

## Satark India Application

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### Abstract

*We face many problems and see a lot of issues happening in our surroundings but we ignore those because of the tedious path of government to follow up and investigate the issue. Mobiles play a major role in delivering solutions to our everyday problems. We have designed the android phone application "Satark India Application" that focuses on delivering a clean society. This app gives people the platform where the issue can be raised and transferred to the respective officer or NGO's directly at that instance using AI and ML. The application makes it easier for people to put forth their issues and gives the government a well-organized and more advanced way of communication with the people. The app provides the feature to form various self-volunteer people in their regions. They all will also help people to solve local issues at their level and ease the workload of the government. Details of request owners are secured, encrypted, and not shared with anybody so people can freely raise the request for any problem self-issue or rule violation report. Users can track the progress of requests raised. The data analysis part will give all the graphical representation which provides benefit to the government for the study of the whole nation on a single interface. Our app provides real-time location tracking and one-click emergency help toggle for women's security purposes. 'Be Indian Buy Indian' module provides a total guide for people to buy Indian products. Since the whole application serves as the best intermediate between the government authorities, NGO's and people which helps to form a better nation and a responsible society we have named it "Satark India Application"*

**Keywords:** Encrypted, self-volunteer, women security, violation, graphical location

### INTRODUCTION

The rate of request fired is increasing as there is a rapid growth of population so problems generated are wide thus grievances and requests given by people also have increased. For any administration, the most important part is the grievances redressal but the traditional approach followed by the Indian government is very tedious and lengthy. The main motto of our proposed application is to bridge the gap between government and people by providing a user-friendly and

interactive way of putting up a request to administration and to sort the different problems easily and in a faster way. The request launched through the app was directly forwarded to the respective nearby officer. Nowadays for each problem, we look for a possible solution on our handset, on the same line, we proposed the application in such a manner that users just must fire a request using a photo, video, document, or audio. This also eases the work of local authorities and problems can be communicated and sorted at the earliest. For people who are willing to work for India, we have introduced the concept of self-volunteer as well as various other topics from the point of view of the welfare of the nation.

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Implemented system work as a bridge between government and the people of the nation. Through this app, users can communicate directly to the government as well as one can fire a request regarding any issue without fear of identity due to high-level confidentiality in the app.

The primary goal is to have a nice reach of government towards problems of people as well as crime rate should be minimized. People can work as self-volunteer for the nation, with NGOs registered with an application for the development of an alert nation. Emergency help button designed for best possible safety measure of women. The module for an initiative to buy Indian products is made available. Admin gets the brief about overall progress in the form of graphical method which may help government official to have a wide understanding.

## LITERATURE SURVEY

SCMS was capable of classifying the complaint and directly sending to the appropriate responsible department [1]; therefore, the system could reduce the cost of hiring the staff and time of the operation as shown in Figure 1. Do not have any admin work place inside the app. There is separate web portal for it. General public don't have to search for any helpline service's phone number in any unfortunate event. They could quickly reach out to the concerned emergency service organization [2]. For SOS module also user need to open the application.

It is proactive and responsive to fight with criminals. As it is not a traditional paper-based process, records could not be manipulated [3]. Restricted to police officials only. Don't have android interface [4]. Totally web based application. The project is a dynamic application wherein a citizen can report incident, view map, and view the status of the report. The project utilizes the use of GIS for geospatial mapping, to effectively analyze law enforcement and incident management [5]. Restricted to police officials only. Don't have android interface. Totally web based application.

## SYSTEM CONFIGURATION

The application is developed using the android studio software. We have used java as a base language for development. Google Map API integrated to provide the real-time location of user while they are using the app. For hosting services, we are using the platform provided by hosting. For database handling, MySQL made it easy to manage it as shown in Figure 2. In the emergency module calling services and in the OTP system text local messages are integrated. Some other languages are also used like PHP, HTML, CSS, jQuery.

The app will work for android mobiles above version 6.0 (marshmallow) [6]. The app also provides the fingerprint sign in the facility to use its device should have a fingerprint scanner [7–9]. The app needs some permissions like location, storage, telephone, SMS, camera, mic, etc.

