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Woman Safety Android Application

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Abstract: ***In the modern's world, it will be unsafe to travel alone for a person at night especially for women. To provide safety for women a good way to reduce the chances of becoming a victim of violent crime is to identify and call on resources to help you out unsafe situations. Having a safety app on your phone can reduce the reason for the risk situation and add assistance when we need to use it. Unlike the other applications available, which work only at the time of Emergency or Danger, this app can be used as a safety or precaution measure. So that, "Protection is better than cure". The main purpose of this app is to provide a safe platform through Android phone as today all person is taking Smart Phones to travel here and there. The user also gets to know the current user address using GPS location tracker. The fetched information is sent to the emergency contact of the user. This paper presents women security an Android Application for the Safety of Women and this app can be activated this app by a shaking the mobile, whenever need arises.***

In today's world, even though there are so many economic developments in our country, but crimes against women are equally raising. Since we cannot travel with them all the time, though it is necessary that they need protection. It is predictable that every single one of them is having smart phones with them. So this application is to provide security through smart phones. This paper presents women security an Android Application for the Safety of Women and this app has so many features like a call is sent on a single shake and message is also sent to the emergency contacts with the present location of the person in trouble.

Keywords: XML, JAVA, android, SDK (software development kit), AVD emulator, firebase database, authentication, real time database, notification, layout.

I. INTRODUCTION

In today's fast-moving world, Women Security is an issue of growing concern. We have read about many unfortunate incidents happening with women and the rate is increasing. Women these days are working women and the globalization has made us aware of gender equality. Earlier the women were restricted only to the household chores. With the changing scenario, women are competing with men in all fields. We can see women going to great success levels in all fields, may it be corporate, scientific, education, business or any other field. Safety of women matters a lot whether at home, outside the home or working place. Last few crimes against women especially the case in Delhi was very dread and fearful. Because of such crimes, women safety has become a major topic. According to the statistics, it is found that every two out of three women have suffered trauma in the last year. According to the survey of women, it is found that women are losing their confidence because of such incidents. By the survey of Delhi government's Women and Child Development Department, around 80% of the women in national capital have fear regarding their safety. Women are harassed not only in the night or evening but also in the day time at their home, working places, or other places like street, club, etc. It is found through the survey that the reason of safety concern is the lack of gender-friendly environment and improper functional infrastructure such as consumption of alcohol and drugs in open area, lack of adequate lighting, safe public toilets, sidewalks, lack of effective police service, lack of properly working helpline numbers, etc. A huge percentage of women have no faith that police can curb such harassment cases. There is an urgent need to understand and solve this problem of women safety so that they can also grow equally like men in their own country.

II. LITERATURE SURVEY

A. Cloud Based Smart Mobile Application For Women Safety

Women face numerous difficulties in today's competitive environment, including abuse. Women's safety has become a serious concern as the amount of crime against women and girls continues to increase. The government has undertaken several proactive steps to prohibit such unethical acts, but they've had little effect on the rising number of such offenses and have remained unchanged. As a solution, in this study, a wearable smart device combined with numerous sensor devices and a microcontroller is used in conjunction with an android-based phone app with a model employs that alerts and provides location-based intelligence. The smart wearable device proposed consists of a series of sensors such as temperature and pulse sensors which send the input signals to the microcontroller which is integrated with GPS and GSM modules.

When the sensors send in signals which indicate that the user is in distress or trouble the GSM module connected with the Wi-Fi module sendsa message to relatives and calls the nearby police station through a mobile app designed for this device. The GPS integrated with the microcontroller sends the location details through the mobile app. The proposed model's primary goal is to offer women safety in public locations, and the key advantage of this propos al is that this gadget is compact enough to be worn anywhere.

