CYBER SECURITY AND WOMEN SAFETY APPLICATION

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Abstract: In many ways, the internet cyber world is a dangerous place where innocent users can inadvertently fall prey to shrewd cyber criminals. To prevent innocent internet users from becoming victims of cyber-crimes, cyber-attacks and also provide the platform for women to protect herself. In continuous upgrading world, lives of women have becoming so vulnerable these days. Security of their lives has become most burning question now a day. Everywhere they have to face unwanted incident Considering all these aspects the application focuses on safety of women, Information about cyber security and to prevent mobile from harmful viruses. During crisis, women just need to press button from their device and an automatic message of the victim's location will be sent to selected numbers through the application. An automated message will also be sent to the nearest police station. The cyber security and women safety application is a way to officially show your support to the contents dedicated to promoting a safer, more secure, more trusted application does not require any financial support.
Keywords: Women security, Detection, Safety measures, Protection, Tracking, Alert, Crime, location, etc.

I. INTRODUCTION

The time of advance technologies and services, cyber security and women safety is one of the important feature. We are all aware of importance of women's safety[3], therefore wemust realize that they should be properly protected. Women are contributing in every sector of the country. But today female's security[1] at day and night time is big concern. For example: some of the worst and most brutal rape cases in India are Delhi gang rape and murder case , 2013 Mumbai gang rape, etc. Proper information security awareness is an effective way to defend against social cyber-attacks. " Cyber security can be define as, body of technologies, processes practices design to protect networks, computers, programs data from attacks[2], damage or unauthorised access. Cyber-crime can involve criminal activities that are traditional in nature, such as theft, fraud, forgery, etc. some cases of cyber-crimes are ATM fraud case set new record in Indore, Global ransomware attack could be long-awaited wake-up call, etc. There are many other ways that fake apps can get onto your Android device[7]. Criminals use SMS and E-mail messages that appear to be from your credit card company, bank or other brands to fool people into downloading applications that will compromise their data.Fake apps sometimes will pose as security updates, and by clicking on the links may also lead to your confidential information being stolen. The App allows users to examine the behaviour of an app that are installed into the device.Cyber security awareness is a way to help you to protect yourself online along with actions to take if you are impacted by cyber-crime or other online issues. The field covers all the information about cyber security crimes aware the people about cyber laws how to protect ourselves. Ensuring cyber security requires coordinated efforts throughout an information system. The uniqueness of this application apart from other application available is that the user need not spent time navigating inside the phone's separate menu to trigger the services. The paper is organized as follows, In section II literature surveyand section III proposed system are described. In the next section experimental result is explained.

II. LITERATURE SURVEY

A good number of mobile applications are found in literature addressing women security and safety problems. They are as follows:

1.AnAndroid Based Security Client System for Female, 13Dec2016[1]:
In this paper a very generic approach is presented to reduce the attack on womenand ensure the maximum security if this security device is used in extensively, itcan be possible to reduce the violence towards the women and provide her a safeand secured life. For this system, user's need a security device made of Bluetooth device and an android mobile application. This system works properly with thedistance between the security device and the mobile phone is 10m.

2. Detection of Mobile Application Leaking Sensitive Data, 2017[2]:
In this study, it was achieved a system that detects mobile applicationsleaking sensitive data [2] and also evaluates mobile applications downloaded from GooglePlayStore in the perspective of dataleakage. J48 classification algorithm was usedto detect malign applications and obtain the most informative features. K-meansclustering algorithm was employed to group both benign and malign applicationsto see if there is any similar pattern between them. Data leakage-related featureselection, evaluating mobile malwares in the perspective of data leakage.

3. SafetiPin[5]:
An innovative mobile app to collect data on women safety in Indian cities:SafetiPin is a Personal Safety app that help user to take safer decisions, based on the safety score of an area. Get alerts when useris in an unsafe location. The app is running in the background and it checks if user have entered an unsafe location. User will receive an alert and can choose to invite friends or family to track user.

4. Women's Security:
This is smart phone app that helps women to ensure their safety using their devices. This helps to identify and call on resources to help the one out of dangerous situation.

5. bSafe:
The app's moto is "Never Walk Alone". This app creates a

net of 'Guardians' who will able to receive users SOS message. This message includes users GPS location, and also users enable the GPS tracker.

6. Police Nearby:

This app takes users GPS location and also list the nearest police stations around users. It is most useful in emergencies such as thefts, robbery or other such problems.