	Satark India Application	iReportMo App	E-Complaint(Web, Mobile app)	Call Center
Tracking Complaint Status	✓	✓	✗	✓
Auto Classify Complaint	✓	✓	✗	✗
Complaint Procedure	✓	✓	✗	✗
Prevent user to submit duplicate complaint	✓	✗	✗	✗
Data Collection	✓	✗	✗	✗
Light APK	✓	✗	✗	✗
OTP Sign In	✓	✗	✗	✗
Multi Language	✓	✗	✗	✗
Self- Volunteer	✓	✗	✗	✗
Data Analysis	✓	✗	✗	✗

**Figure 1.** Specification comparison with previous applications.

Technology	For what we used ?
JAVA	Back-end Programming of App
XML	Front-end of Android App
Google Map API	To Track User Location
Text Local SMS	To Send Alerts, OTP's & Messages
PHP	As Server Side Scripting Language
HTML, CSS, JS	To Design Master Admin Portal
Hostinger	To Deploy our project files & Database
LottieFiles	To Load Lottie Animation Files & Plugins
MySQL	Used as Database
PhpMyAdmin	Used as Database Management Portal
YouTube Plugin	To Load In-App Videos
FingerPrint Scanner Module	To Scan Fingerprint & Authenticate User to use this App

**Figure 2.** Technologies used.

## SYSTEM FLOW DIAGRAM

It is a step-by-step diagrammatic representation of an algorithm. The flowchart of the Satark India Application starts with the user's registration process. As shown in the diagram, the diamond represents the condition where it is checked if the user is registered or not. If he/she is already registered, he/she may perform a Login operation. Else, he/she will make registration in the application.

For completion of the login process as well as the registration process, some credentials will be taken by the user as input data. As we can see in the diagram, after logging in to the application, the next step is the process of making a request. user can fire request. Here, again the input data will be taken by the user. According to the diagram, there are four different ways of taking input from a user. The information that will be entering into the system will be in the form of an image, video, audio, or text file. The process of forwarding selected media to the respective department with a brief description will be done and a request will be sent to the admin of the respective department. The process of verification by admin will start here. We can see a decision point that checks if the request is valid or not. If the request is valid, the Request accepting process will be performed by the admin. After accepting the request, we again come across a branching point that checks if the issue is resolvable by the self-volunteer or not. if yes, the request will be handed over to the self-volunteer and then the resolution process will be started by the self-volunteer. But if it is not resolvable by self-volunteer, it will be resolved by the admin itself.

If the admin feels the request is invalid, it will be rejected. Accordingly, the process of sending acknowledgment to the user will be performed based on the status of the request. The status will be in the form of output data such as 'Request accepted', 'Request rejected', 'request in progress', 'request resolved'. And here the flow of the process ends (Figure 3).

