Alert System from Disaster Management Server (DMS) By Trusted Disaster Party

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Abstract

Since history started human activities enforced many natural disasters. Due to continuous change in geographic position and climate, countries situated near oceans are most sensitive countries to natural disasters. The developing countries also lack effective disaster preparedness system to resist natural disasters. The proposed application predicts the rain and flood related warnings based on previous data sets which are stored and maintained in the database as a long term process. Disaster warnings and evacuation guidelines may save lives of many peoples. A tourist or blind people can face problem in finding safe place if any natural disaster occurs. The system consists of a third-party server named Disaster Management Server (DMS), device on which our application installed and user. Updates of the disaster (cyclone or flood) are put on DMS by the local weather office. To get automatic notification of upcoming disaster device user registers on Disaster Management Server (DMS).The proposed application notifies the user located in possible disaster zone with text and audio disaster warning combine with nearest location of shelter or safe zone.

Keywords: Disaster Management Server, GSM, Weather monitoring, SMS alert.

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1. INTRODUCTION

Characteristic humiliation prompts money related, ecological or human misfortunes. The subsequent misfortune relies on upon the defencelessness' of the influenced populace to oppose the danger, likewise called their strength. Each year such a large number of individuals bite the dust as a result of the characteristic calamities such as violent wind, tornado, tidal wave and so forth. In India the majority of the general population bites the dust amid common calamities in view of the absence of climate data ahead of time. Practically every individuals, no less than each family in our nation has one cellular telephone. So on the off chance that it is conceivable to alarm them right on time around a twister, tornado, torrent and so forth, it will be extremely useful for them to spare their lives. To do this we are proposing a climate early cautioning framework which is a quality included administration and accessible for membership for any cell phone. This framework will alarm the endorsers about climate condition by means of SMS.

Normal Disaster is the result of regular dangers, for example, tornado, storm, seismic tremor, torrent and surge and so on. This world has now seen the unsafe, harming method of nature which has taken a huge number of lives. The 2011

Japan seismic tremor and torrent, the 2010 Haiti quake, the 2008 typhoon Nargis, the 2004 Indian Ocean Tsunami, the 1991 Bangladesh tornado are some late cases of savage regular disasters[1]. By a large normal dangers wind up with catastrophes where the influenced regions are delicate. By positioning report of United Nation's International Strategy for Disaster Reduction (UNISDR) on Mortality Risk Index (MRI), nations arranged close seas are most at danger from tremors, surges, tropical violent winds, and avalanches [2].

To spare lives and properties counteractive action is vital, since creating nations like Bangladesh are most characteristic calamity inclined nations. Now and then individuals might be heedless about the up and coming common dangers. Nonappearance of arrangement of individuals causes the significant harm amid catastrophe. Along these lines, previous adequate debacle cautioning and viable departure framework can spare number of lives in the nation inclined to continuous fiascos. In a debacle delicate range, vacationer, new comer or blind individuals might confront issue in discovering safe sanctuary from their present stay position. To overcome such circumstance here we are proposed area debacle cautioning and clearing framework on cellular telephone utilizing Google Map which gives sound and visual messages. As a result of the accessibility of guide data over the world and the methodology towards modest

Convenient GPS gadgets, utilization of Google Map is quickly developing [3]. This open source Google Map has as of late been utilized in numerous tasks such as Wiki Projects Libya and Wiki Project Haiti and so forth. In the Wiki Project Libya [4], the streets and spots of hobby were mapped in points of interest. The Wiki Project Haiti encouraged the salvage work and helped in giving alleviation help after the staggering quake at Haiti in 2010[5]. In this way, Google Map has accomplished the notoriety to utilize. With the expanded utilization of PDAs the interest of area based administrations is additionally expanding step by step. This framework is likewise an android stage based advanced mobile phone application used to convey area based administrations which gives alarms to the client of forthcoming fiasco if client is close to the calamity influenced zone and gives closest safe spot on guide of utilization. As it conveys both sound and instant messages, it is helpful for ordinary and also daze people groups.

2. LITERATURE SURVEY

There a few scrutinizes are happing overall since regular catastrophes are one of the real worries about human presences. For instance, Chanuka Wattegama [6] talked about quickly about what Information and Communication Technology (ICT) can accomplish for debacle administration. Innovation is being upgraded step by step. There exist cutting edge types of gear which can gather information from different sources and foresee about future catastrophes. ICT is the most vital division in a fiasco administration. Dr. Mashury Wahab[7] portrayed their fiasco early cautioning framework where information are gathered from a few source, assembled and put away in the database and cautions the supporter through SMS, E-mail, Broadcasting frameworks. Olaf Neussner [8] portrayed an early ready framework named LFEWS (Local Flood Early Warning System) which comprises of a few segments such as downpour and stream level gages, operation focus where information are gotten, broke down and choices around a notice are taken. It likewise advises about clearing course, departure focuses and crisis salvage groups. In [9], Joko Windarto proposed a surge early cautioning framework which utilizes fake neural system for foreseeing future catastrophe. This framework

