**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 roadaccidents**,**  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 everyday 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 toroad accidentsare 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 dia**l and messaging: the **device** should make automatic **calls** and send **SOS messages** to 2 or 3 **people** 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.