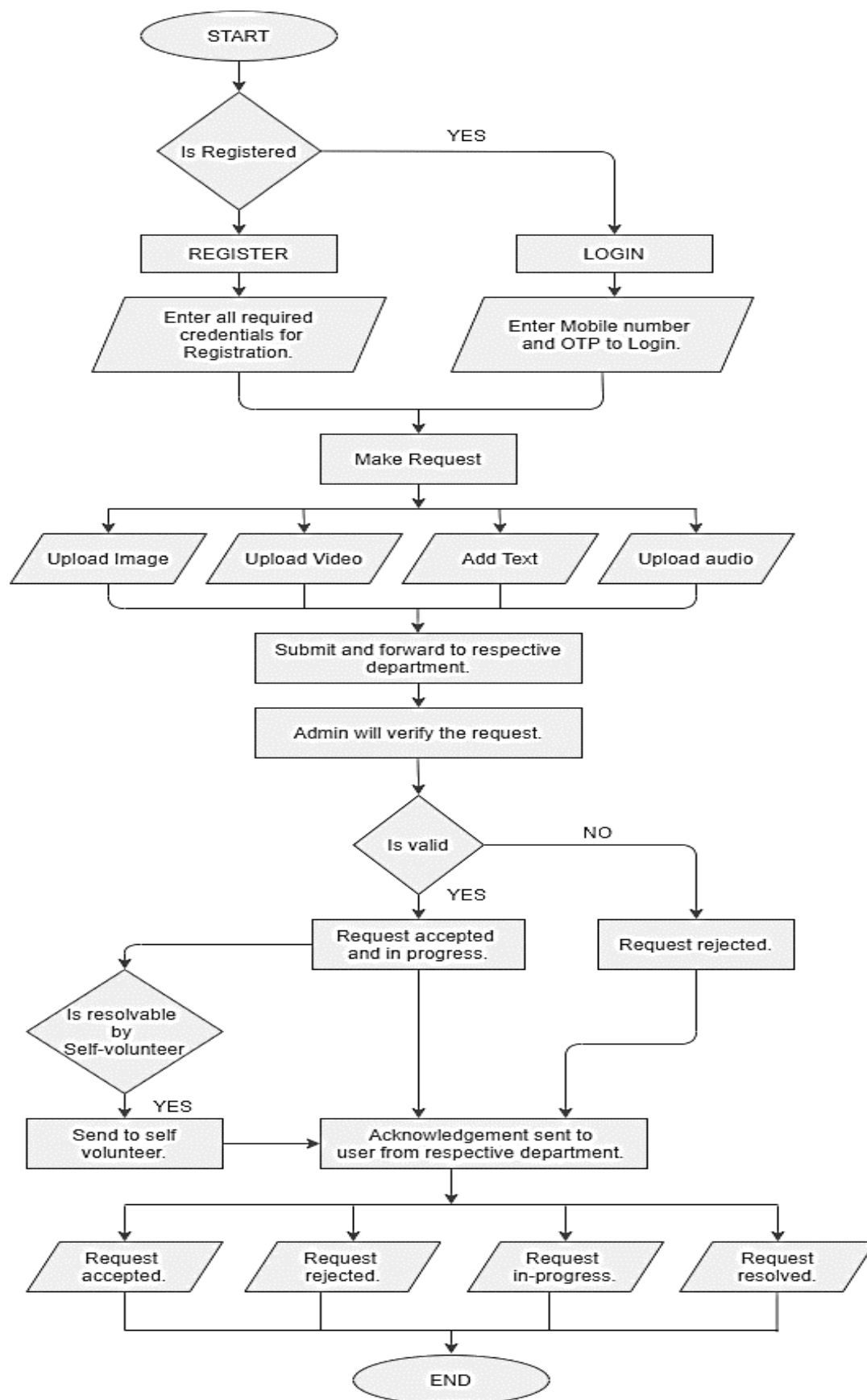
## SYSTEM DEVELOPMENT

Pseudocode for location service and request launched is given as below as shown in Figure 4.

