that notifies users about surface vibrations through audio, visual, and written alerts. This system utilizes sensors to detect vibrations on the Earth's surface in three dimensions during an earthquake, converting them into electrical signals to provide us with information. Additionally, it can remotely send alerts via SMS using a GSM module.

## Flow Chart :



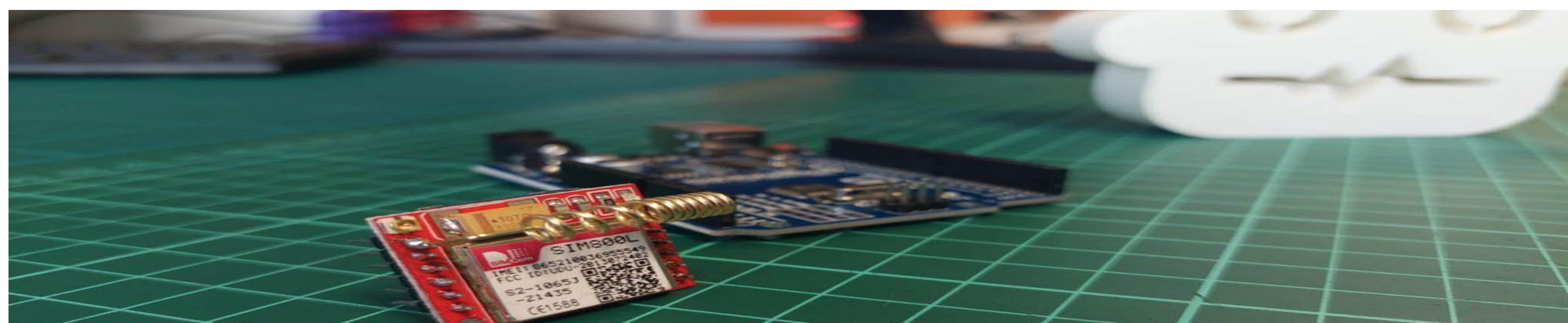
## TILT SENSOR

The tilt sensor is a sensor used to detect earthquakes. This sensor is Powered by 5V. Additionally, the sensor has both Digital and analog outputs. By reading these outputs on Arduino we can create commands based on the read, values, such as visual or audible alerts

## Main Components

1. Arduino UNO
2. Tilt Sensor
3. GSM module
4. Buzzer
5. Red LED
6. Resistance

This earthquake warning system utilizes an SW1801P-based tilt sensor to detect ground movements. The sensor, integrated into Arduino Uno, rapidly and accurately identifies seismic events. Upon detecting an earthquake, the GSM module promptly sends notifications to inform users. SW1801P operates across a wide frequency range, enabling it to swiftly and accurately detect ground movements.



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## References:

- <http://synopsis.nevemtech.com/index.aspx?Id=N539>
- <https://www.robotistan.com/tilt-sensor-karti-egim-sensoru-yatay>
- <https://www.robotistan.com/sim800l-mini-gsm-gprs-modulu>

