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1	Project Title	Smart phone based 'Real Time Tracking and Monitoring' Application
2	Organization Name	Systech Digital Limited
3	Organization Type	Private Company
4	Contact Info of Project Coordinator	Tanvir Alam, COO, Phone:+88 02 8962636, +88 01715489696, Email: tanvir@systechdigital.com , Web: www.systechdigital.com
5	Funding Organization	-Ministry of Post, Telecommunications and Information Technology (Partial Financial grants) - Systech Digital Limited (Technology Facilitator & Partial Finding Provider)
6	Brief Project description	<p>Real Time Tracking System is going to be a handy, easy-to-use app in smartphones leverages the latest technology to help the citizen stay connected in real time to the people. A Real Time Tracking System of our Friends and Family, our school going children, Old aged parents going for a walk every evening, Seek help from the Law enforcement agencies when yourself or your friends or family members are in danger, Finding Taxi- CNG Rickshaw around you, Personal Vehicles, favorite Pet's movement, running tracker showing location of the start point and end point with the speedo meter dashboard, Friends available nearby or where last seen, in business tracking your marketing peoples movement and routing friends or colleagues for meeting in any places.</p> <p>নতুন টেকনোলজি ব্যবহার করে আমাদের সবার হাতের স্মার্ট ফোনের মাধ্যমে সহজে ব্যবহার্য 'রিমেল টাইম ট্র্যাকিং এন্ড মনিটরিং'এপ্লিকেশন ডেভেলপ করা হবে যার মাধ্যমে আমাদের নাগরিকগণ সহজেই একে অন্যের সাথে সংযুক্ত থাকতে পারবেন যা বিভিন্ন সময় খুবই গুরুত্বপূর্ণ। এই এপ্লিকেশনের মাধ্যমে বন্ধু-বান্ধব, পরিবারের সদস্য, স্কুল- কলেজ পড়ুয়া ছাত্র-ছাত্রী এবং বৃদ্ধ যিনি প্রতিদিন সন্ধ্যায় হাটেতে বের হন তারা যদি কোনো সমস্যায় পড়েন তাহলে খুব সহজেই তাদের পরিবারের সদস্য কিংবা আইন শৃঙ্খলা বাহিনীর সহায়্য নিতে পারবেন, আপনার নিকটে কোথায় ট্যাক্সি বা সিএনজি অটো রিকশা আছে তা দেখতে পারবেন, ব্যক্তিগত গাড়ি গৃহপালিত প্রাণী ট্রাক করতে পারবেন, কোনো চলন্ত গাড়িকে অনুসরণ করার জন্য তার স্পিড সহ অবস্থান জানতে পারবেন, আপনার কোনো বন্ধু সর্বশেষ কোথায় ছিলো, কোম্পানির বিশপন কর্মীগণ কোথায় কাজ করছেন জানতে পারবেন, আপনার বন্ধু-বান্ধব বা সহকর্মীকে কোনো নির্দিষ্ট স্থানের অবস্থানের নির্দেশনাও দিতে পারবেন এই এপ্লিকেশনের মাধ্যমে।</p>
7	Project duration	January 2016-May 2016
8	Rational	<p>Real Time Tracking System is going to be a handy, easy-to-use app leverages the latest technology to help the citizen stay connected in real time to the people (and the devices) that matter most. Real Time Tracking System's functions, features and benefits include:</p> <p>Tracking Friends:</p> <p>Real Time Tracking System uses GPS coordinates and state-of-the-art GPS location data to report the real-time whereabouts of your friends. Simply install the app on your phone and your friends' phones. Once registered, each friend appears as a unique icon on the Real Time Tracking System's navigational map so you'll know exactly where each friend is, at all times. Want to know instantly which friends arrived at a particular place or planned meet up point? Want to figure out if anyone is stuck in traffic, made a wrong turn or even worse – if your habitually late friend has even left his/her</p>

house yet? No need to send annoying “Where are you?” or “What’s your ETA?” texts, Real Time Tracking System puts this information at your fingertips. And to make life super easy, Real Time Tracking System can send alerts the moment your friends arrive at the appointed location!

Locating and Monitoring Family Members:

Real Time Tracking System you can monitor your family member’s travel from one location to another via the app’s GPS maps. This is a very helpful feature when your family member traveling separately from you who has a tendency to get lost often in this complicated Dhaka city where security is a big challenge to ensure in day to day’s life.