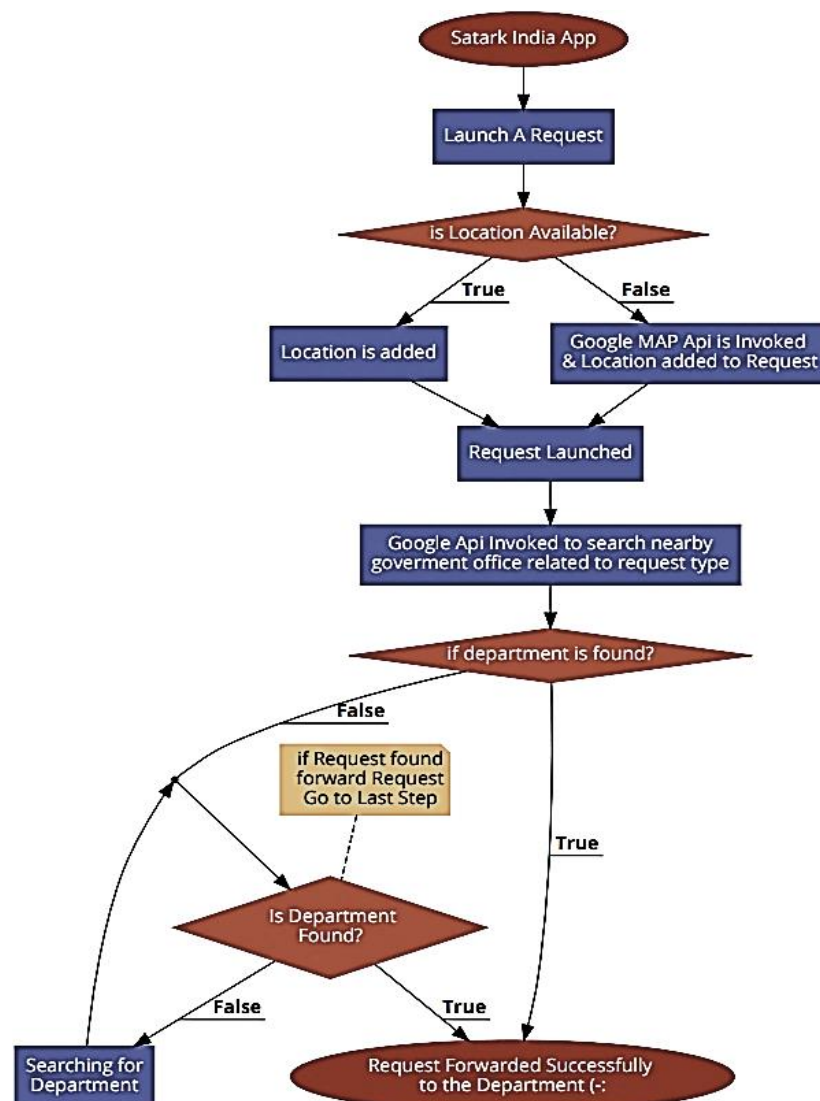
```

Satark India App; Launch A Request;
If (is Location Available?)
{Location is added;}
else{Google MAP Api is Invoked and Location added to Request;}
Request Launched; Google Api Invoked to search nearby government office related to request type
If (if department is found?) { //if Request found//forward Request//Go to Last Step}
else{while (!Is Department Found?) Searching for Department;}
Request Forwarded Successfully to the Department (-;

```



**Figure 3.** Flowchart of Satark India Application.



**Figure 4.** Pseudocode flowchart.

## RESULT

Figure 5 shows the application flash screen developed from point of view of national integrity by using Indian flag colors. The above screen flashes every time the user opens the application. Users don't have to remember the user name and password since we have used OTP verification. After verifying the mobile number user must fill the one-time event registration form as shown in Figure 5.

App on-boarding is the way to familiarize users with the application purpose and the usability of the app Figure 6. It appears only when first time user sign in to the app

As shown the setting of the application include:

- Figure 7.1. User's profile: It shows the information of the application user.
- Figure 7.2. Language setting: Using this, the user can switch to his preferred language to use the application.
- Figure 7.3. Speed test: To check internet connectivity strength.
- Figure 7.4. Privacy Policy of the application.
- Figure 7.5. Terms to use: It includes the Terms and conditions applied to use the Satark India Application.



