An Effective Android based Application for a Campus: A Tour Guide

1Bhushan V. Patil, 2Punam R. Patil
1Assistant Professor, 2Assistant Professor
1Electronics & Telecommunication Engineering,
2R.C. Patel Institute of Technology, Shirpur, India

Abstract—Day to day there is importance of mobile usage for different activities of individual is one of important role. With the advancement in technologies, the mobile is more than just making calls but current time is of smart phone with different general perspectives. It allows several applications with its services. In this paper we proposed one of them as android is open source operating system with java support based on Linux. Also it provides support of mobile maps & GPS location. In advancement it not required any special devices as it is easy to use. Also it reduces effort of institute as easily communication between all users in system is possible.

Index Terms—Android, GPS, smart phone

I. INTRODUCTION

As whole over the world there is requirement of advanced technologies related to their mobility is important and efficient one. With the growing and popular activity due to offer of number of services like games, GPS navigation, web navigation etc. smart phone is used rapidly day by day, as people live longer time and need of mobility. This encourage developers to build applications relates to mobile phone specifications and could be used easily with this hand-held device. As per survey it is clear that in year 2012, 400 million peoples used Android based device as and 59 percent market of smart phone is occupied by android based phones with support of mobile map and GPS localization. It is easy to use as no special devices are required.

A. Need of the system:

As people live longer and want to retain their mobility, there is a need for associative technologies to support them. Android system that is able to give detail description. The crux of the problem is designing a system that can differentiate reliably between falling and other mobility events. Send the messages to the person which is employee of particular institution, some of the current technological solutions are costly to implement.

We think that the best approach is to have some form of android application to send the notice. An android application famous as everyone having smart phones. If they are once installing the application and register on the system then the department, administration do not need to display notice on the notice board. As notice was display on the notice board some student are not get notice within time, backup is also necessary which we take with the help of android application easily. Proposed system is modified and provides all of features with Excellencies and accuracy.

B. Problem definition:

In this system there is one android application which is developed for sending notices to student, staff, principal and head of the department. All the users have to install the application on their smart phones. For security and authentication the staff registers students on the system, after that H.O.D register staff and principal register H.O.D, in our system, we provide choices for send notice to one particular user or send one notice to multiple users. If the system is have with host registration then application user must be interconnected to each other without any disturbance.

C. Presently available system:

Presently the institute uses the SMS sending using any of the networking site just like way2sms, Site2SMS, FullOnSMS, SocialLand.net, 160By2.in this systems we have to register and then add our contact list as we have to send the notice then the user must login to the site and using this sites they sends the notification to the user. This requires the net charges only for to do all process.

D. Drawbacks of available systems:

i) Sometime there may be a network problem.
ii) Lack of security.
iii) Need of extra manual efforts.
iv) Data or information may get lost in the network.

v) Less accurate

II. LITERATURE REVIEW

In this section the overview of different research paper is given as below,

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Paper Title</th>
<th>Abstract</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Design and Development of Mobile Campus, an Android based Mobile Application for University Campus Tour Guide</td>
<td>In this paper author proposed a tour guide application (Mobile Campus) on android based mobile platform for SRM University campus in which Near field communication between smart phone and other devices as a radio communication. It gives information related to current location of users, map of university campus, direction of route to university and contact information.</td>
</tr>
<tr>
<td>2</td>
<td>Building Mobile Tourist Guide Applications using Different Development Mobile Platforms</td>
<td>In this paper distinguish between two electronic tourist guide systems J2ME and Android is performed. So user access application from an interface, then information displayed according to GPS through GPS coordinates of each point of interest as it is flexible in nature.</td>
</tr>
<tr>
<td>3</td>
<td>Android App for Shirdi Search Engine</td>
<td>In this paper application developed gives information related to hotels, lodge, routes, hospitals, police station, bus stand, railway station to help each person visiting Shirdi. Also it gives emergency calls to hospital or police station by displaying railway &amp; bus time table.</td>
</tr>
<tr>
<td>4</td>
<td>Campus Navigation on Android Platform</td>
<td>In this paper author present the architecture with design of a Google map based application using android platform which is implemented using android SDK and also has been tested for K J campuses, to get updates of event to reduce frustration and confusion of anybody present inside the campus.</td>
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III. DATA FLOW MODEL.

A DFD also known as ‘bubble chart’ has the purpose of clarifying system requirements and identifying major transformations. It shows the flow of data through a system. It is a graphical tool because it presents a picture. The DFD may be partitioned into levels that represent increasing information flow and functional detail.

Four simple notations are used to complete a DFD. The below table 1 shows different notations used in data flow diagram as,

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Notation</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Process</td>
<td>A circle or bubble represents a process that transforms incoming data to outgoing data. Process shows a part of the system that transforms inputs to outputs.</td>
</tr>
<tr>
<td>2</td>
<td>Data Flow</td>
<td>The data flow is used to describe the movement of information from one part of the system to another part. Flows represent data in motion. It is a pipe line through which information flows. Data flow is represented by an arrow.</td>
</tr>
<tr>
<td>3</td>
<td>External Entity</td>
<td>A square defines a source or destination of system data. External entities represent any entity that supplies or receive information from the system but is not a part of the system.</td>
</tr>
<tr>
<td>4</td>
<td>Data Store</td>
<td>The data store represents a logical file. A logical file can represent either a data store symbol which can represent either a data structure or a physical file on disk. The data store is used to collect data at rest or a temporary repository of data. It is represented by open rectangle.</td>
</tr>
<tr>
<td>5</td>
<td>Output</td>
<td>The output symbol is used when a hard copy is produced and the user of the copies cannot be clearly specified or there are several users of the output.</td>
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</table>

The below figure 1 shows DFD level 1 for staff of notice sending application is as,
IV. GUI OF WORK

Fig. 1 DFD level 1 for staff of notice sending application

Fig. 2 Home page of Principal
This is home page of principal application, in this form first field is registration of principal and the second field is principal login. Using principal registration, principal register on application.

From figure 3, Principal after login have four options, first Add head of the department, after that send notice to a particular head of department or send notice to multiple head of department, after completion of all the work principal have to logout from the system so the fourth option is logging out.

In figure 4, principal registration form principal provide username, password, email-id, mobile number and post also. As form is filling correctly after click on save button principal register in application, entry made in database.
As shown from above figure 5, principal send notice to all head of department.

In figure 6, is home page of head of department application, in this form first field is registration of head of department and the second field is HOD login. Using head of department registration field, HOD register on application. From figure 7, Head of department after login have four options, first Add staff, after that send notice to a particular staff or send notice to multiple staff, after completion of all the work head of department have to logout from the system so the fourth option is logging out.
In staff registration form for staff provide username, password, email-id, mobile number and post also. As form is fill correctly after click on save button staff register in application, entry made in database is shown in figure 8. Also from above figure 9, staff after login has four options, first Add student, after that send notice to a particular student or send notice to multiple student, after completion of all the work staff have to logout from the system so the fourth option is logging out.

V. CONCLUSION

This project goes through the various phases of project development. The project reduces effort of institute. Once the user register in the application one can easily interact with each other, like principal interact with head of the department, head of the department interact with staff and staff interacts with student. This application removes all kinds of manual errors also work overhead of employees is reduced. This system will be designed in each such a way that future modification can be done easily, automation of entire application improves efficiency, provides friendly graphical user interface, also gives appropriate access to the authorized user.

REFERENCES


