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Disaster Management in Crisis Situation

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ABSTRACT: Charity and helping others is a act of kindness, where a person who has financially more than enough of what he or she needs to be contributes a part of his or her surplus income for the fulfilment of the needs of those who are less capable. Due to Pandemic situation or any Natural Calamities such as Covid-19, Tsunami, Landslide, Earthquake etc. various structures get disturbed and lead to financial damage, property damage and loss of life. In order to Covid-19 has/will hit hard to poor as well as rich i.e. economically, mentally and physically. Also People or donor who want to help to find them is very hard task, To overcome this issue there is need to develop/construct a social helping web application regarding to crisis situation or disaster situation. In which people can volunteer and reach out to poor people to help them with foods, clothes etc. This web application system will help peoples who are in difficulties to find donor easily.

The information about the disaster will be access by Iot device and user. The place where disaster took place Iot device will generate an alert. With the help of alert will get to know where the disaster has been occurred. Also user can provide information about the disaster by filling the form on portal. After providing details correctly help will be provided by volunteers. This web application / website is developed by using HTML, CSS, Bootstrap, React js, Node js, MongoDB. This papers main goal is to develop a web app for disaster management. This system will be very useful in critical or disastrous situation.

KEYWORDS: Disasters, Disaster Management, Charity, Web Design, Web Development.

I. INTRODUCTION

Disaster Management is the organization and management of the assets or the resources and responsibilities for dealing with all humanitarian aspects of difficult, accident or any emergencies, In certain aware-ness, response and recovery in-Order to reduce the impact of calamities. Post Disaster management aims to reduce, or avoid the possible losses from threats, assure prompt and appropriate assistance to victims of disaster and attain fast and effective recovery. As disasters are dangerous to human life, an effective approach or measure or any other alert system must be implemented to advise individual in the beginning phase towards security precautions could be considered to avoid any disaster or calamities.

In existing system the outcomes consists less specificity, less sensitivity. The existing system provides government data set and disaster dataset, also provides news. It is used for public welfare and efficient management of disaster. The existing web application include all the detail about helplines and government bodies to be contact in the stage of emergency.

This research is to design and develop a web application or website for post disaster management in any critical situation. Here the main objective of this web application is to provide an emergency response to the people who are going to be affected in disaster or any other calamities. Following are the main objectives:-

- To provide food, clothes, funds or related resources through volunteer in disaster and crisis situation.
- To provide a platform where people can help each other.
- To obtain the web-application where admin or volunteer can update news of latest disaster or calamities.
- People will find the correct and easy way or platform to help the short-handed people.

- To provide a quick response if any disaster occurs.

II. LITERATURE SURVEY

As per [1] it is described about vulnerabilities and security of web application. Web applications are active websites which are piece of server based programs helping user interaction and various other functionalities. Web Server safety is thus an important phase for any organisation having web server connectivity with the internet and also to assure customers using their websites, for a secure online portal. In this age of digital revolution, there has been a boom in demand of web developers who can create user friendly web platforms such as mobile applications, web applications. The user base for online website is on a rise too. Here they have provided a comprehensive knowledge of web application security and vulnerabilities present in it. It also covers various phase of security pattern which are extensively used in the field of academics, e-commerce and current scenario of various tools like operating system, databases and mobile applications.

In [2] it is explained about the reliable web-api's in the fight against covid-19 infodemia. Infodemia is an overload of data about a problem, usually false and unverified. Here it is suggested that, the problem of infodemia created by declaring a COVID-19 pandemic is considered. A list of Web services has been formed that provide dependable pandemic data from relevant and suitable sources, and as such, in the fight against the COVID-19 infodemia can be used. In addition to global pandemic data, information on individual countries and regions from this service may be requested. The latency of the Web API service COVID-19 data was determined using the getLatestTotals function for reading global information. Based on the obtained results, a way of using this Web service in the fight against the COVID-19 infodemia was proposed.

As per [3] implemented a phone application as it highlights the key features on emergency response and disaster management. It reviews the mighty mechanism for aiding the management procedure. They also developed a prototype keeping in mind the various features and disadvantage of the reviewed disaster applications. Based on parameters like reliability, ease of use, timeliness and region accuracy, their app successfully meets the performance criteria. Here existing proposed solutions for disaster management are reviewed. Next, a prototype is suggest for disaster management by considering the advantages and restriction of the reviewed systems along with the success factors for disaster management. Further, it is concluded by providing future research directions including the integration of application with government authorities, hospitals and other rescue teams.

