DisasterWatch – User Guide

Location-Based Emergency Alert System

1. Introduction

DisasterWatch is a location-based emergency alert system designed to notify people about nearby disasters such as floods, earthquakes, and fires. The system ensures that users receive timely and relevant alerts via SMS while avoiding repeated or unnecessary notifications.

This user guide explains how normal users and administrators interact with the DisasterWatch application.

2. User Roles

2.1 Normal Users

- Register on the platform

- Receive SMS alerts for nearby disasters

- View recent alerts on the dashboard

2.2 Administrators

- Log in securely

- Create and broadcast disaster alerts

- Monitor previously created alerts

3. User Registration

1. Open the DisasterWatch website.

2. Click on the **Signup** option.

3. Enter the required details:

    - Name
    - Email

- Phone Number

- City

- State

4. Submit the form.

System Action: The system converts the entered city and state into geographical coordinates and stores them securely for accurate alert delivery.

4. User Login

1. Navigate to the **Login** page.

2. Enter the registered email and password.

3. On successful authentication, the user is redirected to the dashboard.

The login system is secure and prevents unauthorized access.

5. Receiving Disaster Alerts

When a disaster occurs:

- Users within a 50 km radius of the disaster location receive an SMS alert.

- Alerts are sent only when relevant to the user's location.

- Repeated alerts for the same area are avoided to prevent panic.

Example SMS Alert: "Flood Alert: Heavy flooding reported near Pune. Avoid low-lying areas and stay safe."

6. Admin Alert Creation

1. Admin logs in to the system.

2. Admin navigates to the **Create Alert** section.

3. Admin enters:

    - Disaster type (Flood, Earthquake, Fire)

    - Location

    - Alert message

4. Admin submits the alert.

System Action: The system identifies affected users based on location and sends SMS alerts accordingly.

7. Smart Alert Suppression

To avoid repeated notifications:

- If an alert was already sent for a nearby location within the last 12 hours,

- The new alert is recorded but SMS is not sent again.

This feature ensures responsible communication during emergencies.

8. Viewing Alerts on Dashboard

Users and administrators can view recent alerts on the dashboard. Each alert displays:

- Disaster type

- Location

- Time of alert

- SMS status (sent or suppressed)

9. Advantages of DisasterWatch

- Accurate location-based alert system

- Fast emergency SMS notifications

- Prevention of alert spam

- Simple and user-friendly interface

- Practical application for real-world disaster management

10. Conclusion

DisasterWatch provides an efficient and reliable way to keep users informed during emergencies. By combining location awareness with intelligent alert handling, the system ensures timely communication without causing panic. This makes DisasterWatch a useful and practical solution for disaster awareness and public safety.