B. Safety Solution for Women Using Smart Band and CWS App.

Women endure a lot of sexual harassment these days which is becoming alarming day by day. The situation is extremely serious in developing countries as well as underdeveloped ones. Consequently, it poses a significant challenge to women's empowerment as well as to a country's budgetary growth. In this project, we are advancing an IoT device along with an android app that can make women's movement safer. Women can get swift and supreme safety support by pressing the device's emergency switch. If any incident occurs, this device can track the user's location in real-time and send it to the nearby police box and volunteer. The user can also get location of the nearest safe zone by this device as well. In addition, this device functions in both online and offline mode. If there is no internet available, the user can still use the device to access the nearest police box and volunteer support. The device consists of Arduino nano, GPS, GSM, Bluetooth, etc. The aggregate of all these elements collectively offers this device to be affordable and easy to navigate.

C. Lifecraft: An Android Based Application System for Women Safety.

Women have ensured the stability, progress and long-term development of the nations throughout the history. If women are subjected to violence and harassment, they cannot be genuinely included in society. With increasing heinous incidents involving women and children, an advanced system is needed to serve the purpose of getting help as soon as possible. At present time, the use of smartphones has increased rapidly, making it possible to use a smartphone efficiently for security or other protective purposes. All the recent atrocious incidents have made us think about to go for the safety issues. The crimes against women can be minimized with the help of our application "LifeCraft". It is an application for android for women's safety though men can also use it at a distress situation. It can be activated by voice command or SOS key. An alert message with location is sent to the user defined numbers in every five minutes until the system is turned off [1]. Many cases remain mysterious due to insufficient evidence. So, we have kept audio recording option to keep evidence. Continuous location tracking, showing the victim safe zone, offline mode is some of the most useful features of this system. Keywords—women security, android application, voice command, location tracking, offline, safe zone.

D. An Intelligent LoRa based Women Protection and Safety Enhancement.

A country's economic destiny is heavily influenced by the contributions of its women. Instead of being confined to the house to take care of domestic responsibilities, women are now able to work and raise a family while still contributing to economic growth on an equal basis with men. In the past several decades, there has been a lot of effort and money put into increasing the number of women who get hired and stay in their jobs. Sexual harassment of women in the workplace and other settings has come to light more often in recent years, raising important concerns concerning the gender-specific effect of this kind of discrimination on women's lives. We believe that technology can play an important role in developing a solution to alleviate women's daily annoyance. LoRa-based devices may be used to improve the security of women, according to this report. In this work, we present a method for programming such devices such that they can analyze a person's unique temperature and heart rate patterns and determine at what point to sound an alert. Large-distance transmission is made possible by the LoRa physical layer, which serves as the primary communication interface. Additionally, an Android app has been built to indicate the position of the pushed node and to give navigation routes to the relevant security personnel in order to visit that node. It was decided to evaluate energy use and cost. According to our findings, our network is far less expensive and power-hungry than the alternatives

E. An Insight into Android Applications for Safety of Women: Techniques and Applications.

Smartphones play a significant role in today's era of technical advancement. It not only helps to communicate or a medium of entertainment that can be used efficiently for transactions office work and even for personal security and protection purposes. Women are the crucial segment of our society and contribute in almost every field, still, they are not safe and are most vulnerable when traveling alone. Government and police are taking strict actions for the safety of women.

Several campaigns, workshops, community meetings and social media stuff have helped to spread awareness regarding the issue and have proved useful by educating the people of women rights to safety and need to be safe. However, despite all the efforts, not even a single day goes by when we don't hear a case of an attack on a girl or a woman, be it domestic violence or public humiliation. Unfortunately, this is the sad reality of our society that lives in constant fear. Women safety is now a subject of global concern the increasing crime rates in today's society has infuriated everyone and pushed us to develop a system that can provide security to women and anyone through their phones. In this paper, we have reviewed applications and devices made for women's safety using different technologies such as GPS, SOS button.