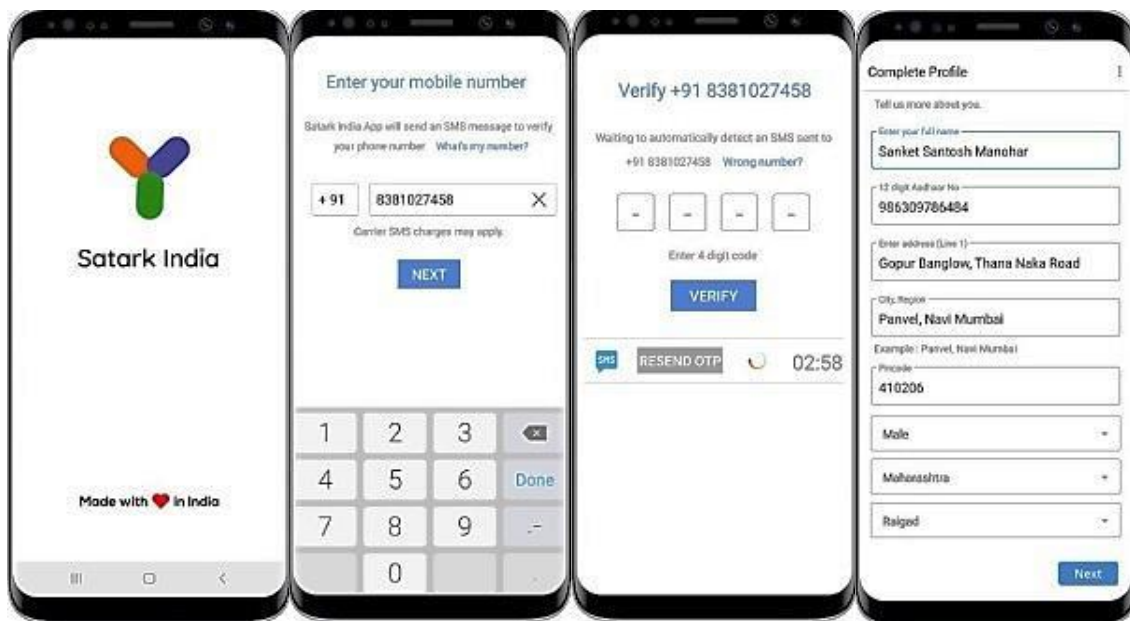


Figure 5. Flash Screen, Registration Form, Login and Sign-up.



Figure 6. Application Onboarding.



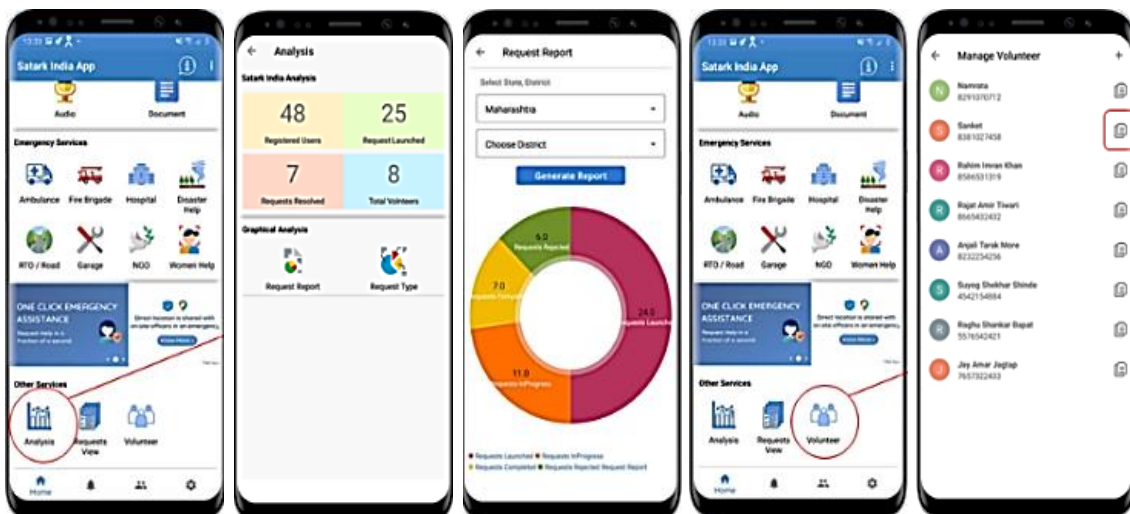
Figures 7. (7.1–7.5) Setting Page of App.

In Figure 8.1, the fingerprint lock of the application is shown. This is a feature that enables the user to unlock the application with his/her fingerprint. To utilize this feature, the device must have a fingerprint scanner. The given Figures 8.2, 8.3 show the Dashboard of the Satark India Application. The dashboard includes a request firing section where the request can be made by the user. As shown in the Figure 8, the second section has emergency services contacts. It is the main module of the application. The third section has some additional features such as 'Be Indian buy, Buy Indian', 'One-click emergency for women'. In the second image, we can see the interface for admin. It has additional modules of data analysis, request reviews, and data of self volunteer. The Figures 8.4, 8.5, elaborate the 'Be Indian, Buy Indian' module of the Satark India Application. It helps Indians to find the Indian producer companies of daily-use products. This module is very helpful for the business of Indian industries.

