

# Smart Parenting Application

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**ABSTRACT:** Nowadays, we know that everyone uses a mobile phone even each child has their own mobile phones. With all its positives, mobiles do have its bad effects. In the present scenario, the parent can monitor their children's mobile activity only by getting the mobile on hands. Even though the parent gets the children mobile phone, it may be secured with locking features and all logs and media files could be erased by the children. In this paper, the technique presented is to track the call, SMS, browsing history, location, audio, including whatsapp photos and videos from the child mobile using a hidden Smart Parenting application. No matter if the logs are erased by the child. So, the smart parenting application provides an interface for the parent to monitor their child's mobile activities.

**KEYWORDS:** IMEI, GPS, RDBMS, Web Service, Geocoding, Geolocation, SMS.

## I. INTRODUCTION

As children are getting more smatter in technology wise, so it is necessary for the parents to monitor their children without they get trapped in between the contentment that the technology can possibly offer. Smart parenting is an application that provides a mechanism to monitor their child's activities over the mobile. Parents know that providing mobile to their child will keep them safe from much number of threats. But at times children aren't grown up to correctly utilize such devices. So it is necessary for the parents to monitor child's activities over the mobile without allowing them to involve in other explicit harmful activities. At present the implemented applications describes the concept of tracking location [1], browsing history [1], short message service (SMS) [4], and call details [4] from the mobiles. In proposed system, smart parenting application track the child's mobile whose IMEI number is provided by the parent. Smart parenting application would track location by providing map along with the audio recorded from the surroundings, photos and videos including from the whatsapp, call, SMS and browsing history from the child's mobile. The browsing histories, photos and videos tracked help the parent to know whether their child had come across any harmful data's for them. This system mainly involves three applications. A web application for the parent, which is used for doing the initial procedures like registration, adding child's details etc. and for monitoring the recorded activities in the child's application. Then, a hidden smart parenting android application for the child's mobile to record the child's activities over the mobile. The children will not be aware of this smart parenting application in their mobile as it is hidden in the child's mobile. Even if the child seems it from the file manager or from the apps folder in the android mobile, it will simply display the mobile configurations. Also, the child will not be able to uninstall this application. Only the parent has the permission to uninstall this application. And the third application is the smart parenting android application is for the parent to monitor the recorded activities in the child's application using the parent mobile.

The rest of the paper is organized as follows: section II describes the main objectives, section III describes the related papers, section IV describes the system architecture, section V describes this system in detail and section VI concludes this paper.

## II. OBJECTIVE

Apart from the implemented system our main objective is to:

- Capture the photos and videos from the both whatsapp and those which are taken using the child’s mobile.
- Record the audio from the surroundings using the child’s application during when the child didn’t respond to the call from the parent.

## III. RELATED SURVEY

Tejal D. Katore, Gayatri R. Ghogare, Dipeeka R. Shinde, Tejaashri M. Ghule and Prof .Tamhane K. D [1] proposed a system that tracks the location and browsing history of child phone and send these details to the parent phone through SMS. The location information is send to parent phone when parent is sending a message to child mobile.

Radhika Kinage, Jyotshna Kumari, Purva Zalke and Meenal Kulkarni [2] have implemented an mobile tracking application. The application tracks the user location through GPS. The parent can set location boundary. If the child breaches that boundary an alert message containing mobile’s current location is send to registered mobile phone number and email id.

Al-Mazloum, E. Omer and M. F. A. Abdullah[3] proposed a GPS and SMS based child tracking system using smart phone. The parent gets the location of the child through real time map. The parent app sends a SMS to get location on child phone. Information like location coordinate and time will send to parent through SMS, and based on that information location is displayed on the map.

Arushi Jain, Pooja Mudgil, Rachna Dabla and Kalyani Satapathy[4] developed an android based tracking application. If the parent want to know the location of the child, parent send a message to child, this message contain a hidden code, this code automatically detect by mobile and send the users location without turning on the GPS. This application tracks the message and calls details, and recorded in the log file. This log file is mailed to parent.

## IV. SYSTEM ARCHITECTURE

System architecture mainly consists of three applications. They are smart parenting web application for parent, smart parenting android application for child and smart parenting android application for parent. The roles involved in this system are the parents and the children.

