



TOPIC:-WOMEN SAFETY ALERT SYSTEM(SAS)

ABSTRACT:-

The Smart Street Safety System for Women is a technology-driven solution aimed at improving the safety and security of women in public spaces. Utilizing Arduino, this system integrates a street pole with a buzzer that, when pressed by a woman in distress, triggers a series of safety responses. Upon activation, nearby street lights will change color to signal an emergency, and a siren will sound to attract attention. Simultaneously, the system sends the woman's current location along with an emergency message to the nearest control room or police station. This real-time response system provides immediate assistance and helps authorities take quick action to ensure the safety of individuals.

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INTRODUCTION:

In today's society, women's safety is a critical issue that demands effective solutions. Despite numerous advancements, there are still many instances where women face danger in public spaces. The Women Safety Alert System aims to address this concern by providing an accessible and immediate method of seeking help. This project proposes a network of strategically placed alert poles equipped with push buttons, lights, and sirens. By activating these poles, individuals in distress can quickly signal nearby people and authorities, facilitating faster responses and improving overall safety in public spaces.

BACKGROUND:

The need for enhanced safety measures has been growing in recent years, especially in urban areas where women may feel unsafe or are at a higher risk of facing harassment or other threats. Existing safety mechanisms, such as emergency hotlines or mobile applications, often depend on smartphones, which may not always be accessible in a crisis. By creating physical alert poles that are easily accessible and visible in critical areas, this system aims to provide a more immediate response mechanism. Using Arduino technology, the system incorporates user-friendly components like push buttons and alarm signals, ensuring simple operation in times of need. These components are designed to work together to create a reliable, easily maintainable alert system that can be scaled across urban areas.

PROBLEM DEFINITION:

Women often feel unsafe in certain public areas, especially at night, with limited access to immediate help. Traditional methods of seeking assistance, such as calling the police or waiting for someone to intervene, can be slow and inefficient.

There is a need for a system that can provide instant visual, audible, and location-based alerts in the event of an emergency, ensuring quick responses from authorities.

OBJECTIVES OF THE PROPOSED WORK:

- To provide an accessible and quick-response system for women in distress by using a street-installed buzzer.
- To enhance public awareness of a potential emergency by activating street lights and sirens when the system is triggered.
- To send the woman's current location and an emergency message to nearby authorities, ensuring rapid intervention.

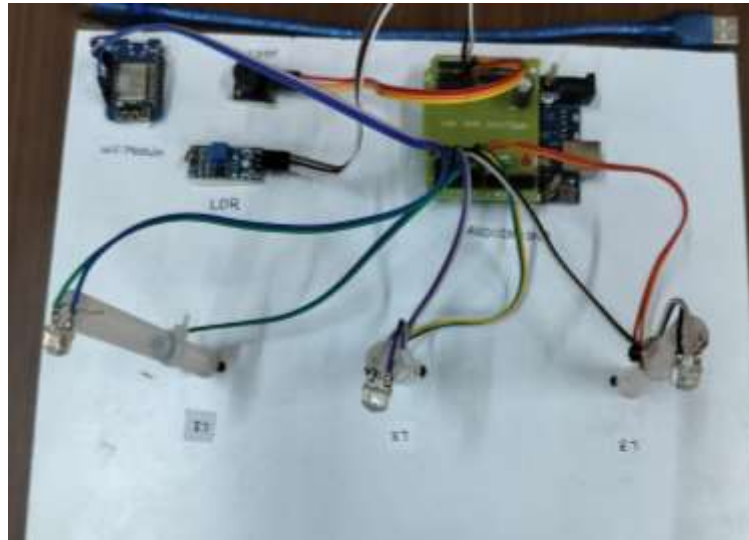
METHOD/PROCEDURE:

Utilizing Arduino, this Women safety alert system integrates a street pole with a buzzer that, when pressed by a woman in distress, triggers a series of safety responses. Upon activation, nearby street lights will change colour to signal an emergency, and a siren will sound to attract attention. Simultaneously, the system sends the woman's current location along with an emergency message to the nearest control room or police station. This real-time response system provides immediate

assistance and helps authorities take quick action to ensure the safety of individuals.

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RESULT AND DISCUSSION:



CONCLUSION AND FUTURE SCOPE:

The Women Safety Alert System is a proactive solution to address the pressing issue of women's safety in public spaces. By deploying an accessible, efficient, and scalable alert system, this project seeks to empower individuals and communities to respond quickly to emergencies. Through real-time alerts that mobilize assistance from bystanders and authorities, this system could reduce response times and enhance the overall sense of safety. Future enhancements could integrate additional features, such as real-time GPS tracking and automated notifications to law enforcement, making it a comprehensive solution that evolves alongside technological advancements.

