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# Emerging Attacks and Solutions for Secure Hardware in the Internet of Things

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*Abstract*— The Help Report increased crime and occurrences of emergency situation it is required for technology to provide support rather HELP in the case of emergency. The main problem is in case of emergency to find nearest places like Hospital, Medical Shop, Police station, Fire Station. It is always required to query the places in the Google maps which is time consuming. Another problem is to notify our friends about the distress user are required to type message which is also a time consuming process so, there is need for automation of the process with more innovative and intuitiveway.

The help application on android is based on object oriented design. Object oriented design is the process of planning a system of interacting objects for the purpose of solving a software problem. One of the principle advantages of object oriented programming techniques over procedural.

A programmer can simply create a new object that inherits many of its features from existing objects. This programming techniques is that they enable programmers to create modules that do not need to be changed when a new type of object is added.makes object-oriented programs easier to modify. In the vision, a handheld system would provide its users with a multi-function app that they currently do not posses. This application paves the way for much more intuitive, interactive and user-friendly by creating new ways to interact with application. This application can be used to find nearest places, send messages etc.

***Keywords*—** Hospital, Google maps, Programmer , Consuming process, User-friendly etc.

## I. INTRODUCTION

Application will help the smart phone users in distress or otherwise by providing the functionality of four applications as one better application. The application allowstheusertoaccessnearestlocationslikehospitals,pharmacies ,policestationsand fire stations (Nearest Places module). It also allows users to send a predefined message to three predefined contacts by shaking the handheld device (Motion Message module). Further it allows the user to pin a location and find his way back using navigation (Find My Way module). Finally it allows the user to get basic health tips and first aid information (Medical Help module). The user interface is intuitive and self descriptive.

With increased crime and occurrences of emergency situation it is required for technology to provide support rather HELPS in the case of emergency. The main problem is in case of emergency to find nearest places like Hospital, Medical Store, Police station, Fire Station. It is always required to query the places in the Google maps which is time consuming. Another problem is to notify our friends about the distress we are required to type message which is also a time consuming process so, there is need for automation of the process with more innovative and intuitiveway

## II. OBJECTIVE

These special sections explore software solutions for secure hardware in the Internet of Things (IoT). It could well be argued that the emerging IoT, together with the two long standing trends of pervasive and ubiquitous computing, constitutes one of the most massive civil endeavors in the history of mankind. While it promises outstandingly positive usability and convenience effects, its implications for security and privacy are less clear. The vision of billions of low cost, lightweight, and highly interconnected endpoints certainly rises a host of pressing issues to both cryptographers and system designers. Ideally, these should be resolved prior to a large scale deployment of the IoT, and before its underlying infrastructure and standards have beenestablished.

In “Building a Trustworthy Execution Environment to Defeat Exploits from both Cyber Space and Physical Space for ARM,” authors from Pennsylvania, Georgia, Washington and Boston deal with the problem of secure execution and comprised operating systems. They provide a comprehensively protected execution environment for unmodified application running on ARM-based IoTdevices.

The objective is to develop an application that will provide help to the users in case of emergency. The main problem is to find nearest places like Hospital, Medical Store, Police station, Fire Station. It is always required to query the places in the Google maps which are time consuming.

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- The user to locate the nearestplaces.
- To send automatedmessage.
- To find way to a presetlocation.
- To provide common healthinformation

## III. LITERATURE SURVEY

Google maps is a web based navigation system developed by Google. Google maps includes broad, precise maps in 210 countries and territories. It allows the users to search for different places around the world. It also provides some information about different place which the user wants. Google maps is used for getting locations of different city. The user can get direction for another location with respect to his own location.

Google maps gives different options to the user to select their mode of transportation i.e. Bus, Train and walking. Google maps also gives the distance and time for travelling one place to another to the user Google maps helps the user by providing directions during driving, public transportation and walking directions for over 14,000 towns and cities. It also provides with the Live traffic conditions, incident reports, and automatic rerouting to find the best route.