The Parent monitors the child with android application for parent and web application through Smartphone and browser respectively over the internet. The child is being monitored through the smart parenting child application which is installed in the child’s mobile.

We make use of Google server for providing Google services. In the smart parenting web site, there are Apache Tomcat Server and My SQL Database Server for storing the informations and for managing the RDBMS.

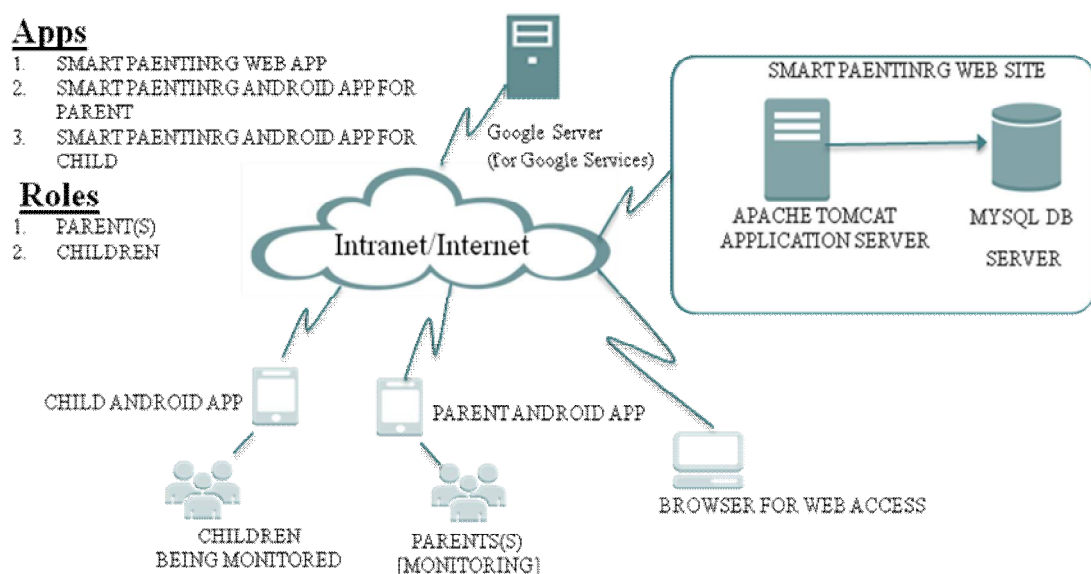


Fig.1 System Architecture

All these components in the system architecture are connected over internet or intranet.

## V. OVERVIEW

### A. SMART PARENTING WEB APPLICATION

In the smart parenting web application, the parent first needs to download both the parent and child android application. Parent application should be installed in the parent mobile and child application should be installed in the child mobile. Parent should register in the web application by providing the personal information along with the username and password which is to be used for further login in the web application and in both android application. After successful login, the parent is taken to the home page. User guidance information's are provided on the home page to find the child's IMEI number and also to open the child application. Parent should register the child in order to track the child's mobile by providing child's name and IMEI number. Web application also receives all the tracked information like SMS, call, URL logs, photos, videos, audios, location map using the web service. Smart Parenting android app receives these recorded details from the web application. So, web application act as an interface to view and access these tracked information for the parents.

### B. SMART PARENTING PARENT APPLICATION

Smart parenting application for the parents is to monitor the recorded activities of the child over smart phone. All the informations of the activities track in the child's smart phone using the smart parenting child application are received by the parent application from the web server using the web service technology. This action takes place only in the presence of internet. The parent should login with the username and password provided during the registration in the web application in order to view these informations.

### C. SMART PARENTING CHILD APPLICATION

The main purpose of smart parenting child application is to track the mobile activities and to display them. It also sends the tracked informations to the web server using web service when there is an internet connection.

### D. ACCESS & ACTIVATE CHILD APPLICATION

First, the smart parenting child application should be installed and activated in the child's mobile. This app will be hidden in the child's mobile. So, the parent can access this hidden child app by dialling a specific number from the child's mobile. Now, the app gets visible in the menu of child's mobile. Parent must login at least once in the child app in order to send the recorded tracked details from the child's mobile to the corresponding parent over the web server. For login parent should use the same username and password provided during the registration in web application. Then the tracked details are sent to the web server using the web service. Parent can also monitor the recorded activities through the child's mobile using this child application.