And let’s face it: Real Time Tracking System makes a great family tracker. This is especially helpful where all the family members are travelling for different reasons in different parts of Dhaka city and as the main responsible person in the family you want to monitor all the time or any time where everyone is or whether they are in the places where they are meant to be. You can easily create a schedule to pick them up while your return back to home. Or if you do not hear from a family member let’s say some one’s mobile phone is unreachable for a while, you would know where is last seen in the map. Let’s say your family member is travelling a long distance, you don’t need to phone them up every moment to know where they are. You can just check on the app their location or even if you do not hear from them you will know their last location seen.

Monitoring and tracking School going kids:

Kids’ movement is the most important part for any parents. Especially when they are at school, parents are always in tension whether what the kids doing or whether he is in the school or moving around being very naughty or bunking school. The parents can simply let the children use a smart/simple phone or can attach a GPS tag to their school bag or trousers loop. Children’s location out of their usual location boundary will simply alarm the parent’s phone that it is time to find out what the kid is up to.

Tracking and monitoring old Parents:

Old parents usually like to take a walk in the evening in the parks where you can be in tension being at home whether they are going away their usual boundary which they would not have any reason to do so. So the app can be alarming to you saying your parent are moving some where they do not need to be going and you can start to be reaching them through phone or in person to know their status.

Speedo Meter Dashboard:

It also has the great advantages of using it as the running tracker. The App lets you select the start point and end point of your running and will signal you how long to your end point and once reaching there it will tell you that you have reached to your point. Finally it will show you the result of your average and maximum running speed.

Tracking Marketing People:

Track your sales and marketing people is vital for your business. Whether your sales people are moving where they are meant to be as per the business need and going to places where they are saying are going, it is important for you to know the information as end of the day you do not want your sales people wasting your time and money doing activities that does not help your business. With Real Time Location Tracker you can from your phone’s app trace their location and movement all the time. In positive you can also route them to location where you need them going to attend a

client safely and quickly.

Car Tracking:

Your driver is driving your car or it could be your young son driving the car alone. You want to find out at what speed your car is driving, as soon as it crosses your pre restricted speed you will be notified that your car going over speed. You can with Real Time Location Tracker track whether your driver is going any off location where he should not be.

Route Your Friends to Places:

You can with Real Time Location Tracker route your friend to your place or anywhere they wish to go so. You can choose and route them through the quickest route possible seeing on the map or checking out the traffic conditions.

Seek help from the Law enforcement agencies when yourself or your friends or family members are in danger:

This would be the most helpful feature of Real Time Location Tracker Application. You would have all the numbers of the Law enforcement agencies such as Metropolitan Police, Industrial Police, Tourist Police, Traffic Police or the highway police. You can be in any danger and want to notify the nearest Police you can just press a button in any condition and a message will be automatically delivered to the police including your family members or nearest friends seeking help. So family or friends can then again approach to police informing them your location and explaining what type of trouble you are in.

Future Plan (not included in the scope of the current project) :

The reason we are keeping the following in the future plan as we need a certain amount of time to reach to a level where we would have a vast number of population using our apps for the above mentioned various reasons. Then we would like to incorporate the following great citizen help making our life easier.

Taxi, CNG Rickshaw through GPS Tags or Apps:

We would like to bring the service to connect the Taxi or CNG Rickshaw drivers and users. Providing this service we can bring the taxis and CNGs on the map and users can easily find the nearest CNG Rickshaw and directly give them a ring. The best part is that you can use the application to enlist yourself with location or there will be option where the drivers can give a call to a particular number with their vehicle details and the registration can be done over phone and he is on the map.