In [4] it is described how to focus on the efficient collection of disaster-related information on Twitter or other social media. In previous studies, they have proposed a method to collect tweets posted immediately after retweeting a news post about a disaster or any other calamities. In addition, to automatically collect or store disaster-related data by focusing on tweets posted immediately after retweeting the news post, they have proposed a keyword-based property to differentiate whether the tweets are relevant to the disaster. They have develop the prototype of a web application for storing data relevant to the news posts, with the aim of developing a web application, which will enable content providers, local government staff, and general users to store disaster-related tweets with ease.

As per [5] it is explained about web-based application that is stored in HAPS (High Altitude Platform Station) to facilitate communication or conveying and eviction of disaster in rural areas called Tele HAPS. Tele Haps has three main components namely Tele Chat, Tele Data and Tele Camera. Tele Chat is a service that serve to send and retrieve text messages, images or pictures and videos that are running locally. Tele Data is a real time disaster collection component and the outcomes of the data stored are presented in tables format. While Tele Camera is a camera access service component at HAPS to facilitate the awareness of rural region and affected by the disaster. The Tele HAPS application is built using HTML, CSS, PHP and JavaScript programming languages, using Sublime software, using Apache as a web server, and also using MySQL as a database

As per [6] it ensures web application security testing framework method that mainly focuses on web application/ website security to find weaknesses in a website. It aims to ensure the security and safety of websites in form checklists. It has the 10 most dangerous types of website vulnerabilities such as injection, broken authentication, sensitive data exposure, Extensible Markup Language external entities, corrupted access control, security misconfiguration, cross-site scripting, unreliable deserialization, segment exploitation with known weaknesses, and lack of logging and checking.

As per [7] it ensures the purpose of the research is to study and explore the importance of hospitals in natural disaster calamities and events and to identify the impacts on the hospitals in natural disaster events. A disaster is an not predicted event, which can overwhelm the capacity of the affected people to manage its effect. Many people are

periodically exposed to natural disasters calamities in their life, and most disasters, or more correctly hazards that lead to disasters, cannot be prevented. However, their effects can be reduced.

III. PROPOSED METHODOLOGY

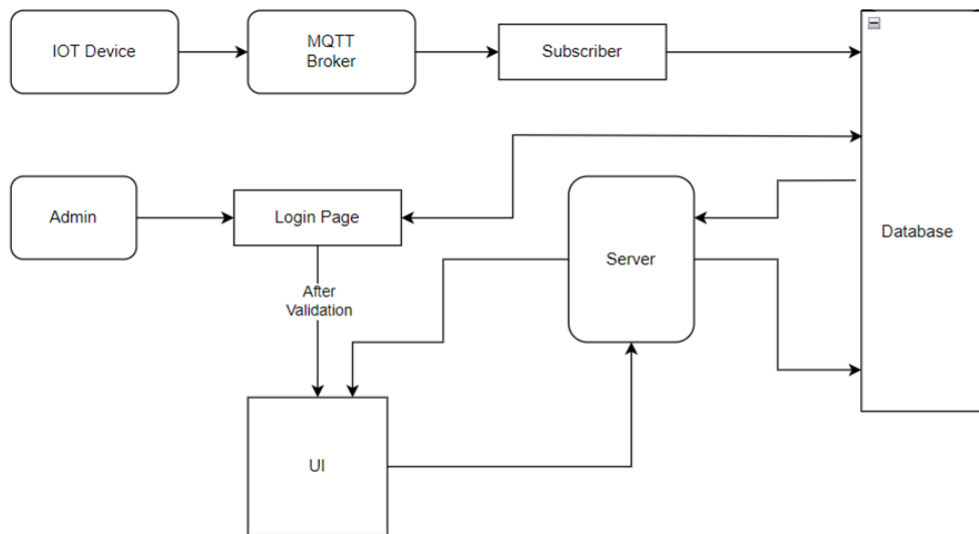


Fig 1: Architecture Diagram of Disaster Management In Crisis Situation.

The system can help the people in critical situation through this online platform classified in two ways :

- If at any region disaster took place, we will first extract information from iot devices & provide help via volunteers based on priority.