### E. SECURITY

During login when the login button is pressed the smart parenting child app will automatically takes the IMEI number of that mobile and sent to the web server and check if it matches with the registered IMEI number by the parent. If it matches, then only the login becomes successful.

Uninstalling the child app is difficult for the child. The child cannot see the smart parenting app as it is hidden. Child may come to see this app only from the file manager. Even though if the child seems and opens this application from the file manager, our application simply displays the mobile configurations. So, the child never ever comes to know that it is a smart parenting application. Also the child cannot clear the app cache or uninstall it. Because these options are set off by default. So the child cannot make active those options. Only the parent can uninstall the smart parenting app by using the administrative privileges.

### F. TRACKING CALL, SMS, URL LOGS

Smart parenting child app will track and store the incoming and outgoing message details like content, mobile number, time and type – incoming or outgoing[4]. Also track and store the incoming, outgoing, missed and rejected call log details like duration, time, contact number and type from the child's mobile. All these data's are taken from the inbuilt database of the android mobile of the child. So, no matter if the child has deleted these logs from his mobile. The browsing history details like searched URL, number of visits, time, and date are taken from the web browser and stored. Also all these tracked informations are send to the web server using web service technology when there is an internet connection in the child's mobile.

### G. TRACKING AUDIO AND LOCATION

When the parent makes a call to the child's mobile and if the child didn't respond or rejected the call, the smart parenting app starts to record the sound from surrounding for some time using the recorder in child's mobile and send to the web server. By hearing this audio, parent can assume what the child is doing and where the child is. Parent should make a call from the number which is given during the registration time. At this time, the location is also traced

by using the geocoding technology [3] and the exact current location of the child is plotted in a map and is shown. These audio and location details are only provided along with the missed and rejected call details.

Recording audio is done by getting the user permission for accessing the recorder in the child's android mobile. With this privilege we make active the recorder for the next few seconds when the child reject or didn't respond to the call from the parent. Then this recording is stored and sent to the web server using the web service technology when there is an internet connection in the child's mobile. For getting the map plotting the child's exact location, we make use of the Google Maps API along with Geocoding and Geolocation technologies.

#### **H. TRACK PHOTOS & VIDEOS**

Smart parenting child app will track and store all the photos and videos taken using the child's mobile. It also track and store the photos and videos downloaded from the whatsapp. It helps the parent to know whether their child has come across any harmful data's for them.

For getting the videos and photos taken using the child's android mobile and downloaded from whatsapp, first we will get the user permission for accessing the corresponding folders which stores these data's inside the android mobile. The complete path towards the corresponding folder is also taken. So using this privilege whenever a new file is created inside the specified path we access that file. It can also be done by getting user permission to access the Gallery app. So by using this privilege we can get the files which are displayed by the Gallery app which includes all the photos and videos taken from the mobile and which is downloaded.

### **VI. CONCLUSION**

Smart parenting is one of the main concerns of parents with the today's digital world. So, we have proposed a smart parenting application by using Android and Web as a platform. Smart parenting provides an interface for the parents to monitor what their child do with a smart phone. Child will not come to know about this application as it is hidden in child's mobile. Using this application parents can make sure that their children are not going in wrong path. Parent can keep them safe by monitoring their activities over mobile anywhere they want and directing them in the right path.

### **REFERENCES**

- [1] Tejal D. Katore, Gayatri R. Ghogare , Dipeeka R. Shinde , Tejaashri M. Ghule , Prof .Tamhane K.D.Android Parental Tracking, March 2015.
- [2] Radhika Kinage, Jyotshna Kumari, Purva Zalke, Meenal Kulkarni .Mobile Tracking Application,March 2013.
- [3] A. Al-Mazloum, E. Omer, M. F. A. Abdullah.GPS and SMS-Based Child Tracking System Using Smart Phone ,January 2013.
- [4] Arushi Jain, Pooja Mudgil, Rachna Dabla, Kalyani Satapathy Android Based Tracking Application, March 2014