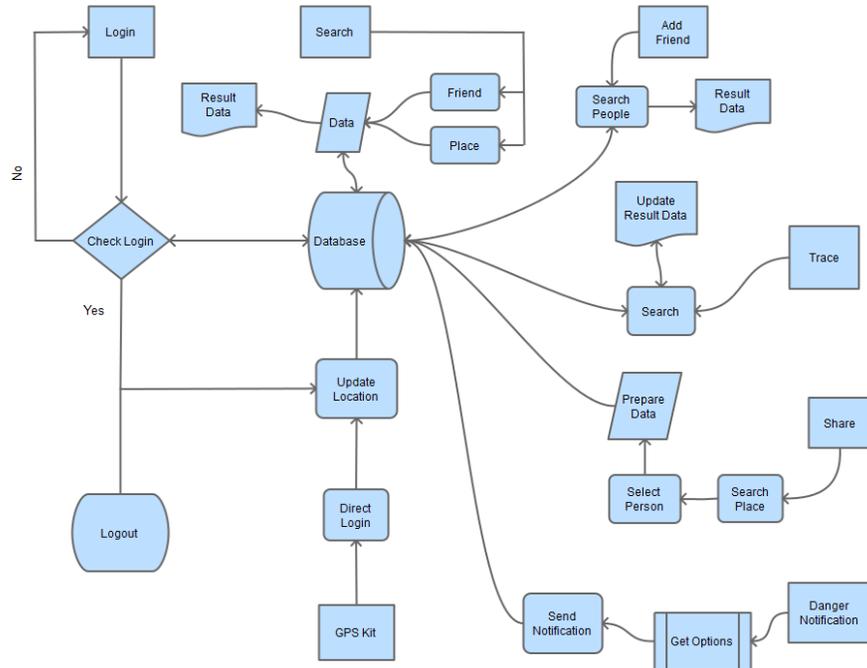
Real Time traffic monitoring:

From the location and using the algorithm we can found out individual's location and movement on road and report the traffic congestion on the road based on the real time data. So imagine when we have the real time data covering majority of the population using our app we can trace their location and based on their movement our app can report the traffic condition on any road or signal point.

9

Project Overview

Our first task which is the analysis of this project and system analysis where both the works are done. Our next task is to develop the application. The application will work on the following mechanism:



How it works:

Our Application will be available for Android mobile devices. So the application will be available in Google play store and apps store of ICT Division. After downloading they will register with their Name, phone number and email address. After registration they will be able to update their profile with Photo, storing useful numbers etc. Then they will connect with their friends, families, colleagues whoever is on the same application.

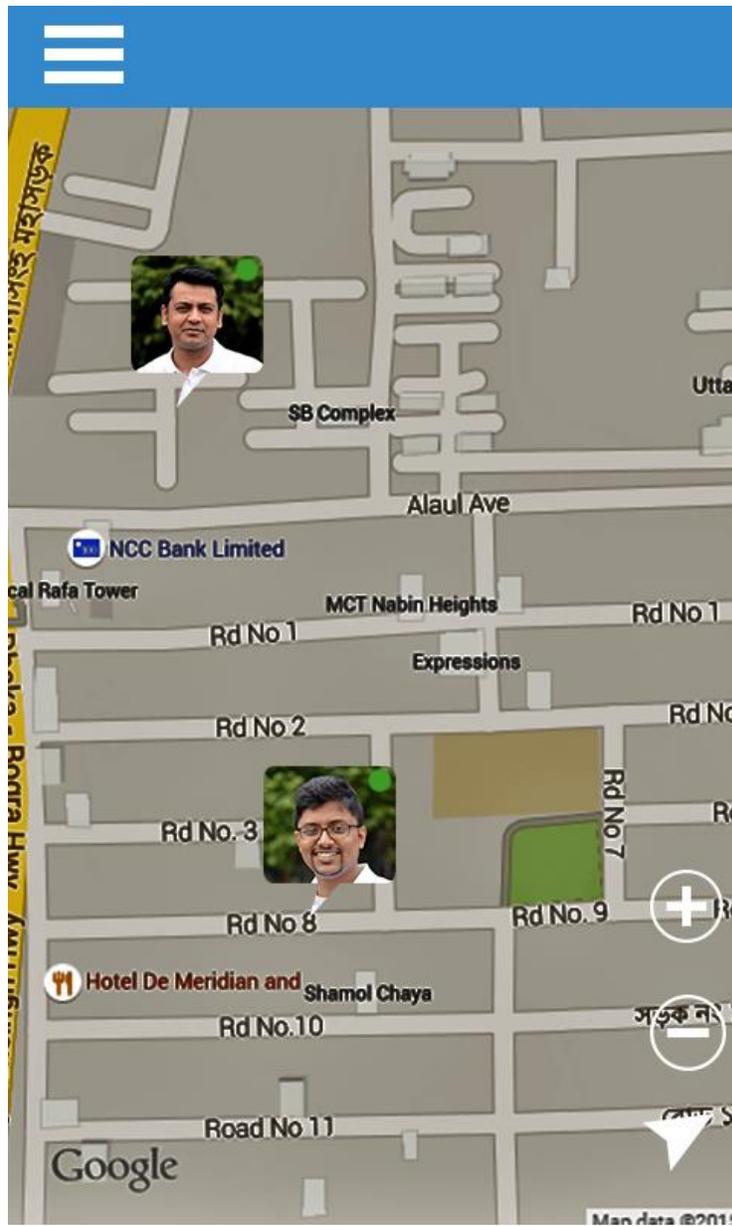
Registration:



