Use of Android for Development of Self Help Group App

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1. Abstract:-

This research paper focus on the implementation of task, where an android application is developed as an E-brochure or prospectus for a self help group including supportive technology .This contains various parts and features of the organization and target to provide services and facility to the customers. Its features are being given as the technologies which included such as SMS facility, location based service. The application is developed using through ADT (Android Development Tool) which helps any project to be developed in an IDE (Integrated Development Environment). It leads towards tiny attempt to reduce the paper usage and to save cost of publishing the brochure

Keywords:- ADT,IDE(Integrated Development Environment), E-brochure, SMS service, SHG.

2. Introduction:-

The Android Application is an E- Brochure which contains many features as well as details of the (SHG) self help group for example a small bank or branch. The parts of the organization are classified into different pages as well as activities. They involve certain plans, activities, benefits, attractive offers, addresses, etc. of the self help group. Every activity gives the details of every plan, feature and service through texts, images and videos. Whole application is designed and developed in an Integrated Development Environment provided by an Eclipse ADT. It also uses certain technologies which are to be used with Android. They are the SMS service, GPS location service and Charity donation service. Here SMS service makes the customers to connect themselves with the group. They can send data, feedback, reviews, comments and whole details such as registration etc. through this service. If the customers want to visit the organization, then by the means of GPS location service, it is convenient for them to trace the path. And Donation service which motivates them to donate their small payments in order to help. The feature of the application is that it is available in States language such as Punjabi, Haryanvi and Rajasthani. Being a small scale organization for which this application is developed, any local languages can be used. It provides convenience to the customers of all age groups.

3. Related Work:-

Actually any prospectus is considered the backbone of every group. Most of the SHG depend on prospectus to inform the customers about their business. Like hospitals, colleges universities and schools it becomes necessary for them to provide information timely to people. This ultimately helps in growing their business. But again, a manual is not enough to do so. There should be something innovative and interesting which would attract customers to their organization. Now a day we can see several websites doing this task. But it is not convenient for everyone to login the webpage each time to access the information. Also, some websites are not accessible on mobile phones and have the alignment problems. So option is that android is a platform which helps us in developing such android applications. It has many tools and advanced features with the combination of XML and Java programming languages. XML gives the layout designing with the help of different widgets. Java makes that widgets work in synchronization so as to make the application run and work properly. As the traditional way to publish brochure is to use

the paper, the modification and updates cost more. Also, it is not beneficial for the organization to repeat the procedure every year. Using an Android Application, one can easily look for the updates and perform them. Newer versions of Android, the application will be needed to be updated [1]. Although it is efficient to comfort customers through an application, but again there comes the matter of satisfaction. Mobile banking is helpful in satisfying customers and retaining the valued customers [2]. In our application, fix transactions have been included, but the services are proper. Main services are Location Based Service (LBS) in any product. Previously, there used to be short description about the user's location in most of the applications. But it has to be mentioned that location based services can be proved as value added services in such work [3]. Everybody easily trace out the path to the destination and locate nearby areas along with his own current location. LBS act as a boon to the users so as to retrieve information in order to find their desired location [3]. The application should be attractive enough to grab the attention of customers [4]. The proposed system is well designed to attract customers and provide them the quality services. As a result, the customers will find it efficient to access the application rather than opting for brochures. So in this way reduces the paper work.