III. PROPOSED SYSTEM

Cyber security and women safety application is one of the good options when it comes to safety apps for women, to aware user about cyber security and give the platform to protect device from harmful viruses. The application is designed keeping in mind the concept of personal safety, device safety and `awareness of cyber security.It incorporates all the essential features such as GPS tracking, emergency contact numbers, directions to safe locations, fake application and link detection,etc.System work flow is described in this section in detail. The main target of the work is shown by flow diagram as follows.
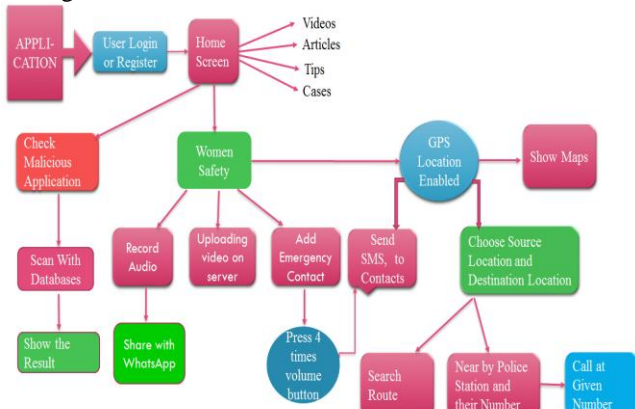

Fig.1:Working Diagram

In the above fig.1 Proposed system is described as with various modules:

A. Registration Process

At first user have to save somedetails.These details include: Name,Valid mobile number and password of the user.

B. Login Process

User have to login with their registeredmobile number and password.

C. Information Portal

This section includes information about cyber security in the forms of cyber security related videos, blogs, tips, cyber-crimes, cyber laws, Do's and Don'ts.

D. Fake application Detection

The risky apps might contain in google play store. For normal user it is just impossible to identify fake or malicious apps. This application will checkyour device for potentially harmful apps. It `warns you about any detected harmful apps found and immediately send alert.

E. Women Safety Alerts

In this section describe the procedure of women safety alerts. Application will provide the women safety mode, this comes with power button, which will send alerts to user's selected emergency contacts as well as nearest police station with live location when user in danger situation.

F. Display Nearby Police Station and their Number

When user travel from one place to another then application automatically displays nearest police station with their number.System use the nearby API for displaying nearby police station.

G. Choosing Safe Route

This module displays the safest route. therefore, you can view alternate routes from one place to another, andselect the safest route. It will then transfer control to Google maps so you can reach your destination safely.Here Used Dijkstra's Algorithm for finding shortest Safe Route.

Dijkstra's Algorithm:

*   START
*   Identify source and destination node as location1(L1) and location2 (L2).
*   Set L1 as T-Node.
*   Set T-Node's label to "permanent" and update neighbour's status record set.
*   Identify the tentative node linked to L1 that has the lowest weight and set it to T-Node.
*   Is T-node L2?
*   If No, Then goto step 4.
*   Otherwise
*   Based on information in status record set, do this until you reach L1. This string of nodes represents the best route.
*   END.

H. Fake Link Detection

This section describes the procedure offake link detection. If user wants to check visited website fake or not, then user can easily check from this application.
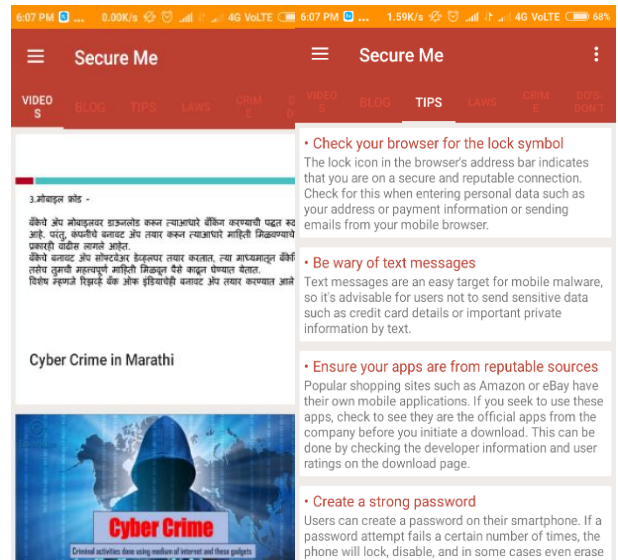
IV. EXPERIMENTAL RESULT

Fig.2: Information Portal

In fig.2.Display the information portal includes cyber security and women safety related videos, blogs, tips, cyber-crimes, cyber laws, Do's and Don'ts.
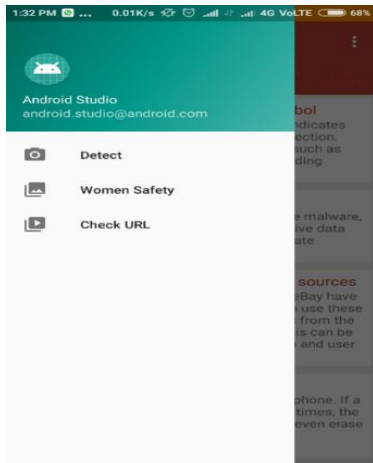
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3326

Fig.3: Navigation Drawer

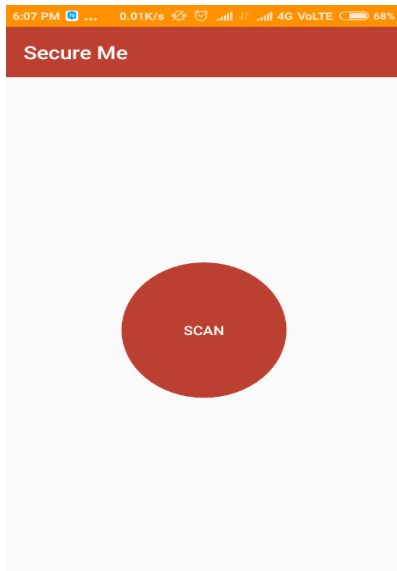In Fig. 3. Navigation drawer display these three modules in the form of ListView.