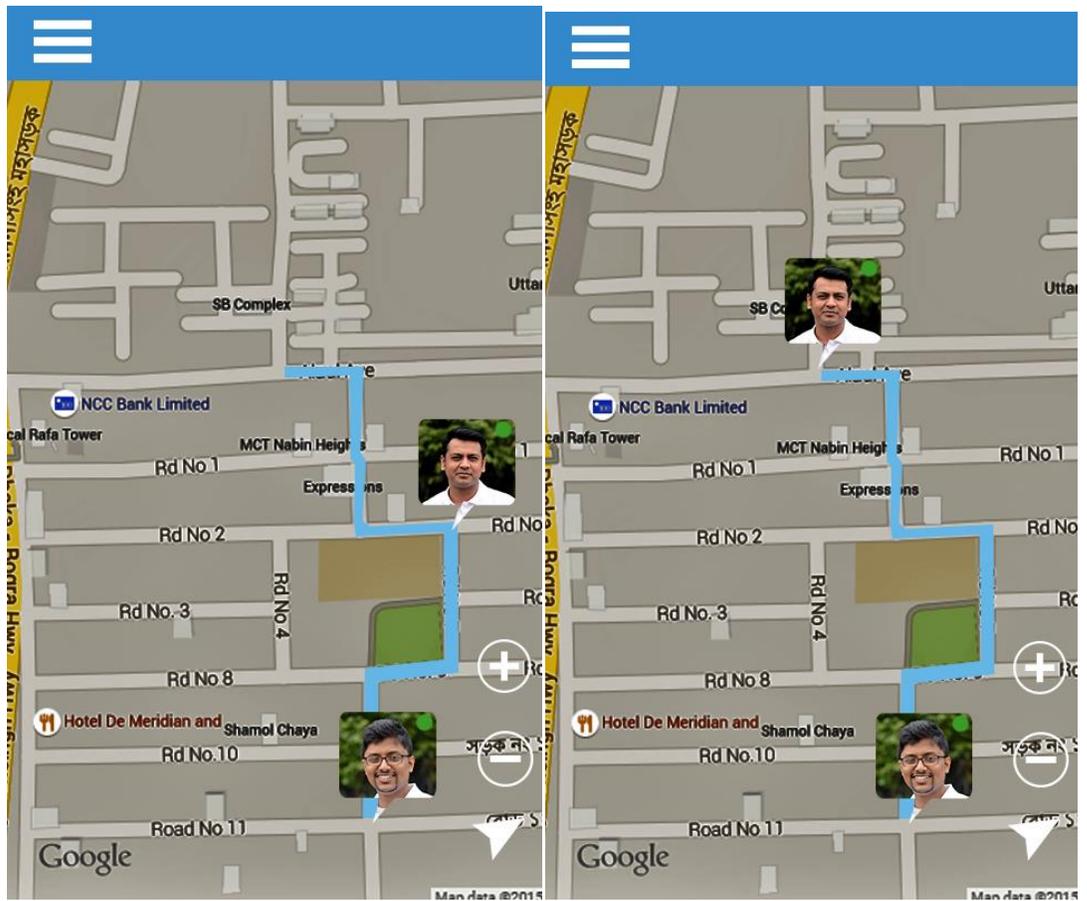
Home Page: with all your connections shows all the online and offline contacts