The given Figures 9.1–3 show Data Analysis screen for admin. It helps admin to analyze the record of requests with respect to state, district, and city for each department. It is shown in very elaborate manner by using graphical method. Figures 9.4, 9.5 show the Self Volunteer module of Admin end, where admin can view the list of self volunteers and the requests assigned to them. As shown in the Figure 9, he can add a volunteer, pass the request to the volunteer, and view the information of the request handled by the respective volunteer.



**Figures 8.** (8.1–8.5) Fingerprint, App Dashboard, Be Indian Buy Indian.

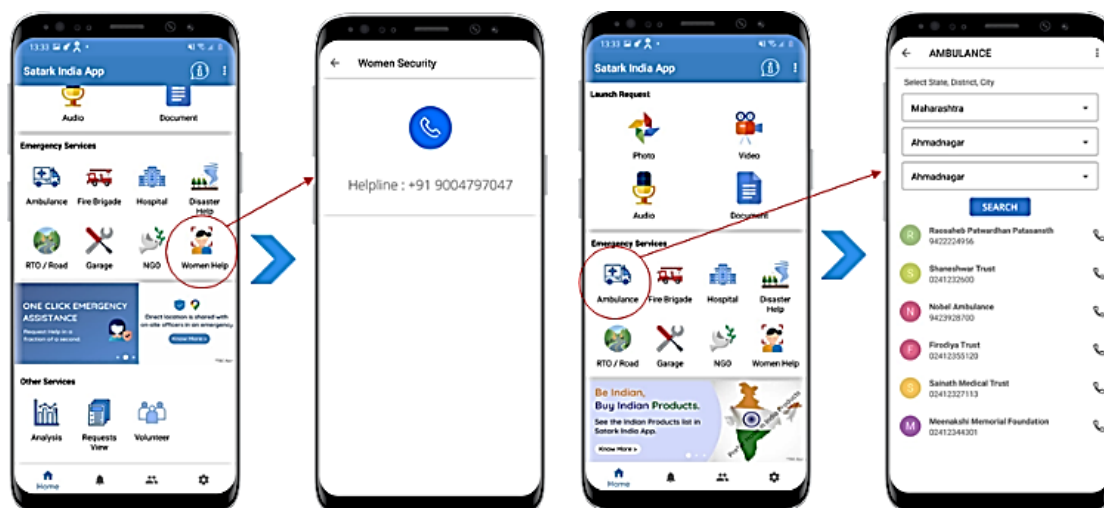


**Figures 9.** (9.1–9.5) Admin utilities (Data Analysis, Self Volunteer).

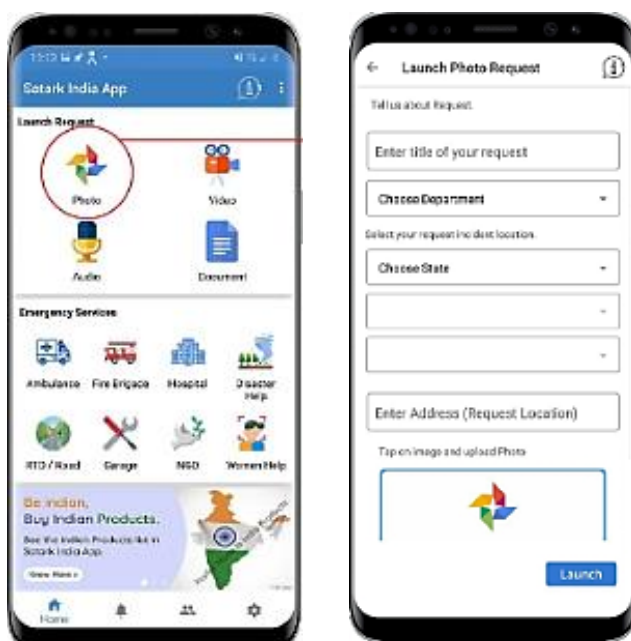
The given Figures 10.1, 10.2 elaborate the Women Help button which is additional feature of Satark India Application. As we can see in the Figure 10, in case of emergency, just by clicking the women help button, the emergency call will be sent to the nearby Police station.

In the given Figures 10.3, 10.4, the emergency services module is highlighted. This includes the Contacts of all emergency services like Ambulance, Fire Brigade, Hospital, Disaster Help, RTO/Road help, Garage, NGO. In second Figure 10, we can see that User can filter the contacts according to his/her location to find nearby emergency service.