III. SYSTEM REQUIREMENTS

A. *Software Requirement*

1) Operating System - Windows 7/8/10
2) Front End – Android
3) Back End - SQLite DB
4) Android SDK

B. *Hardware Requirement*

1) Processor - Intel i5/i7
2) RAM - 4GB(min)
3) Hard Disk - 40 GB
4) Key Board - Standard Windows Keyboard
5) Android Mobile

C. *System Feature*

1) Registration
2) Login
3) Add Relative Number
4) Detect Location’
5) View Output
6) Accuracy
7) Logout

IV. METHODOLGY

A. *Working Modules*

The waterfall model is a sequential design process, used in software development processes, in which progress is seen as flowing steadily downwards (like a waterfall) through the phases of conception, initiation, analysis, design, construction, testing, production/Implementation and maintenance. Waterfall approach was first SDLC Model to be used widely in Software Engineering to ensure success of the project. In the waterfall approach, the whole process of software development is divided into separate phases. In Waterfall model, typically, the outcome of one phase acts as the input for the next phase sequentially. Following is a diagrammatic representation of different phases of waterfall model.

1) *Requirement Gathering and Analysis:* All possible requirements of the system to be developed are captured in this phase and documented in a requirement specification doc.
2) *System Design:* The requirement specifications from first phase are studied in this phase and system design is prepared. System Design helps in specifying hardware and system requirements and also helps in defining overall system architecture.

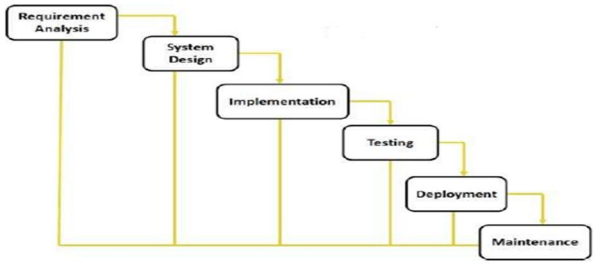
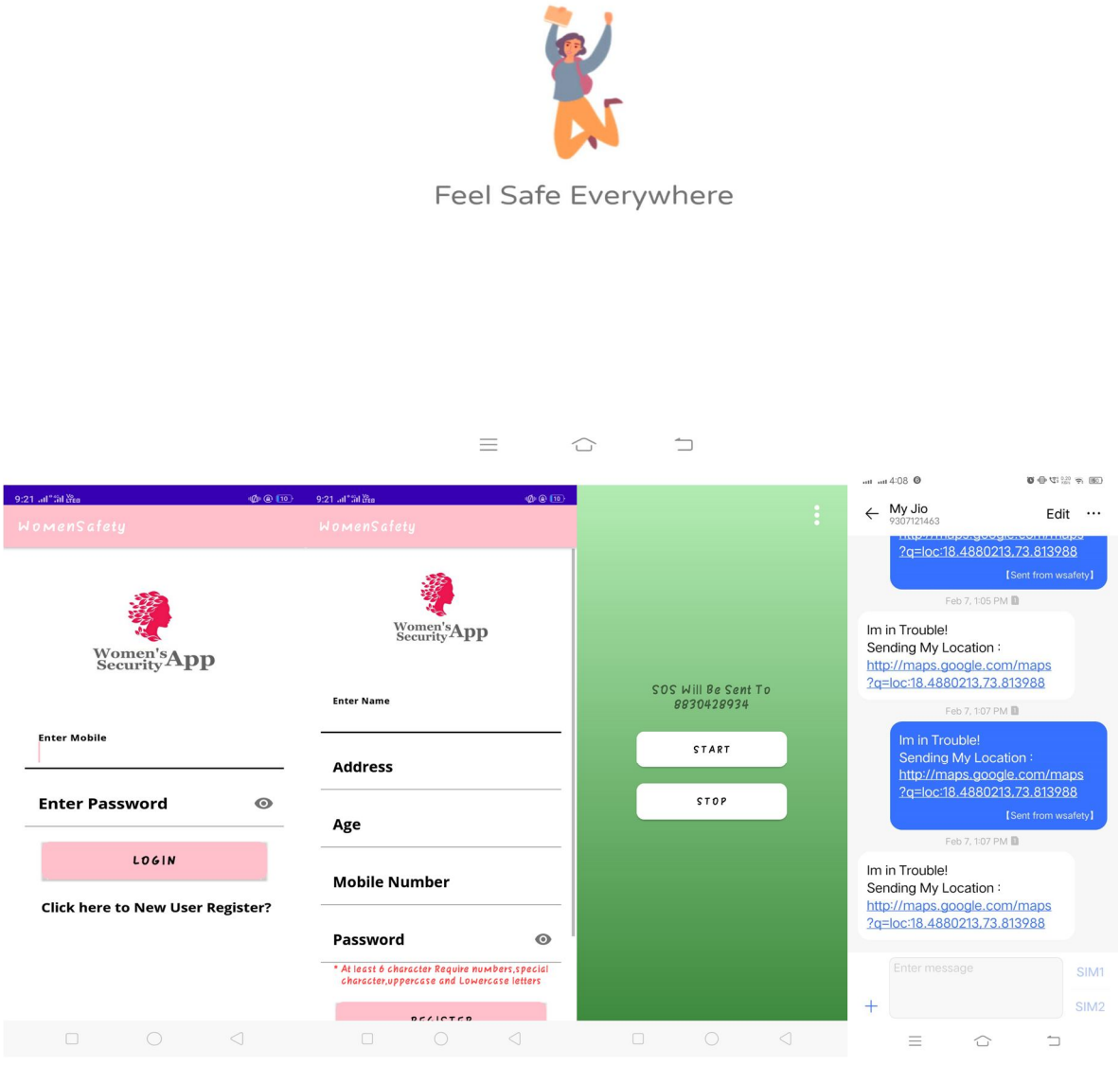