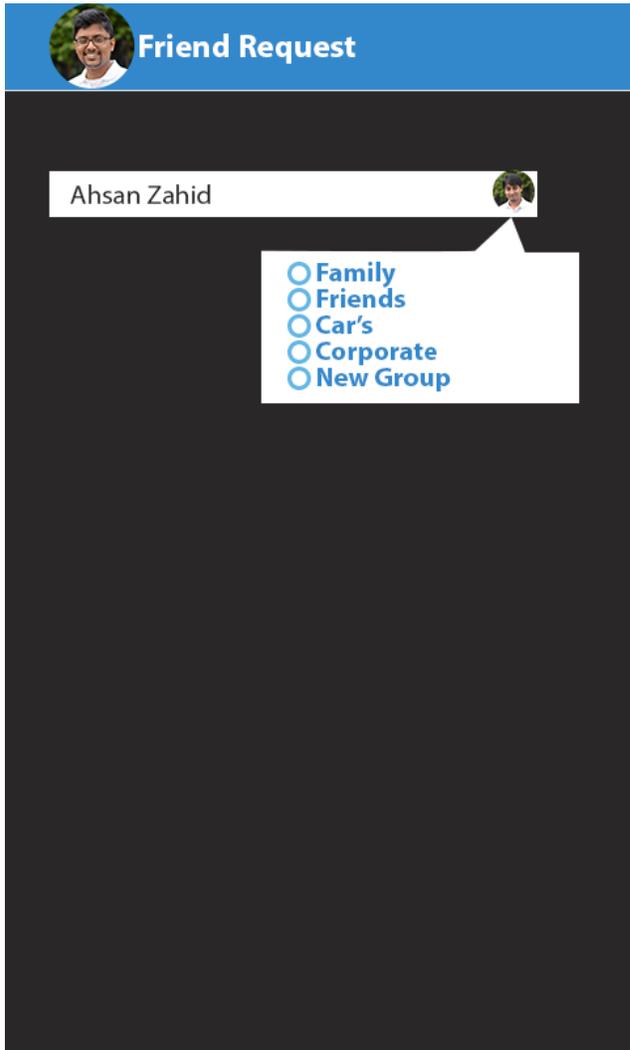
Home Page with Online contacts only:



Tracking and Routing:



Friend Request and Categorizing the connections:



Notification Settings when in Danger:



Tanvir

Select Danger Notification Option



Family Group

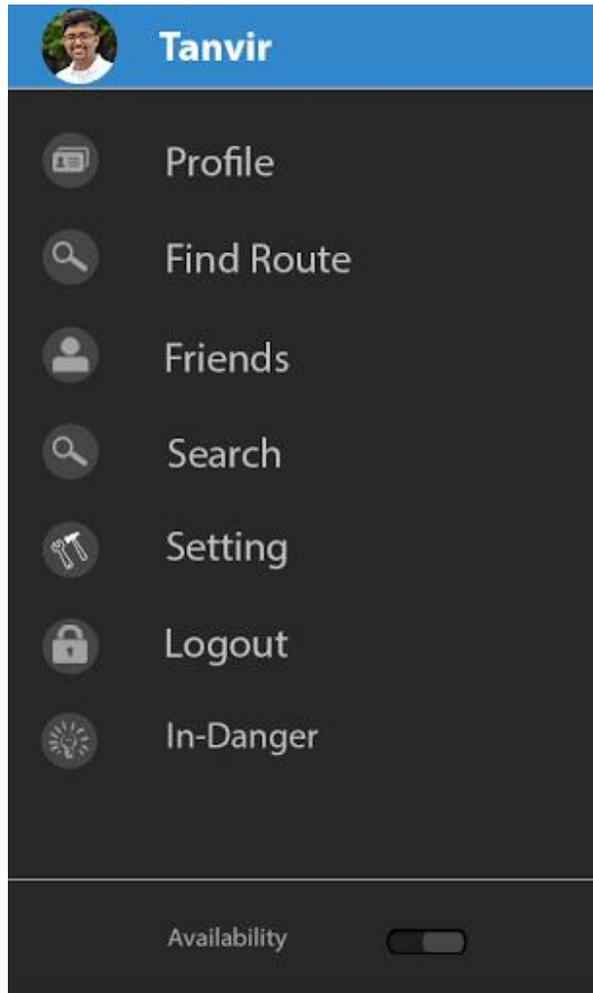


Nearby Friend



Nearby Police Station

Settings:





Individuals

First Name :

Last Name :

City :

Country :

Email :

Mobile :

Update



Corporate

First Name :

Last Name :

City :

Country :