cautions the general population through SMS and web. In [10], the multi-danger early cautioning arrangement of Shanghai is quickly portrayed. Brendan Williams [11] proposed some innovatively propelled alterations to Queensland Early Warning System .P. Vanderkimpen .[12] proposed a surge early cautioning framework for Egypt which comprises of a few segments, which are consequently initiated and connected. These parts are precipitation determining model (Weather Research and Forecast model), modified hydrological model (to reflect bone-dry locale conditions), water driven model (InfoWorks-RS) and a notice module (FloodWorks). It sends alarms by email or SMS or web. In [13], Kerry Plowright quickly portrayed worldwide multi-risk early cautioning arrangement of Australia. This multi-peril and multi-channel geographic early cautioning framework is intended to telecast alarms in a split second and all the while to people or aggregates in the chose zones. These cautions or notices are sent through various correspondence mediums like SMS, telephone call, email, desktop alarm and so on. Chai Mui Fatt et al. [14] portrayed quickly about Tsunami early cautioning framework in Malaysia and made a Tsunami database for usage of the arrangement of Regional Tsunami Watch Providers (RTWP). In [10-14], creators likewise investigate debacle early cautioning frameworks of Malaysia, examine the dangers and give arrangements through the execution of different advances. These arrangements are utilizing different equipment, processors, sensors and so on for gathering information and taking choices (here and there by utilizing manmade brainpower) which will be excessive for the creating nation like India. Hence we are proposing a minimal effort and easy to use early cautioning answer for the general population of India.

Drawbacks

- In existing system of this project, there is no alert system to the peoples in the time of disaster.
- If any emergency or disaster occur in any district the local administration cant alert the all people at a time.
- To alert the peoples the local administration has to make announcement using physical transactions.
- But these methods are time taking options.
- Not Effective and Efficient Management
- Very complex Process

Manual work load for admin

3. PROPOSED SYSTEM

This project is a real time project which is used to alert the peoples during the time of national disaster. The details can be collected and updated from the department of weather forecasting officer. After collecting the details the local administration can take in charge to alert the peoples using SMS. In this application there are two types of login. They are admin and people reporter (manager). The admin is the authority of this application. The admin can control all the tasks carried out using this application. The admin has rights to create or remove users from the domain, view the login time of people reporter, review the SMS posted by the people reporter, etc.

The people reporter can add or remove the peoples contact information and update the information. The people reporter can filter the candidates list by area or ward wise. In the time of emergency, the people reporter sends a message to alert the people regarding the tsunami waves, earthquake, storm and other national calamities too.
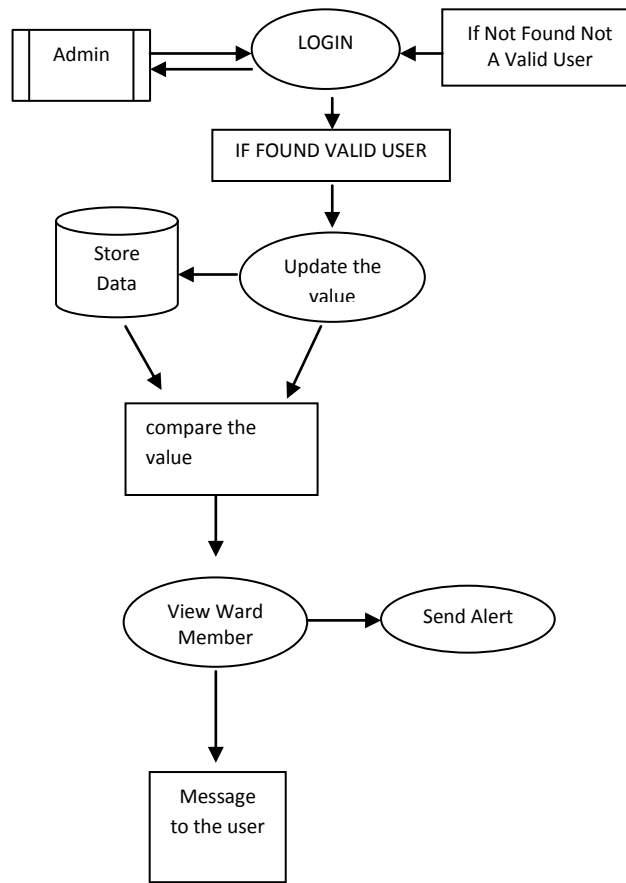
4. SYSTEM ARCHITECTURE

Fig.1. Architecture of Disaster Alert System

In the proposed system of this project it has to eliminate the drawbacks of the existing system.

Fig.2. Use scenario of a Disaster Alert System

The local administration is divided into ward wise people reporter. Now all people reporter are provided by laptop. If our software is enabled in their laptop they can maintain the details using this software. These details are maintained and entered by the people reporter. During the emergency, the reporter can alert the peoples using GSM Mobile which is connected to our application

5. CONCLUSION

In this system, the proposed application is to predict the flood and rain related warning based on previous data set and then send alert message to the people. But, the existing system simply predicts only the amount of rain and flood to occur. This Disaster warning and guidelines may save lives of many normal people and blind people.

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