

Mobile App for Disaster Management & Information Technology in Emergency Preparedness and Response

Sangeetha.P¹ and Divya.A²

¹UG Students, Department of CSE, IFET College of Engineering, Tamilnadu, India.

²Assistant Professor, Department of CSE, IFET College of Engineering, Tamilnadu, India.
Email: sangeethaifetsan@gmail.com¹ and div.anandan88@gmail.com²

Article Received: 30 December 2017

Article Accepted: 29 March 2018

Article Published: 31 May 2018

ABSTRACT

Disaster happens in two ways both man rolled out action and characteristic improvements. Man-made activity, for example, substance spills, mishaps; atomic spillage can be recorded under the man-made catastrophes. Catastrophic event like surges, violent winds etc., .Use of Internet to know the writing on cataclysmic event. Web is referred to as often as possible for data sharing amid the crisis circumstance .In this natural corruption happens suddenly; at any were whenever yield of this death toll, property and it changes the whole life cycle of the general population. The fundamental point of this is building up a portable application for awesome incident security tips, and giving crisis area data. In this applications sharing information in troublesome condition how to dealing with in that particular situation. It creates with new innovations and apparatuses for data sharing amid crisis periods of debacle. The highlights in this paper with intelligent video and well-ordered guidance incorporating modified cautioning pointers in territories convey to calamity.

Keywords: Disaster Management, portable application, location identification, technologies tools.

1. INTRODUCTION

Disaster is generally categorized into two types; one's man made another is natural .Manmade disaster such as road accidents, chemical leak, nuclear leak, structural damage, etc. Natural disasters like floods, cyclones, landslides, tsunami, droughts, and earthquake. All of this environmental degradation more frequently occurs in this world. Disaster Management is not about avoiding and ignoring the thread but also to decrease the damage and loss of consequence. This mobile application mainly is focusing to safe the people lives and goods from the disasters.

This application uses SQL for the purpose of data management. It should be a database for data handling, storing and retrieving information from the database. First module of this paper registration form fills the user's information, or already registered. You will be having sign in option of this. This application includes the history of disaster, and disaster management techniques and information about the event.

This paper deals with the technological part that can be used to implement an efficient way to give safety preference to the people.

1. Safety tips.
2. History of disaster.
3. Disaster Management methods.

These three modules are present in this application.

2. IMPLEMENTATION

This application provides the idea about how to save the people's life and goods.

2.1. Phase-I (Safety tips)

To provide Security tips following Debacle: Floods, Earthquake, Landslides, Cyclone, Road accidents, Chemical leakages. To save our authorities and properties based on this instruction. This module is providing safety preference to the people, environmental degradation that reduces the population growth in this world.

2.2. Phase-II (History of disaster)

The disasters happen every year in this world. History of disaster gives the information about what type of disaster happens and how many people die and loss their life in that time. This chart shows the information about a disaster that happened more in china when compared to Bangladesh.

Graph.1: Represent about the disaster information

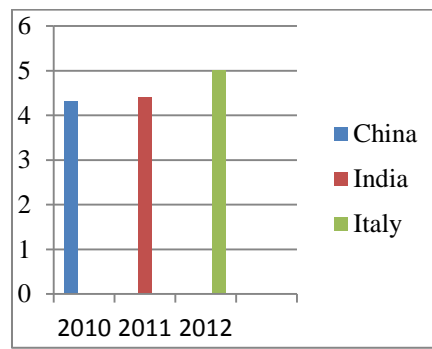


Fig. 1 Graph

2.3. Images representation



Fig.2: Tsunami in Italy



Fig.3: Earthquake in India

2.4. Phase-III (Management techniques)

Disaster management involves many management team that includes the cross and Red Crescent. They have coordinate manner in handling the risk. All nations have the debacle administration administrations to give the administration Ministry of Home undertakings in India has set up an administration. National Disaster Management Authority (NUMDA) to response to man-made and natural disasters.

