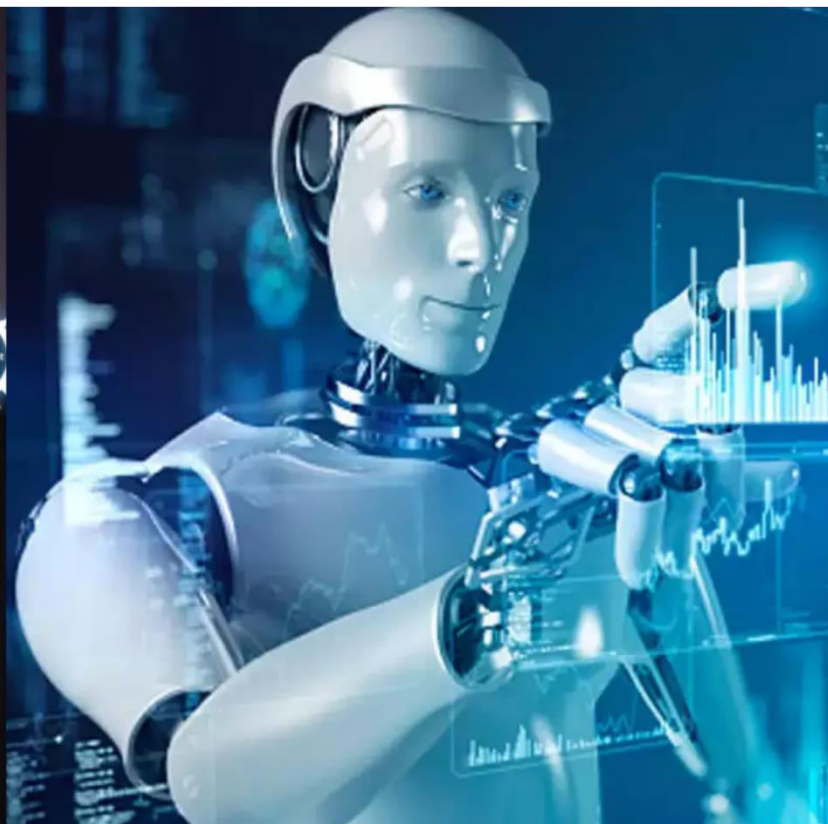




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Disaster Management and Alarm App

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ABSTRACT: Disaster Rescue Using Android Computing and Active Services Since the beginning of time, natural disasters have posed a threat to humanity. Many nations are susceptible to natural disasters because of their geographic location and changing environmental conditions. In order to deal with natural calamities, the nations also lack an efficient disaster preparedness framework. Additionally, a visitor might have trouble locating a safe location or a place to stay before a natural disaster strikes. We have therefore suggested a system for managing disasters and evacuating people. The system is implemented on android mobile phone because of the burgeoning growth of smart phones in world. Android device with our application installed on it and user. User can register the multiple receiver or family member or friends to send alert at a time to send notification for help. By sending the current position obtained by GPS and including path of shelter or safe zone on the map of the application.

KEY WORDS: Android-based computing, Services in use, Rescue from disasters, Computing on the go, Response to emergencies

I. INTRODUCTION

Natural disasters like earthquakes, floods, hurricanes, and wildfires are unpredictable and frequently devastating; millions of people have been impacted over the years, causing property damage, economic instability, and loss of life. In today's fast-paced world, integrating mobile technology can greatly improve disaster management efforts. The project "Resque Wings" is a mobile application for Android platforms that provides real-time disaster alerts, facilitates emergency location sharing, helps people find safe zones or shelters, and provides vital preparedness resources. The application enables people to act swiftly and effectively during emergencies, ensuring their own and others' safety. The creation of intelligent systems that can lessen the effects of natural disasters is necessary due to their rising frequency and intensity. Conventional catastrophe alarm systems frequently rely on public announcement, radio, or television systems, which might not get people in time, particularly those in vulnerable or isolated places. Due to their widespread availability, GPS, and internet connectivity, smartphones offer a great chance to create more individualized and responsive disaster management systems. An Android software called Resque Wings directs users to the closest shelters, shares user whereabouts with pre-registered emergency contacts, and sends out timely alerts. The application is a complete disaster management solution since it also offers resources to teach users about disaster preparedness.