4. Proposed System:-

This system is an Android Application which contains various parts of the self help group in order to provide services to the customers. All of the parts are accessible in a sequence for the cool functioning of application. It too includes certain technologies which are broadly classified into components.
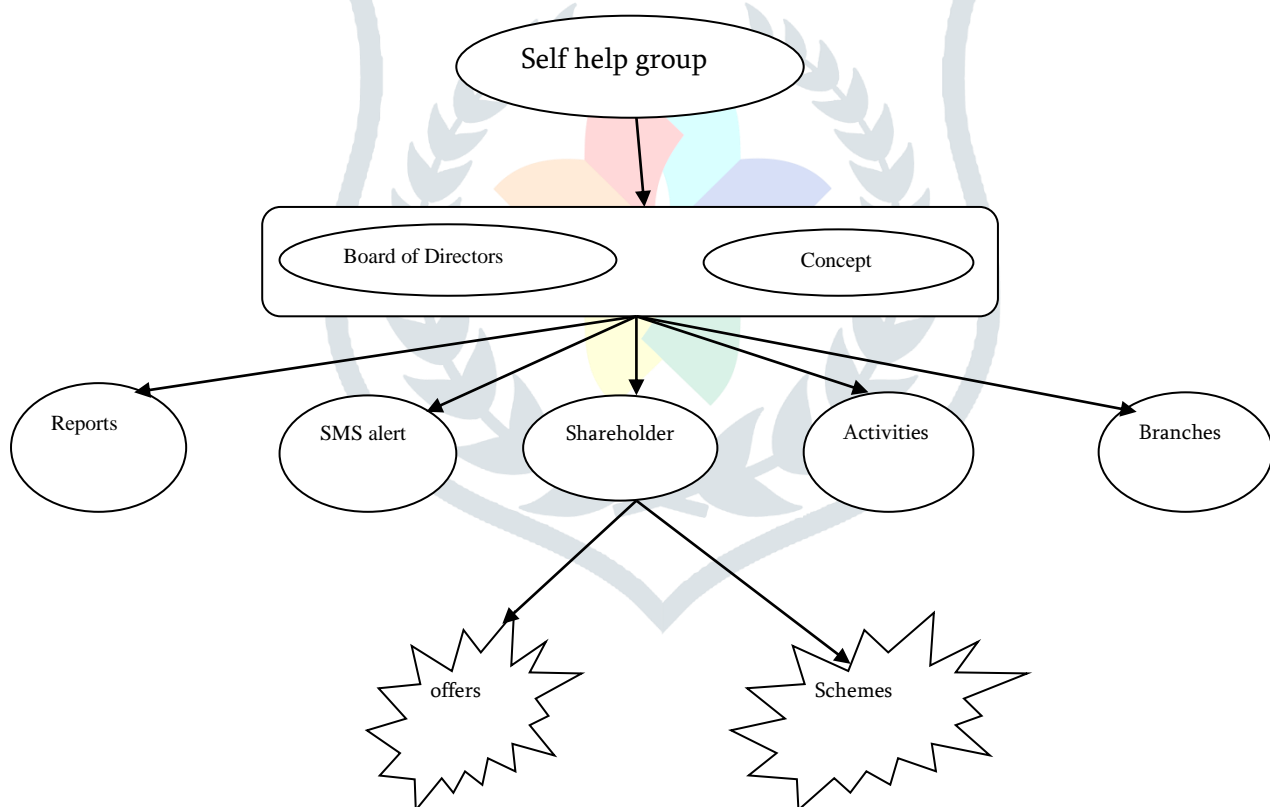

Figure: 1 Process of application

Figure 1Describes the working process of various parts in the application. This is formed with these two elements:

1. Board of Directors:- this contain the information about the directors along with other members of the SHG.
2. Concept: It includes the core idea regarding the establishment of the firm or organization.

The other parts too can be described as following-

    1. Shareholders**:** this part contain of two other subparts such as-

a. Schemes: This part describes scheme details for customer.

    b. Offers: It gives details of concession.

2   Reports: The annual budget of the SHG is given in the form of scanned copies. They are arranged page wise with proper space.

3   Activities**:** The SHG held many activities which help to customer to participating them to get more benefit.

    4. SMS Alert**:** This module provides the facility to send message to the customer and group.

5   Branches**:** It includes the information about various branches of the group. In order to visit them, the customer can check the address given and trace the path by the means of GPS location service provided.

Since different pages of the application include detailed information along with certain technologies, one more feature is provided for the ease of access to them. The Navigation Drawer implemented in the application helps in moving from one activity to another without clicking the back option. Simply the option from the list provided is to be selected. This offers convenience to the customers to roam in the application fluently and perform their tasks. As mentioned earlier, the proposed system is fully developed in Android platform. The tools and methodologies used are explained in the technologies used section.