1. Human source development
2. Disaster Management team

3. DISASTER MANAGEMENT

1. Response
2. Recovery
3. Reduce the risk of disaster

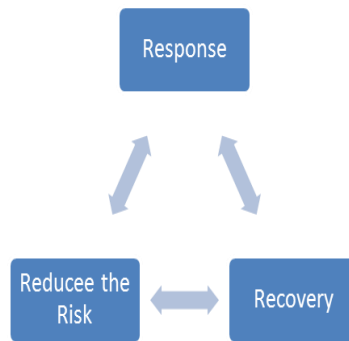


Fig.4: Steps for Management

The Management methods are Administrative management, Human Resource management, Financial management, Supply chain management.

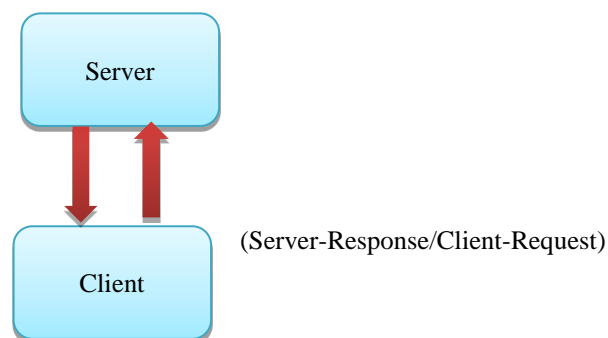


Fig. 5: Client Server Communication

3.1. MySQL (Database)

Higher level programming language is used to develop in this application. The Front end(C#) and Back end (MySQL).

In this paper database engine is based on SQL structure, it handling all information include safety tips, history of Disaster and Management techniques stored in database. Database providing client/server communication are Client-Request and Server-Response.

4. CONCLUSION

This paper shows a point by point portrayal about the debacle attention to the general population and to spare themselves from the threats previously influencing them. This app is unique app which explains about the dangers and also about saving their life from the disasters. This application may also feature with interactive videos and simple step-by-step advice including customized warning. In this app more interaction manner to develop for the user satisfaction.

REFERENCES

- [1] J. E. Quannah, B. Engel, and Gilbert L. Rocha, “Early Warning Systems: A Review”, *Journal of Terrestrial Observation*, vol. 2, no. 2, 2010, pp. 1-22.
- [2] Muthukumaran. N and Ravi. R, 'Hardware Implementation of Architecture Techniques for Fast Efficient loss less Image Compression System', *Wireless Personal Communications*, Volume. 90, No. 3, pp. 1291-1315, October 2016, SPRINGER.
- [3] M. ErikET. Al, “Istanbul Earthquake Rapid Response and the Early Warning System”, *Bulletin of Earthquake Engineering* vol. 1, no. 1, 2003, pp. 157–163.
- [4] Muthukumaran. N and Ravi. R, 'The Performance Analysis of Fast Efficient Lossless Satellite Image Compression and Decompression for Wavelet Based Algorithm', *Wireless Personal Communications*, Volume. 81, No. 2, pp. 839-859, March 2015, SPRINGER.
- [5] W. Yi, A. P. Chan, X. Wang, and J. Wang, “Development of an early- warning system for site work in hot and humid environments: A case study”, *Automation in Construction* vol. 62, 2016, pp. 101–113.
- [6] Muthukumaran. N and Ravi. R, 'VLSI Implementations of Compressive Image Acquisition using Block Based Compression Algorithm', *The International Arab Journal of Information Technology*, vol. 12, no. 4, pp. 333-339, July 2015.
- [7] T. J. Cove, P. E. Dennison, D. Li, F. A. Drew's, L. K. Siebeneck, L. K. and M. K. Liddell, “Warning Triggers in Environmental Hazards: Who Should Be Warned to Do What and When?”, *Society for Risk Analysis*, 2016, pp.1-11.
- [8] Muthukumaran. N and Ravi. R, 'Simulation Based VLSI Implementation of Fast Efficient Lossless Image Compression System using Simplified Adjusted Binary Code & Golomb Rice Code', *World Academy of Science, Engineering and Technology*, Volume. 8, No. 9, pp.1603-1606, 2014.
- [9] Ruban Kingston. M, Muthukumaran. and N, Ravi. R, 'A Novel Scheme of CMOS VCO Design with reduce number of Transistors using 180nm CAD Tool', *International Journal of Applied Engineering Research*, Volume. 10, No. 14, pp. 11934-11938, 2015.