II. EXISTING SYSTEM

The existing systems for disaster alerts are often fragmented and not user-focused. They rely on governmental broadcasts or third-party weather applications that do not offer personalized alert services. These systems typically lack features such as real-time location sharing, multi-user alerting, and navigation to safe zones. During emergencies, the inability to share one's location or receive precise directions to safety can be life-threatening.

III. PROPOSED MODEL

Resque Wings, the suggested system, provides a user-centric, mobile-based solution to overcome the drawbacks of current solutions. Real-time disaster alerts based on the user's GPS location are one of the main features.

- An emergency notification system that lets users notify several registered contacts at once
- An instant crisis notification via a panic button.

- Google Maps integration for finding and navigating to shelters in the area.
- Disaster preparedness checklists and educational materials.
- Historical logs for tracking past alerts and actions taken.

A Personal Computer (PC) is any general-purpose computer whose size, capabilities, and original sales price make it useful for individuals, and which is intended to be operated directly by an end-user with no intervening computer operator. In contrast, the batch processing or time-sharing models allowed large expensive mainframe systems to be used by many people, usually at the same time. Large data processing systems require a full-time staff to operate efficiently.

A computer user will apply application software to carry out a specific task. System software supports applications and provides common services such as memory management, network connectivity, or device drivers; all of which may be used by applications but which are not directly of interest to the end user. A straightforward, albeit imprecise parallel in the area of hardware would be the coupling of an electric light bulb to an electric power producing plant. The power plant only produces electricity; it has no practical purpose until it is put to use in a way that benefits the user, such as an electric light. Numerous new features are included in Windows 7, including enhanced boot performance, support for virtual hard drives, improved touch and handwriting recognition, Direct Access, and kernel enhancements. Windows 7 provides support for PCs employing multiple heterogeneous graphics cards from different vendors (Heterogeneous Multi-adapter), a new version of Windows Media Center, a Gadget for Windows Media Center, better media features, the XPS Essentials Pack and A revamped calculator with multiline features, including Programmer and Statistics modes, is also included, along with Windows Power Shell.

IV. SYSTEM ARCHITECTURE

- **Client-Server Architecture:** Android app acts as the client; Firebase and Maps APIs form the server-side services.
- Real-time communication through Web Sockets and HTTP requests.
- Authentication, data storage, and push notifications managed by Firebase.

V. MODULES

Module 1: User Registration and Profile Management

- Users can create profiles with personal details and emergency contact information.
- Secure authentication using Firebase Authentication.
- Multiple contacts can be registered as receivers for emergency alerts.
- Users can update or delete profiles and contacts anytime.

Module 2: Disaster Alerts and Notifications

- Real-time alerts are fetched from integrated APIs or manually updated by admins.
- Users receive push notifications about disaster type, severity, and timing.
- Location-based alert customization ensures relevance.

Module 3: Emergency Location Sharing

- Users can send their current GPS coordinates with a message to registered contacts.
- A panic button allows for quick broadcasting of location and SOS alert.
- Notification logs are stored for future reference.

Module 4: Safe Zone and Shelter Finder

- Google Maps integration displays nearby shelters and safe zones.
- Users can navigate to shelters using turn-by-turn directions.
- Admin panel allows shelter data updates.

Module 5: Disaster Preparedness Resources

- Educational materials such as videos, articles, and infographics.

- Checklists for emergency kits and safety protocols.
- Interactive quizzes to assess disaster readiness.