The given Figure 11, shows the request launching module of the application which is used by user to launch the request. As shown in the Figure 11, request can be launched using any option such as image, video, audio, or document. In second image we can see the details required to launch the request like title of the request, department where request to be sent, Exact location of the incident or user's location and media attached to the request. By clicking the launch button which is in the bottom right corner of the screen will successfully launch the request.

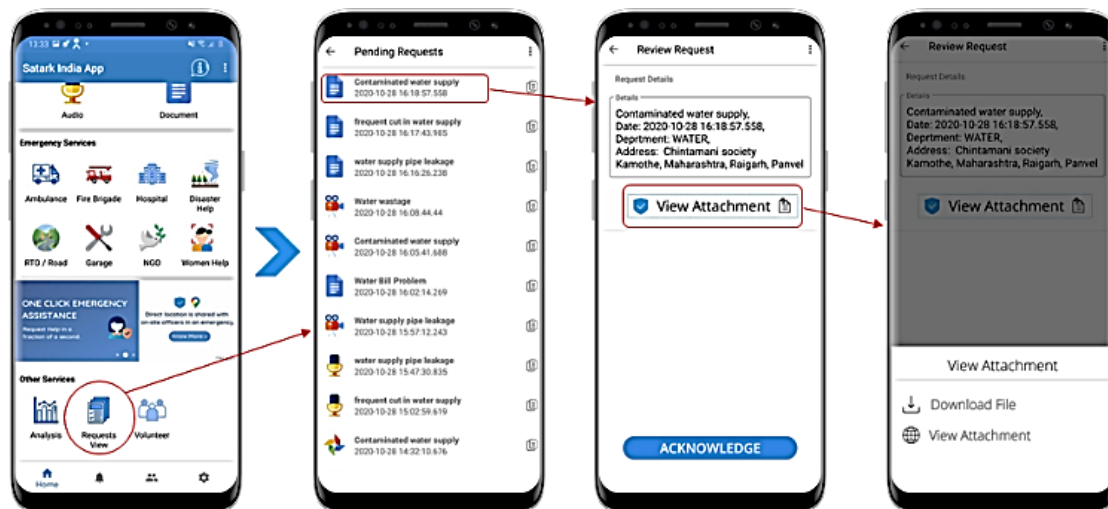


**Figure 10.** Women Help, Emergency Contact Service.



**Figure 11.** Request Launch Service.





**Figure 12.** Request View for Admin.

As shown in the Figure 12, there is a Request View module for admin. Requests made by user will be seen in list format at admin end. By clicking any request from the list, admin can view the details of that request i.e., type of request, location of the respective user and the media file attached with it.

This app provides a wide range of functionality that cannot only ease the work of government but also have a lot more things to use for users. There is a separate user, admin, and master admin view of the application. The app can be used for request launching and tracking [10]. Be Indian Buy Indian, Self-volunteer, Women Help, Emergency Services contacts (in offline mode), etc. modules make the app more versatile. This app provides offline assistance and data analysis for the admin side which was also not part of previously developed systems.

## CONCLUSION

Satark India Application is designed to help the public to convey their requests to government bodies without any hesitation. It connects the general public of India and government organizations directly. The easy-to-operate and user-friendly request firing system automatically fetches the current location of the user by google maps API while firing the request. It is extremely helpful for the admin to track the location of a user and take action. The Satark India application would be very pleasant in case of emergency help for the public. The application has location-wise emergency contacts of all government organizations. People can easily fetch emergency contacts for quick help. The application is a treasure for women's safety as it has a widget (emergency button) on the home screen for emergency help that will directly contact nearby police station for immediate help. Having this application in emergency times could be beneficial for user's safety, especially for women. The application's additional feature, "Be Indian, Buy Indian" encourages Indians to buy Indian products and support Indian industries. The application is entirely designed for the betterment and safety of Indians.

## Future Scope

Mobile app for I-phone and windows OS can be develop. Two different apps for admin end and user end can be developed. Machine learning algorithm can be integrated to analyze the request from provided media.

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