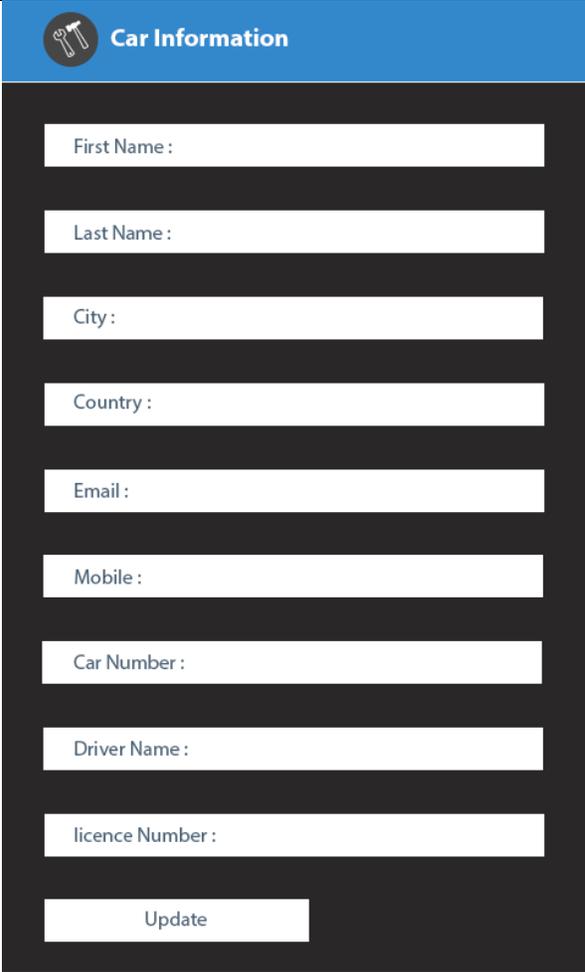
Email :

Mobile :

Company Name :

Company Address :

Update

		
10	Technology	<p>The Application will be available in Android. Also Those who want to connect Apps to GPS Tags can do purchasing a simple GPS tag and connecting that to the application.</p> <p>Back-end and Front-end</p> <p>The Front-End User Interface will be designed first. We will use HTML 5/PHP/CSS 3 for the mockup by keeping in mind user friendliness is given. The majority of users will be corporate/family users. We want to ensure that you're desired person is connected with you by this application. The Front-end will keep update user location to database. User can easily trace/route any person who is in his friend list also user can see history of location past 8 hours.</p> <p>The Back-end will be only available in web platform. We will provide complex report with user location history/position.</p> <p>Development (Back-end and Front-end)</p> <p>We will go with the waterfall model for this development. The Back-end and Front-end will be developed concurrently. First we develop both Back-end and Front-end UX/UI mockup, and then we go for the complete functionality. We will use "Cordova" for the cross platform and mobile functionality and "PHP/Mysql" for server side functionality. HTML/CSS/jQuery will use in both side</p>

		<p>UX/UI mockup.</p> <p>Database Integration</p> <p>We will integrate database after the complete schema design is complete. The Front-end will real time connected to the database and Back-end will support user quires on demand.</p> <p>Server Configuration Intel Xeon Quad Core 2.5GHz (8 threads) 250 Mbps Uplink 4 GB RAM 1,000 GB Drives 15 TB Bandwidth 1 Dedicated IPs</p>
11	Project Goals & Objectives	<ul style="list-style-type: none"> • Locating and Monitoring Family Members • Tracking Friends • Monitoring and tracking School going kids • Tracking and monitoring old Parents • Speedo Meter Dashboard • Tracking Marketing People • Car Tracking • Route Your Friends to Places • Seek help from the Law enforcement agencies when yourself or your friends or family members are in danger • Most of all, the idea is to bring all the users on the map for real time to enhance the national citizen security level ensuring through tracing and tracking.
12	Project Beneficiaries	<p>-Citizen of Bangladesh</p> <p>-Law and Enforcement Agencies of Bangladesh such as Bangladesh Metropolitan Police, BRTA, Traffic Police.</p> <p>-Car Drivers, owners and Users</p>
13	Project Activities	<p>-Application Development</p> <ol style="list-style-type: none"> 1. Security Analysis 2. Database Design/Schema 3. HTML Mockup 4. Friend management 5. Tracking 6. Routing 7. Sharing 8. Dashboard 9. Report <p>-Awareness Promotions</p> <ul style="list-style-type: none"> • Launching Ceremony with the presence of the Media • News Paper Publishing • Stickers in the Public Buses • Social Media Marketing
14	Language to be used in this Project	<p>- PHP</p> <p>- MySQL</p> <p>- SQL-Light</p> <p>- JavaScript/JQuery/Json</p> <p>- HTML/HTML5</p> <p>- CSS/CSS3</p>