Google maps contains detailed information of more than 90 million places. It also provides Street View and Satellite view. Google maps allows the user to find their locations on maps by GPS. It also allows the user to customize the own map by signing in. The user has the option to view maps even if he is offline. The major disadvantage of Google maps is that when the user wants to travel multiple destination then Google maps provides directions as per the locations entered by the user but it does not provide the optimized route for these multiple destinations.

## IV. EXISTING SYSTEM

The applications like Google Maps, Zomato, and Nirbhaya etc., where the users search for nearest places and send automated messages to the people care aboutthem.

Google Maps: (formerly Google Local) is a web mapping service application and technology provided by Google, that powers many map-based services, including the GoogleMapswebsite,GoogleRideFinder,GoogleTransit,andmapsembeddedonthird-party websites via the Google Maps API. It offers street maps, a route planner for traveling by foot, car, bike (beta), or with public transportation and a locator for urban businesses in numerous countries around the world. Google Maps satellite images are not updated in real time, but rather they are several months or years old.

Zomato: Restaurant Finder application give restaurant recommendations around and let's look at menus, pictures and maps for 95,000 restaurants in India, United Kingdom, UAE, Philippines, South Africa, Sri Lanka and Qatar.Zomato.com for Android also lets check ratings and reviews of all restaurants in city. Zomato on Android device is location aware - it recommends the best restaurants around currentlocation

Nirbhaya: An Application that can be used in any type of emergency to protect women, children near ones using a "Single" click Distress signal.

### *A. Drawbacks*

The drawbacks of the existing system are:

- Google Maps is a web mapping serviceapplication.
- Google Maps satellite images are not updated in realtime.
- Zomato is only Restaurant Finderapplication.
- Zomato is best restaurants around your currentlocation.
- Nirbhaya is children or women using a "Single" click Distresssignal

## V.PROPOSED SYSTEM

The main problem is in case of emergency to find nearest places like Hospital, Medical Store, Police station, Fire Station. It is always required to query the places in the Google maps which is time consuming**.** In this proposed system overcome these problems by providing service at anytime.

### *A. Advantages*

- To be able to find the nearestHospitals.
- To be able to find the nearestPharmacy.
- To be able to find the nearest PoliceStation.
- To be able to find the nearest FireStation.
- To be able to send automated message with currentlocation
- Insert three phone numbers by just shaking the android handheld device.
- To be able to find way to a location which visitedearlier.
- To be able to read few health relatedtips.
- To be able to get first aid information for commoninjuries.

## VI. MODULES

The project "Emerging Attacks And Solutions For Secure People The Internet Of Things" contains major four modules. Those modules are listed below:

### *A. Find Nearest PlacesModule*

- Hospitals Module
- PharmacyModule
- Police stationModule
- Fire Station Module

### *B. Motion messagingModule*

### *C. Find My Way BackModule*

- Present Identity Number(PIN)Module
- Find My Way(FMW)Module

*D.Medical helpModule*

- First AidModule
- Tips Module

*A. Find Nearest Places Module*

*1) Hospitals Module*

The user can find nearest hospitals by clicking the "HOSPITALS" button under Nearest places. It will show the nearest hospitals address and phone number. If user want make a call and view the map.

*2) Pharmacy Module*

The user can find nearest Pharmacy by clicking the "PHARMACY" button under Nearest places. It will show the nearest pharmacy address and phone number. If user want make a call and view the map.

*3) Police stationModule*

The user can find nearest Police station by clicking the "POLICE STATION" button under Nearest places. It will show the nearest police station address and phone number.

*4) Fire stationModule*

The user can find nearest Fire station by clicking the "FIRE STATION" button under Nearest places. It will show the nearest fire station address and phone number. If user want make a call and view themap.

*B. Motion Messaging Module*

The user must be able to send automated Distress alert message to preset phone numbers by shaking the phone. If the user has not entered and saved the phone numbers, and tries to send message by motion. If the user enters any invalid phone numbers like more than 10 digits or less than 10digits.