Administration System:-

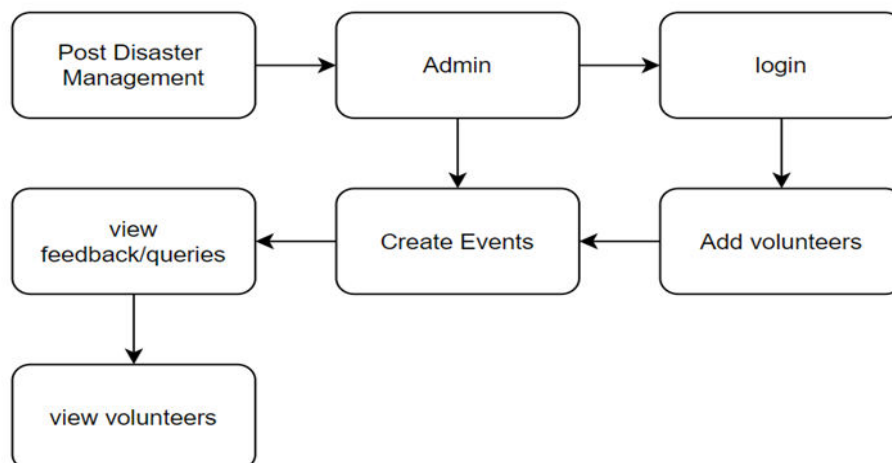
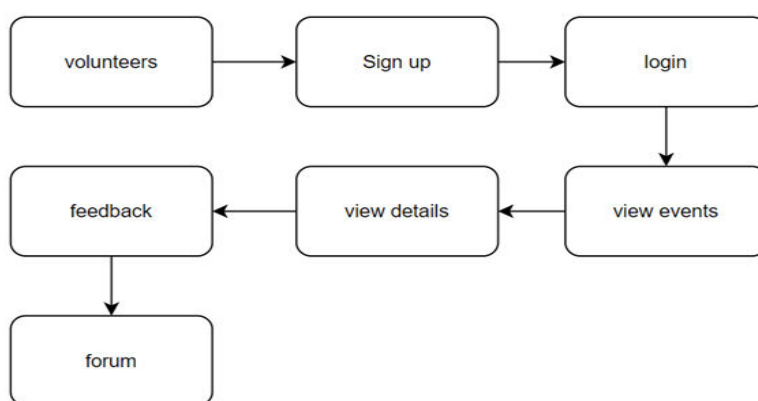


Fig 2:- Administration System.

The above diagram shows the system flow of this project. The application is developed with the vision of helping people in post disaster situation and to achieve this goal we will be using an IOT device which will be installed in specific areas in which will transmit an alert signal whenever some disaster happens at the location where the device is installed after sending the signal over to the server via transport protocols an alert will be generated at server side and will be stored and examine by the admin to check whether the alert generated is valid or not. After confirming the alert generated by the IOT device the system will randomly assign volunteers to relevant areas so that they could reach out to help people by distributing foods and necessary goods to them. Besides from the IOT generated alert the admin can also create alert and the following process will be carried out.

Technical Setup:-



1. Volunteer Registration/Sign up
2. Login [valid id is must]
3. Task and events assigned
4. Details about events

IV. CONCLUSION

This project deals in-order to provide the emergency response in disaster or any other kind of crisis situation. This web application will access information with the help of Iot device and provide help via volunteer to the disaster prone area based upon priority. With the use of this application, we will be able to help peoples who are suffering from any kind of disaster and pandemic by providing them with foods and necessary goods.

REFERENCES

1. Divyani Yadav, Deeksha Gupta, Dhanajay Singh, Devendra Kumar, Upasana Sharma, "Vulnerabilities and Security of Web Applications", International Conference on Computing Communication and Automation, 2018.
2. Zoran S. Velickovic, Marko Z. Velickovic, Zoran N. Milivojevic, "Application of a Reliable Web APIs in the Fight Against COVID-19 Infodemia", International Conference on Information Technology, 2021.
3. Vidhi Mody, VrushtiMody, Soham Parekh, "Distress – An Application for Emergency Response and Disaster Management", International Conference on Smart Electronics and Communication, 2020.
4. Keisuke Utsu, Ayami Manaka, Koki Nakafuri, Osamu Uchida, "Web Application Prototype for Collecting Disaster related Information Focusing on Tweets Immediately after Retweeting News Posts", 2017.
5. Ahmad Fauzi Iskandar, Iskandar, TutunJuhana, Hendrawan, "Web-Based Application Design Rn HAPS Ior Rural and Disaster Affected Areas", 2019.
6. Muhamad AgreindraHelmawati, EsaFirmansyah, Irfan Fadil, YanvanSofivan, FathoniMahardika, AgunGuntara, "Analysis Of Web Security Using Open Web Application Security"International Conference on Cyber and IT Service Management(CITSM), 2020.
7. Salamata Nia, S. P., &Kulatunga, U. "The importance of disaster management and impact of natural disasters on hospitals", 2017.



8. Amit Sarkar, Joy Bose, "A Web Service to Generate Intelligent Previews of Web Links", IEEE International Conference on Web Services, 2018.
9. Shukla S. S., Disaster Management:“”. International Journal of Scientific Engineering and Research (IJSER), Managing the Risk of Environmental Calamity 2013.
10. P. P. Jayaraman, “Internet of Things platform for Smart farming: experiences and lessons learnt,” Sensors (Switzerland), vol. 16, no. 11, pp. 1–17, 2016.



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