

EARTHQUAKE PROJECT

IE 482

Safety and Security

Group Number: 8

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1- Problem Definition

After earthquakes, there are threats to the safety of earthquake victims rescued from the rubble. The location affected by the earthquake becomes a chaotic environment, with everyone trying to reach their loved ones or acquaintances. In this chaos, the main goal of the project is to ensure that earthquake victims rescued from the rubble reach hospitals safely or that deceased individuals are safely buried. We aim to keep people safe by preventing negative actions such as exploitation or kidnapping by malicious individuals outside who take advantage of the chaos caused by the earthquake. Currently, there is no systematic work to ensure this security after recent disasters, which is why incidents like child abduction or the aforementioned negative actions occur, and people cannot reach their loved ones for months or even years.

2- Solution

We are planning to create a digital platform to solve this problem. For this platform to be usable, the government needs to collect certain information from every citizen as a procedural requirement, such as fingerprints, contact numbers of people to be reached in emergencies, blood type, etc., and store this information in the system. Then, authorities need to establish departments for the use of this platform. Those involved in ensuring the safety of earthquake victims through this platform should not consist of rescue workers involved in earthquake rescue operations. This is to prevent any delays in life-saving efforts. Access to the created platform will not be provided to the public to prevent malicious individuals or anyone from learning the whereabouts of others. Only police, gendarmerie, and AFAD (Disaster and Emergency Management Authority) officials will have access.

After an earthquake, every person rescued from the rubble will first have their fingerprints scanned by officials in these departments. This process can be done very quickly and effectively ensuring security. When fingerprints are scanned, the data and information registered in the system will appear for the individual. This information will include the person's photo, name, surname, blood type, and emergency contacts. Below this information, there should be a section indicating the condition of the earthquake victim. The responsible person should write a brief note about the person's health status and where they are being taken. This message will be recorded in the government system and automatically sent via message to the designated contacts. This notification message will inform where deceased individuals are buried, where live and healthy individuals are accommodated (collection areas, shelters, etc.), and finally, which hospital earthquake victims in need of treatment have been transferred to. This way, all acquaintances of earthquake victims can learn where they are and ensure their safety.

One important aspect of this platform is that there should be a requirement for designated contacts. Every citizen must add a contact who does not reside in the same city as themselves. This rule aims to prevent the possibility of everyone receiving messages being in the earthquake zone. Except for those who receive messages, if someone wants to reach their acquaintance, they can go to the police or gendarmerie and provide evidence of their acquaintance to access the person's location and health information.