Fig.4: Fake Application Detection

In fig. 4. Detect fake application just clicking on scan button then scan all application which installed in user's device If any fake application is found then alert notification will be send to the user.
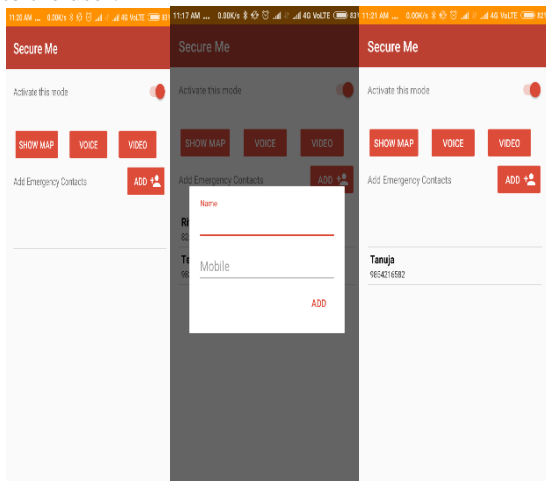

Fig.4: Women Safety

In fig.4. user have to activate security mode and add

emergency contact in it.If user will be in danger mode just clicking power button 4 times then automatically send users live location SMS to the selected emergency contacts.
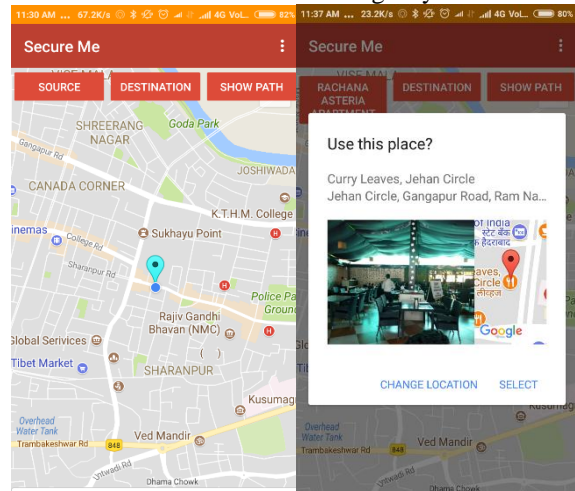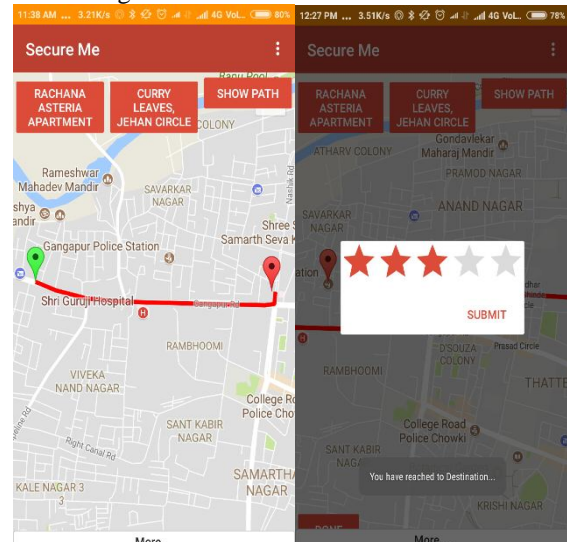

Fig.5.1:Select Source to Destination

Fig.5.2: Display Safe Route

In fig. 5.1. User have to enter source and destination and in fig.5.2. Display the safe route for the user. When user reach to their destination then rating popup message will be display on user's deviceand user will be give rating for this route.
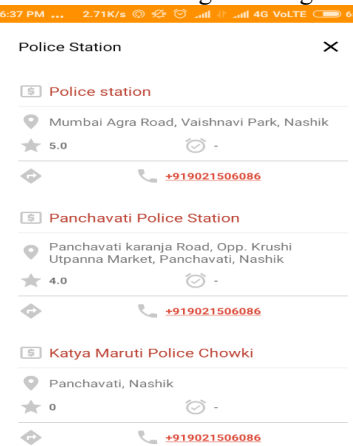

Fig.6: Nearest Police Station Information

In fig.6. When user travel from any area then this application will be display the nearest police station information on the user's device.

Fig.7: Fake Link Detection

In fig.7. Detect fake link, if user received any type of link then from this module user can able to check this link is fake or not.

V. CONCLUSION

The main objective behind the development of this application is to provide better way for people to find safe routes, to detect fake apps and links, security alerts and also to aware people about cyber security. This is the android application for women safety. When we feel that we are in danger situation, for example travelling alone at night time then this application will be efficient and effective to use. It will continuously display and send updated locations to added contacts and to nearby police stations.Thus, application is having both safety and security which is essential in today's digital world.The developed system has scope by extending Live video streaming with offline facilities.

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3328