**Emergency Help Service**

**Problem Definition:-**

Our is task to design a system which provides help to people in emergency situations like natural calamities, accidents, medical emergency, women safety alert etc. Device contains the emergency contact list of the user, so that user’s location can be sent in case of emergency. The user’s emergency contacts will get automatic message regarding the emergency.

**Problem Description:**

The natural disaster and other unpredictable disasters can put people in dangerous situations. We can't stop their occurrence. Some disasters can be predictable but many happen without prior warning. Apart from the natural disasters, road accidents have become many common these days. As per data registered by the World Health organization, nearly 12 lakhs people are known to die each year in road accidents globally out of which more than 83,000 people are killed in India while roughly 5 times of this number (about 4 lakhs) are seriously injured in India. It means, we kill about 230 people and injure about 1100 every day on Indian roads. Out of this, about 25-30% are pedestrians, 15-20% children under 15 years of age. In India, the total cost of losses due to road accidents are in the range of Rs. 400- 500 crores a day. But as we all are dependent on road transport. It is difficult to imagine life without it. So we should be prepared beforehand to face such situations.

During emergency situations most of the time it is difficult for person to contact family or hospital or other help centers for help and it also takes a lot of time and effort. In many case person don’t have that much of time to ask for help. With help of modern developed communication technologies like social media and mobile tools play increasing role in emergency and rescue. Smart devices become integral part of human life. As of today one in 5 people or around 1.75 billion people in the world own a smartphone and or a smart device. A large proportion of those also have internet access on their devices. During road-accidents it is difficult for a person to contact a family members and nearby hospital. Doing this would be very difficult and takes a lot of time. Due to this the condition of person becomes more critical. To avoid such situations there is a need for application and software which can immediately notify to family and nearby hospital or help centers about condition and location of that person accordingly .

**Features of Emergency Help Service Application:**

Probable features of app should be as given below.

● The app or software should be easily accessible at the time of emergency and should be able to rescue person in need within few minutes so for that our app would have easily accessible emergency feature e.g. Click home screen three times, or click power off button 5 times etc.

● The application will ask for a password or pin after turning on of emergency situation mode. If the user enters the code it means he is safe and message will not be sent. If the user fails to enter the pin within given time it means he is in a critical situation and immediate help is to be provided. This features ensures that a person really need help or the app is activated by mistake.

● Enable emergency information sharing instantly once activated. E.g. In case of medical emergency app will immediately send pre-saved information of user like blood group, allergies, past serious medical problems etc to nearby hospital. So, the treatment of patient become fast and more efficient.

● Once the user has turned on the application, then the device should immediately start capturing the data that needed. The data needed by the application may included are given below.

1. GPS location: This feature includes capturing of the current location of the user.

2. Photos and video capturing: Photos and videos would be taken periodically and sent to emergency contact numbers to get them an idea of what happened to the user or how is user’s condition. This feature is quite useful in women safety because it captures picture and videos that might be helpful in future. This feature is also useful in medical emergency and natural calamities as well. Because in medical emergency by help of video or pictures of patient’s state, while some help reach to patient, doctor can give some instruction to patient or if someone is present around patient and can help patient to pull through that situation. As well in case of natural calamities photos and videos are helpful to give information to sufferer to get through that hazardous situation.

3. Auto dial and messaging: the device should make automatic calls and send SOS messages to 2 or 3 persons in the emergency contact list.

4. Biometric and Atmospheric information: periodic capture of biometric and atmospheric information such as pulse rate, blood pressure, atmospheric pressure, temperature, orientation using compass etc. Atmospheric information is needed in case of natural calamity.

**Limitations of the Application:**

● Many people do not own a mobile phone or computer. And as we are going to build a software, it will be helpful for only those people who have access to this software.

● As we are collecting and sending data via internet, it is necessary that the mobile internet or WIFI connection is turned on in the mobile. Otherwise the GPS location could not be tracked and data cannot be sent without internet connection.

But the availability of the internet limits the use of this software because

many a times internet is not turned on in everybody’s phone. So we will

try to make a software which turns on the internet automatically. Another

thing which we can do to enable person use this software without internet

is that we could just send SMS to the registered emergency contact

number saying that the person is in some critical situation and needs help

Immediately.

● During natural disasters like earthquakes, floods etc network is not available many times. So the person in need would not be able to use the software and get the required help.

So for this we can add a feature which on activating the software without

network saves the recorded data like photos or videos in the software

Itself. This data along with the time when data is recorded would then be

sent to the emergency contact person when network is available.