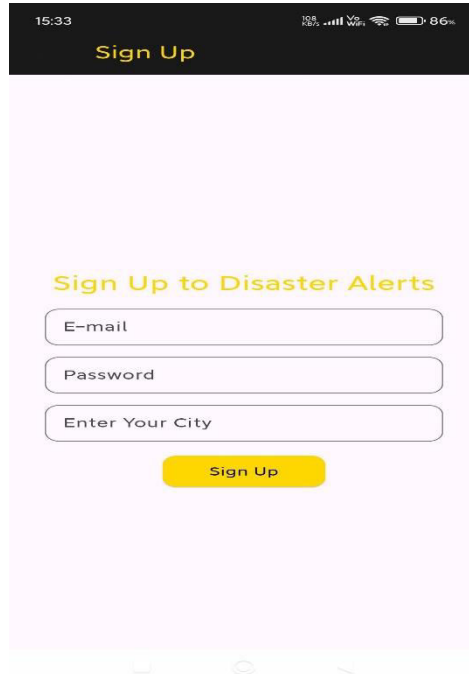
Module 6: History and Logs

- Stores records of past alerts, notifications sent, and locations shared.
- Users can review and analyze past disasters in their area.
- Admins can generate reports for planning and improvements.

VI. SCREENSHOT**Fig 6.1 Login screen****Fig 6.2 Register value**

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15:33 86%

Sign Up

Sign Up to Disaster Alerts

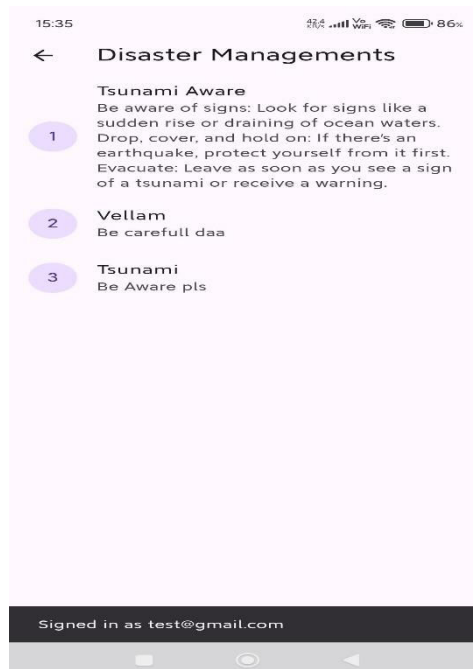
E-mail

Password

Enter Your City

Sign Up

Fig 6.3 Sign Up Disaster Alerts



15:35 86%

Disaster Managements

Tsunami Aware
Be aware of signs: Look for signs like a sudden rise or draining of ocean waters. Drop, cover, and hold on: If there's an earthquake, protect yourself from it first. Evacuate: Leave as soon as you see a sign of a tsunami or receive a warning.

1

2 **Vellam**
Be carefull daa

3 **Tsunami**
Be Aware pls

Signed in as test@gmail.com

Fig 6.4 Signed

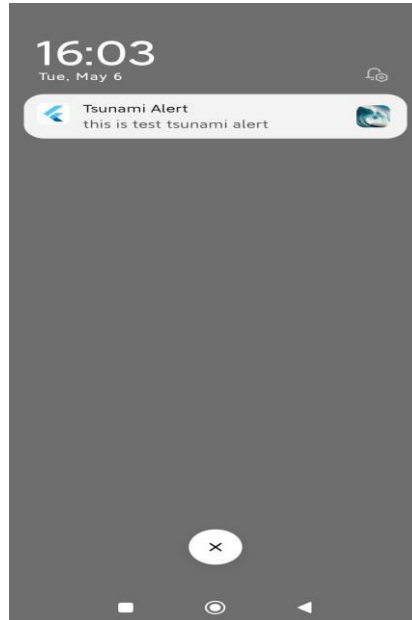


Fig 6.5 Output Screen

VII. CONCLUSION

A useful, effective, and easily available catastrophe management solution is provided by Resque Wings. It uses the power of mobile technology to provide safety navigation, emergency communication, and real-time notifications. It guarantees that consumers are better equipped and protected against natural disasters because to its user-friendly interface and dependable backend infrastructure.

Future Improvement

- Integration with crisis alert APIs from the government.
- Early warning prediction models powered by AI.
- Preparedness guides and maps can be viewed offline.
- Support in multiple languages to reach more people.
- An administrator and first responder web-based dashboard

VIII. IMPROVEMENT IN THE FUTURE

- Integration with official catastrophe alert APIs from the government.
- Prediction models for early warnings powered by AI.
- Maps and readiness guides can be accessed offline.
- Support in multiple languages to reach a larger audience.
- A web-based dashboard for first responders and administrators.

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