		- Cordova																																																																																				
15	Project Outputs	<p>- An application that keeps your location to your Friends and Families in Real time so do their location to you in real time monitoring, tracking and routing in real time and avoid dangerous situation being alerted on the right time</p> <p>-Increasing Social Security</p> <p>-Law and Enforcement Agencies crime control can also be enhanced</p> <p>-Missing person trace can be easily done from the last seen location through the app</p> <p>-Car tracking coming on the real-time with the least investment and getting handy for both the users and drivers/owners</p>																																																																																				
16	Time Plan	<table border="1"> <thead> <tr> <th>Major Activities</th> <th>M1</th> <th>M2</th> <th>M3</th> <th>M4</th> <th>M5</th> <th>M6</th> </tr> </thead> <tbody> <tr> <td>Application Development:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>1. Security Analysis</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2. Database Design/Schema</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3. HTML Mockup</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. Friend management</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5. Tracking</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>6. Routing</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>7. Sharing</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>8. Dashboard</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>9. Report</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Awareness Promotion</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Major Activities	M1	M2	M3	M4	M5	M6	Application Development:							1. Security Analysis							2. Database Design/Schema							3. HTML Mockup							4. Friend management							5. Tracking							6. Routing							7. Sharing							8. Dashboard							9. Report							Awareness Promotion						
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17	Project sustainability	<p>-The awareness Promotions will start creating bigger number of users of this application due to its benefits in terms of Security.</p> <p>-Once the number of users get to the peak point, the revenue will be generated from the Adds</p> <p>-We would like to get engaged through partnership/other models with some NGOs to promote the social security concerns to the Citizen</p> <p>-When the Taxi Service comes to the place we will generate some revenue from the text messages from the Mobile Operators, also from the Taxi Drivers while doing the registrations and Yearly renewals program</p>																																																																																				
18	Reference Application Developed by Systech Digital (Available in Google Play: Search with Systech Digital)	<div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p>Dahsboard</p> <p>Highly designed car dashboard. Useful speedometer, compass, travel time and lots. Useful for Car, Motorbike, Bicycle The main Dashboard contain every meter, to enlarge the meter just tap the part on main-board.</p> <ul style="list-style-type: none"> • Digital Speedometer • Analog Style Speedometer • Digital Compass • Analog Style Compass • Travel Time • Accuracy • Altitude • Hud • Background mode </div> </div>																																																																																				

	 <p>Digital Tracker</p>	<p>Digital Tracker is a self tracking system application. By using this application you can share your location by Longitude and Latitude with its attractive screen-shot.</p> <ul style="list-style-type: none"> • Latitude • Longitude • Accuracy • Altitude • Compass
	 <p>Magic Play & Learn</p>	<p>Magic Play & Learn is a binary logic based game that developed for fun based learning. It's like a magic that computer can read your mind. To play this game- select an object type from the main menu. You will see a number of object in a same category. From this list select an object and remember that. When remembered press 'remembered' button bellow. In next few slides you will see few list in different combination, recognize whether your selected object exist in those list or not. In a few step it's a bingo. Your surprise is waiting! try now.</p>
	 <p>Location Tracker</p>	<p>Location Tracker is an application to trace and track your friends, families, partners & colleagues in the global map. By using this application, you can track anyone, measure distance of their location and assist them to route to your place.</p> <ul style="list-style-type: none"> • Track your Sales team to know where they are and whether they are wasting your time and money. • You can easily trace & track your friends and assist them to route to anywhere. • You can trace & track your children in schools, playgrounds, or anywhere they go. • You don't need a GPS tracker anymore in your car to track your car & driver. This application will help you tracking your cars and drivers easily. • You can seek help when required from your friends or law enforcement agencies by providing them your location information. <p>Use this application to secure yourself and your business by the blessings of the latest technology and innovation. More features are coming soon and you will be updated automatically. Download now to be connected.</p>