*C.Find My Way Back Module*

*1) Present Identity Number (PIN)Module*

The user must be able to pin or save the current location by clicking "PIN" button under Find my way. It will show the current location. If user want view the map.

*2) Find My Way (FMW)Module*

The user must be able to find the way back to the previously pinned location by clicking "FMW" button. It will show the source and destination way map. If user want view the map. The help application will save the current location . The help application will fetch the updated current location and shows directions to reach the pinned location from the currently fetchedlocation.

*D.Medical Help Module*

*1) First AidModule*

The user can read common health related first aid by clicking appropriate buttons in the "MEDICAL HELP" button. The user can view demo of how to perform first aid by clicking "DEMO" button under the first aid. It will show the some first aid instruction

*2) Tips Module*

The user can read common health related tips by clicking appropriate buttons in the "MEDICAL HELP" button. The user can view demo of how to perform tips by clicking "DEMO" button under the tips. It will show the some tipsinstruction.


Fig 1 : Screen Shot 1

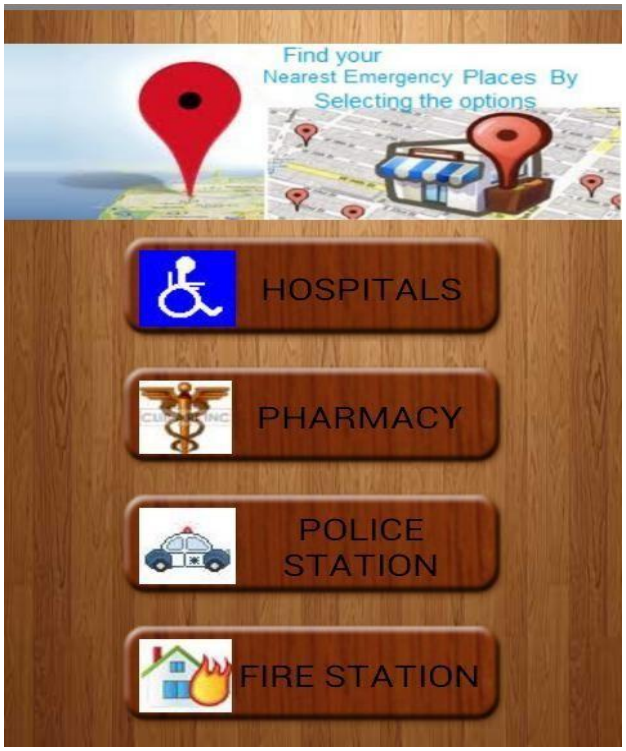


Fig 2 : Screen Shot 2


Fig 3 : Screen Shot 3


Fig 4 : Screen Shot 4

## VII. CONCLUSION

The application will help the smart phone users in distress or otherwise by providing the functionality of four applications as one better application. The application allows


Fig 5 : Screen Shot 5

the user to access nearest locations like hospitals, pharmacies, police stations and fire stations (Nearest Placesmodule).

Users to send a predefined message to three predefined contacts by shaking the handheld device (Motion Message module); further it allows the user to pin a location and find his way back using navigation (Find My Way module); finally it allows the user to get basic health tips and first aid information (Medical Help module). The user interface is intuitive and self descriptive.

This application paves the way for much more intuitive, interactive and user- friendly by creating new ways to interact with application. This application can be used to find nearest places, send messages etc. This makes object-oriented programs easier to modify. In the vision, a handheld system would provide its users with a multi-function app that they currently do notposses.

## VIII.FUTURE ENHANCEMENTS

As a future enhancement this application can provide:

- Street view inmaps.
- More options in Nearest Places and Medical Helpmodules.
- Online data storage for MedicalHelp.
- Automatic messages based on some criteria (e.g. Location) for Motion Message.
- Including notification to pin location when visiting newlocations.

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