Figure: Waterfall Model3.

3) *Implementation:* With inputs from system design, the system is first developed in small programs called units, which are integrated in the next phase. Each unit is developed and tested for its functionality which is referred to as Unit Testing.
4) *Integration and Testing:* All the units developed in the implementation phase are integrated into a system after testing of each unit. Post integration the entire system is tested for any faults and failures.
5) *Deployment of System:* Once the functional and non-functional testing is done, the product is deployed in the customer environment or released into the market.



6) *Maintenance:* There are some issues which come up in the client environment. To fix those issues patches are released. Also to enhance the product some better versions are released. Maintenance is done to deliver these changes in the customer environment.

V. CONCLUSION

This paper proposes a new women's safety model that aims to provide a very safe environment. Many unfortunate incidents took place in the case of women. Problems can come from anywhere. This paper analyses the key needs of the intelligent security system with technology demand and system building challenges. Since the prediction of such incident is not possible hence to minimize it our proposed mobile application will be very helpful. It will not only help the women but also the children as it can work with voice command which is easy for a child to operate. And men can also use it when they face any big trouble and need help. Not only in sexual related problem, it can be used when someone faces accident or hijacking or public attack. Whenever anyone is in any kind of danger, our system will help to decrease the risk and make the world a better and safer place.

VI. FUTURE SCOPE

In future we will work on making it more secure so that we can decrease the crimes at the lowest level possible. We are planning to implement two unique features in this application which are new in safety app. That is hidden camera and microphone detection. As this is also a safety issue for women. User can check whether there is a camera or microphone hidden in the place. There are two ways to find a hidden camera using our mobile app. One is to look for the magnetic activity and another is to detect the nonvisible white light. We will use the magnetic sensor of the smart phone's hardware (magnetometer) and infrared sensor (IR) in the camera to detect hidden camera. User can move his/her phone around suspected area, if a strong field is detected, user can be sure about hidden device that is secreted within the wall or object. Another way is by detecting light reflecting from a lens which can be caught by the phone's camera.