Future Scope of the Women Safety Alert System

- 1)Smart City and IoT Integration The system can be integrated with smart city infrastructure and Internet of Things (IoT) technology to enable real-time monitoring and faster response. By connecting with streetlights, cameras, and other sensors, the system would enhance situational awareness and allow authorities to respond more efficiently.
- 2)Mobile Application Integration Developing a companion mobile application would enable individuals to send alerts through their smartphones. This app could also notify family members and close contacts in emergencies, enhancing the system's reach and personal safety network.
- 3)Expansion to Rural and Remote Areas Expanding the system to rural and remote regions would improve safety for individuals in less accessible areas. This extension would make the system more inclusive, addressing the needs of diverse communities.

REFERENCES:

- 1.Nirbhaya Fund (India)
2. UN Women - Safe Cities and Safe Public Spaces Initiative
- 3.Global Fund for Women
- 4.The #MeToo Movement
- 5.Violence Against Women (VAW) Research Projects

<https://www.irjet.net/archives/V8/i5/IRJET-V8I5100.pdf>

<https://www.ijraset.com/research-paper/women-safety-system>

CODE:-

```
#include <WiFi.h>
#include <HTTPClient.h>const
char* ssid = "data";const
char* password = "data@ecs";
const String serverURL = "http://thingviewfree.com/update";
int s1 = 5, s2 = 6, s3 = 7;
int l1 = 2, l2 = 3, l3 = 4;
int ldr = A1;int buz = A0;
int s1s = 0, s2s = 0, s3s = 0, cnt = 0;
void setup() {
  Serial.begin(9600);
  WiFi.begin(ssid, password);
  while (WiFi.status() != WL_CONNECTED) {
    delay(1000);
    Serial.println("Connecting to Wi-Fi...");
  }
  Serial.println("Connected to Wi-Fi");
  pinMode(s1, INPUT_PULLUP);
  pinMode(s2, INPUT_PULLUP);
  pinMode(s3, INPUT_PULLUP);
  pinMode(l1, OUTPUT);
  pinMode(l2, OUTPUT);
  pinMode(l3, OUTPUT);
  pinMode(buz, OUTPUT);
  pinMode(ldr, INPUT);
}
```

```
void loop() {
  if (digitalRead(ldr) == 1) {
    digitalWrite(l1, 1);
    digitalWrite(l2, 1);
    digitalWrite(l3, 1);
  }
  else {
    digitalWrite(l1, 0);
    digitalWrite(l2, 0);
    digitalWrite(l3, 0);
  }
  s1s = (digitalRead(s1) == 0) ? 1 : 0;
  s2s = (digitalRead(s2) == 0) ? 1 : 0;
  s3s = (digitalRead(s3) == 0) ? 1 : 0;
  if (s1s == 1) {
    activateAlert(l1, "Sensor 1");
  }
  if (s2s == 1) {
    activateAlert(l2, "Sensor 2");
  }
  if (s3s == 1) {
    activateAlert(l3, "Sensor 3");
  }
  delay(300);
  cnt++;
  if (cnt > 20) {
    cnt = 0;
    sendDataToServer(s1s, s2s, s3s);
  }
}
```

```
void activateAlert(int lightPin, String sensorName) {
    Serial.println("ALERT: " + sensorName + " has been triggered!");
    digitalWrite(buz, 1);
    digitalWrite(lightPin, 1);
    delay(200);
    digitalWrite(lightPin, 0);
    digitalWrite(buz, 0); delay(200);
    sendDataToServer(s1s, s2s, s3s, sensorName);
}

void sendDataToServer(int s1_state, int s2_state, int s3_state, String alert = "") {
    if (WiFi.status() == WL_CONNECTED) {
        HTTPClient http;
        String url = serverURL + "?s1=" + String(s1_state) + "&s2=" + String(s2_state) + "&s3=" + String(s3_state);
        if (alert != "") {
            url += "&alert=" + alert;
        }
        http.begin(url);
        int httpCode = http.GET();
        if (httpCode > 0) {
            Serial.println("Data sent to server: " + url);
            String response = http.getString();
            Serial.println("Server response: " + response);
        } else {
            Serial.println("Error sending data to server.");
        }
        http.end();
    } else {
        Serial.println("Wi-Fi not connected. Cannot send data.");
    }
}
```

THANK YOU