- [10] S. Dawn, and N. Kaurik, "Time Critical Analysis of Resource Technique in Cloud Computing", American International Journal of Research in Science, Technology, Engineering & Mathematics, 2013, pp. 1-4.
- [11] Muthukumaran. N and Ravi. R, 'Design and analysis of VLSI based FELICS Algorithm for lossless Image Compression', International Journal of Advanced Research in Technology, Vol. 2, No. 3, pp. 115-119, March 2012.
- [12] Manoj Kumar. B and Muthukumaran. N, 'Design of Low power high Speed CASCADED Double Tail Comparator', International Journal of Advanced Research in Biology Engineering Science and Technology, Vol. 2, No. 4, pp.18-22, June 2016.
- [13] N. Muthukumaran, 'Analyzing Throughput of MANET with Reduced Packet Loss', Wireless Personal Communications, Vol. 97, No. 1, pp. 565-578, November 2017, SPRINGER.
- [14] P.Venkateswari, E.Jebitha Steffy, Dr. N. Muthukumaran, 'License Plate cognizance by Ocular Character Perception', International Research Journal of Engineering and Technology, Vol. 5, No. 2, pp. 536-542, February 2018.
- [15] N. Muthukumaran, Mrs R.Sonya, Dr.Rajashekhara and Chitra V, 'Computation of Optimum ATC Using Generator Participation Factor in Deregulated System', International Journal of Advanced Research Trends in Engineering and Technology, Vol. 4, No. 1, pp. 8-11, January 2017.
- [16] Ms. A. Aruna, Ms.Y.Bibisha Mol, Ms.G.Delcy, Dr. N. Muthukumaran, 'Arduino Powered Obstacles Avoidance for Visually Impaired Person', Asian Journal of Applied Science and Technology, Vol. 2, No. 2, pp. 101-106, April 2018.
- [17] Mrs. S. Murine Sharmili, Dr. N. Muthukumaran, 'Performance Analysis of Elevation & Building Contours Image using K-Mean Clustering with Mathematical Morphology and SVM', Asian Journal of Applied Science and Technology, Vol. 2, No. 2, pp. 80-85, April 2018.
- [18] Keziah. J, Muthukumaran. N, 'Design of K Band Transmitting Antenna for Harbor Surveillance Radar Application', International Journal on Applications in Electrical and Electronics Engineering, Vol. 2, No. 5, pp. 16-20, May 2016.
- [19] B.Renuka, B.Sivaranjani, A.Maha Lakshmi, Dr. N. Muthukumaran, 'Automatic Enemy Detecting Defense Robot by using Face Detection Technique', Asian Journal of Applied Science and Technology, Vol. 2, No. 2, pp. 495-501, April 2018.
- [20] Ms.Mary Varsha Peter, Ms.V.Priya, Ms.H.Petchammal, Dr. N. Muthukumaran, 'Finger Print Based Smart Voting System', Asian Journal of Applied Science and Technology, Vol. 2, No. 2, pp. 357-361, April 2018.
- [21] Muthukumaran. N and Ravi. R, 'Quad Tree Decomposition based Analysis of Compressed Image Data Communication for Lossy and Lossless using WSN', World Academy of Science, Engineering and Technology, Volume. 8, No. 9, pp. 1543-1549, 2014.
- [22] M. Mache era, and M. Chambray, "A review of studies on community based early warning systems", Jamba - Journal of Disaster Risk Studies, vol. 8, no. 1, 2016, pp. 1-11.