5. Technologies used:-

Android is system software which easily can be downloading. It contains something which is endless and limitless. It provides amazing GUI by the means of Android 7.0 and onwards for the users to feel it lively. It provides numerous opportunities to the developers to work with zeal in this development environment. It has versions which enable any application to be installed on the mobile phones from lower to higher configuration. It simply provides everything a developer wishes to build and a customer or user wishes to utilize. Hence, the Eclipse ADT (Android Development Tool) is being selected. It enables the developer to work in an Integrated Development Environment (IDE). It provides an interface to various technologies like GPS Location, Payment Gateway, etc. (which will be implemented in this application). The overall proposed system seems to be more advanced and more enhanced. The technologies used in this application are described into various modules. The description of each is provided in the following contents:
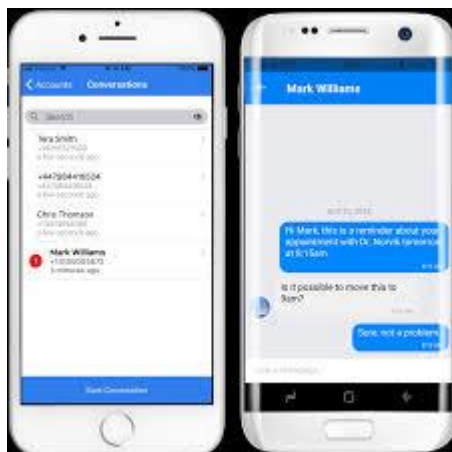
5.1 SMS Alert/Service:

Fugure 2 SMS Alert (sent and received)

Group authority and customers communicate to each other; with the help of this service customers are now able to send their reviews, feedbacks, comments, etc. Figure 2 Shows the SMS activity. The customer has sent an SMS, the SMS has been received at registered number of group authority. The main objective of including this service is that if any customer wants to open an account in this SHG, then he will simply send an SMS reflecting his wish. In turn, the organization is now able to contact that customer for further procedure by the means of contact number received through an SMS.

5.2 GPS Location Service:-

Figure 3 SHG Branch Address & GPS View

In figure 3 GPS location service has been depicted. It has been implemented in the application to provide location facility. As there exist various branches of the group, then it becomes difficult to search for each location, every time the customer wants to visit. Therefore, the GPS location with predefined destinations of all the branches has been implemented in this application. Whenever the customer will desire to visit the branch, then on just one click, the route will be displayed and he/she will simply have to follow the path as shown in figure 3.

6 Project Scope:-

Currently information brochure a brochure which is usually published using high quality paper. It is made available to the customers providing information about the firm. After some updates, the new brochure is to be published again. Also, the cost of implementation increases slowly. Hence, it is one of the best options to install an Android Application and check for the updates. This helps in reduction of the frequent cost of publication. It is a one-time investment which increases the scope of project. Also, the paper brochure lacks the multimedia part. There is no provision for interactive videos and multimedia services on paper. The application which is an 'Electronic Brochure' does this with sophistication. The customer is not able to contact the organization by the means of textual brochure. The customer is unable to find the route to different branches reading the addresses given. The customer definitely requires an interface which directs him to the exact location. This application provides this on just one click. There are number of services which make unique the application from traditional practices, thus increasing the scope of project.

7. Application and Implementation:-

The application has been implemented in the self help group, for which it is basically designed. It helps the group to promote its services efficiently and grab the attraction of the customers with a touch of technology. The other organizations where such applications can be used are hotels, schools, colleges, hospitals, petrol pump etc.

7.1 Advantages:-

I Wastage of paper will be reduced as all elements are covered in this application.

II It includes multimedia part such as photos and videos for attractive interface.

III As the application is an electronic brochure, there is a one-time investment.

IVGPS location module provides correct path to the destination.

V Navigation drawer provides ease of access to the customers to roam within the application.

7.2 Limitations:-

Android based Smartphone is mandatory for the application to be installed.

II. Due to newer versions of Android, it demands updating timely.

8. Conclusion:-

Through this application business grows fast since this enhances the use of technology to great extent. And organization and customer work jointly to take country ahead.

9. References:-

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