Android card reader application using OCR

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Abstract: Because of growing technology and rapid living of human beings, business card are now becoming very much in demand. Most of the cards have appropriate font size and style. There are traditional types of papered visiting cards. People meet to each other and they exchange their visiting card for further contact and interaction. But there are possibilities of losing the papered visiting card. These cards may get violated with time. The technology is growing so rapidly so this must be changed. The new technology must be enhanced and must be adopted. This paper discusses the issues in developing the electric visiting card. It explains how to process on visiting card through smart phone when the user doesn't want to meet other user. We can just share image with smart phone. It uses Global Positioning System to detect end user address .using this we can save contact and other information on mobile. Whenever image grabs all algorithm work on that image and detect each part such as contact number, name, email_id.

Keywords: Android, Data Flow Diagram, Project Plan

I. INTRODUCTION

ENGLISH is an international language and is spoken and used in almost every country. As English is spoken in almost very country, it is names as "world language". Most of the business cards and documents use fixed font size and style to make document/ card of universal standard. Now day's business cards are very much in as it makes the processing fast so the users of card don't have to wait for balance validation and checking. If we are working in an environment where document font size and font style is fixed, as we have seen in case of official documents, business cards, air ticketing, etc. In traditional days there were paper based visiting cards but there was the possibility of loosing the card and the cards were easily damage so to overcome these disadvantage new concept was introduced called Electronic visiting card. In such environment we can make the system very easily automated with the help of a technology called "Optical Character Recognition". Optical character recognition is usually referred to as OCR . This technology recognizes the characters present on the images with database. OCR technology is widely used but its accuracy is still far from that of second grade student. But people want OCR to convert information in electronic form to increase efficiency of data storage and retrieval .The main goal of this paper is to develop a prototype of an visiting card system which is cost effective and less time consuming. Our Visiting card can be handle with use of just a smart phone application. The basic concept deals with OCR. Optical Character Recognition technology, is developed to translate scanned images of handwritten, typewritten or printed text into machine-encoded text .There are four generation in OCR. In the first generation only Hand-written documents were used, in second generation Handwritten documents were scanned, in the third generation documents were scanned and in the fourth generation which is used now documents are scanned and edited along with symbols. Our application can be installed only on smart phones. When the user click the photograph of papered visiting card. User can easily handle that E-visiting card. Application works on that image and collect symbols, letters, numbers separately. Using detected information it can save name, mobile number and other filed on local database. so it does not need to type all the things again.
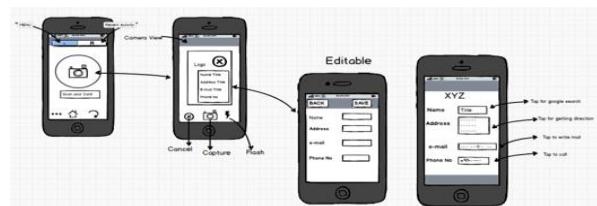

Fig. 1 Customer Application

II. ANDROID

Android is an operating system and a software platform upon which applications are developed. Android, which is a potential game-changer for the mobile development community. An innovative and open source platform, Android is well positioned to address the growing needs of the market place. Android is hailed as "the open and free mobile platform". Android operating system is the first in a new generation of mobile platforms, giving its platform developed opens a distinct edge on the competition. The latest version of Android is codenamed Gingerbread. Android is an open source platform. Neither developers nor mobile phones manufacturers pay royalties or license fees to develop for the platform. Android applications are written in a well-respected programming language: Java. On the Android platform, there is no distinction between native and third-party applications, enabling healthy competition among application developers. All Android applications developed till now use the same libraries. Platforms such as Symbian have suffered from setbacks due to malware virus. Android's vigorous application security model helps protect the user and the system from malicious software. As of October 2012,there are more than 90,000 applications available in the Android Market ,which is growing rapidly. There are more than 182,000 android developers writing interesting and exciting applications.

Android Platform Differences:
- **Complete:** The designers took a comprehensive approach when they developed the Android Platform.
- **Open:** The Android platform is provided through open source licensing.
- **Free:** Android applications are free to develop. No required signing or certification fees.
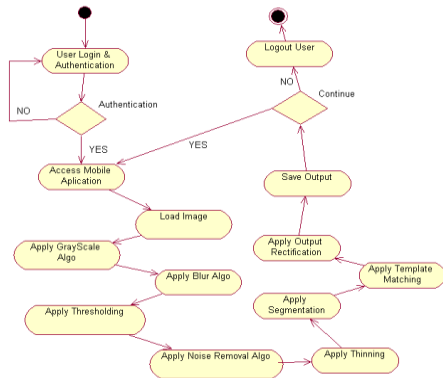
Fig. 2. Activity Diagram
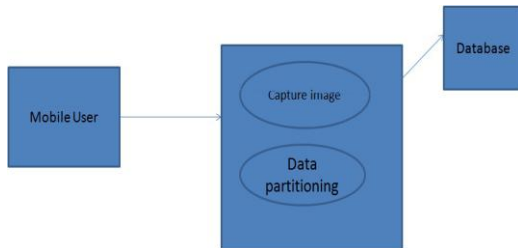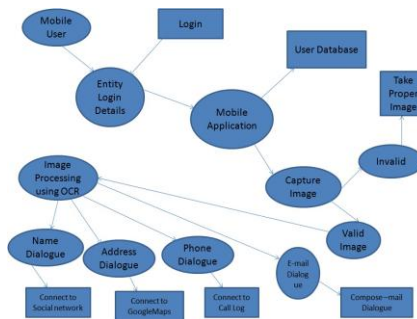
III.   DATA FLOW DIAGRAMS

Fig. 3.(Level) DFD

Fig. 3. (Level) DFD

IV.   PROJECT PLAN

The project plan for proposed system i.e., OCR It includes the requirements gathering and analysis, design of project, GUI development of project, coding, testing of final modules, modification and deployment phases.
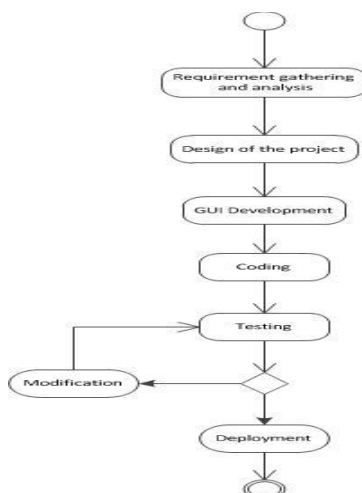

Fig. 5 Project Plan

The above figure (fig. 2) depicts the project plan. It describes the activity plan of the project. The activities will be carried out in the same sequential order. We are implementing the proposed system on the basis of object oriented concepts. It means dividing whole system into different modules.

V.   CONCLUSION

E-visiting card can be an effective replacement for papered visiting card. The system is completely automated so it reduces the human effort. Using OCR technology each symbols, number and letters can easily and detected. This android application can be very useful for end user for tracking the other user. It means the user can be detected very easily for validating purposes. Through GPS facility of android mobile, the user can get address very correct. It save time of typing of all filed in local database. Hence the performance of read/write operation   improved using this OCR.

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