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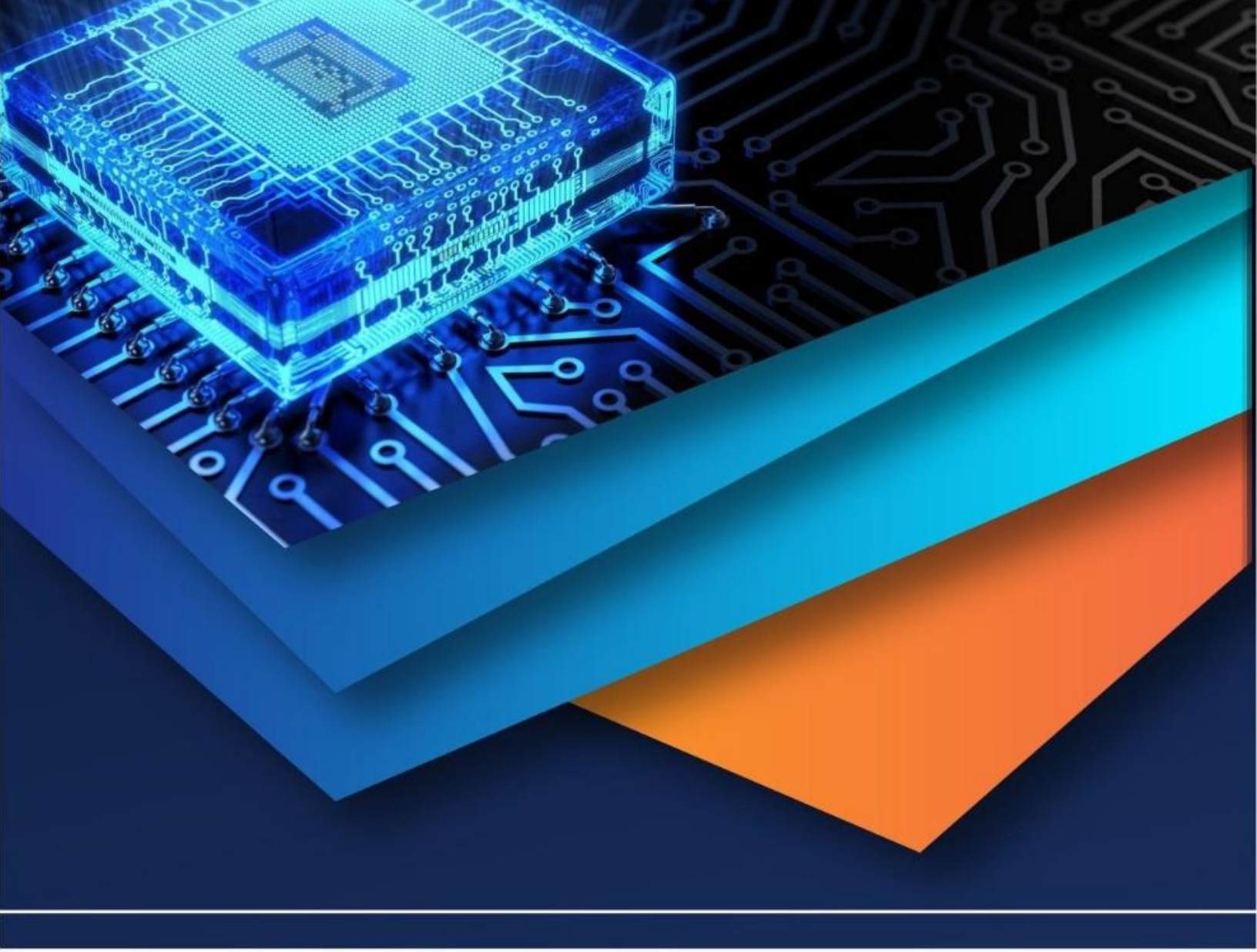

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