A BUSINESS CARD WALLET SYSTEM USING ANDROID TECHNOLOGY

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*Abstract:*Business Card Wallet is an android application should use for manage the business card. This application is for those who have to deal with numbers of card. Using this application user can scan the card using OCR processing, then this application directly set every different fields (name, address, email, message, call and website) in particular manner. After that whenever user need to contact anyone from saved card, user can directly search from the search bar by person name, company name or even using an area name and make call, message, email or directly visit their office using location map from this application. User also set a reminder of meeting with their clients within particular profile, so user cannot have any rush of their meeting. User can directly visit company website also.

IndexTerms–**Business Card Scanner, Optical Character recognition, Biz Card recognition.**

I.INTRODUCTION

People who are dealing with numbers of business card every day for those we are provide solution by making this business card wallet application which useful for manage and exchange business cards. It allows a user to scan business cards into their mobile for digital storage. With Business Card Wallet you no longer need to find around the drawer overflowing with business cards to follow up on a connection. This application makes it easier ever to organize your card and managing details of business cards digitally.Our objective is to utilize the visual capabilities of the Android mobile to extract information from a business card. Our application uses the camera features of the Android to capture data. Recognition of the text from business card need to be accurate. Any camera image of the business card would be subject to several environmental conditions, such as variable lighting, reflection, rotation, and scaling [1].Utilization of the business card into digital format using OCR (Optical Character Recognition) based technique. We use Google based Machine learning kit which provide OCR technique called Google Vision API. This technique detects text within images along with automatic language identification [2].OCR tries to address several issues of abovementioned techniques for automatic identification [2]. OCR is a complex problem because of the variety of languages, fonts and styles in which text can be written, and the complex rules of languages etc. [1]. The below fig.1 describe different areas of character recognition.
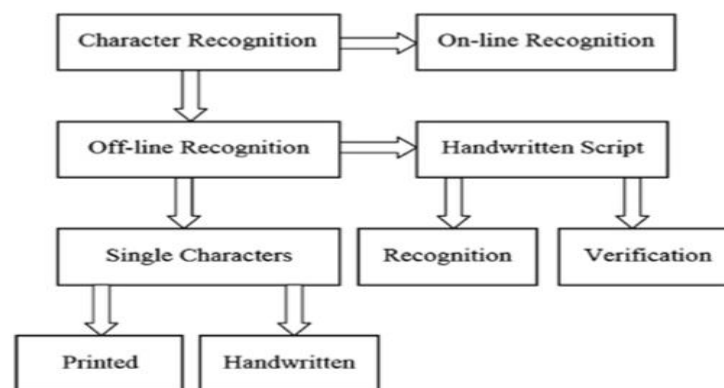

Fig.1 the different areas of character recognition [2]

By collecting the character information from card using OCR technique and classifies it in specific fields. Specification of the fields gives clarity to data. Using specified field easy to detect the different fields of the business card. Using specified fields user can do different kind of acts like call, mail and message directly from the specified fields. No need for wasting important time on entering business card data manually. This application eliminating the need for manual data entry, it saves time and enables you to act on the information in business cards faster than ever. This application is perfect fit for sales people, entrepreneurs, business developers or marketing experts, and anyone who want to be one.

2. Literature Survey:

Numerous existing systems regarding the similar issues of business card are available in the markets. This shows that the problems and limitations of traditional business cards are concerned by the society. From the huge number of existing application, was selected to review in the following subtopics namely CamSacnner, Textfairy and CamCard.

CamScanner is converts a photo into a document form, a smartphone PDF creator. This scanning application is an Android application that allows users to scan, store, sync and collaborate on content across smartphones, tablets, and computers. CamScanner features a mobile scanner that works by using a camera function within the application.

After snap a picture of the paper you want to scan, the application then recognizes the corners of the sheet and outlines it to crop it in a way that makes it look perfect. The text is in readable form and the document is safe to share with other people.

This application scans the multiple pages documents as well as Scan any kind of document in seconds, texts or graphics. CamScanner have feature of auto crop the scanned photo and save scan results to system album.

CamScanner have all features that can impress the users, but when user have to download that saves pdf or document form the system album to phone memory user have to pay for those document, So this is the limitation of this system. CamScanner also have limitations like camera quality must be good. If the quality of the camera is bad then the documentation of the photo is not so accurate [3].

TextFairy is an application for converting image documents to PDF form by recognizes text from image. TextFairy alp has 50, 00,000+ downloads since 2013. This application is useful to recognize text from the photo. With use of that Text fairy application generate a pdf file. This application is helps you to convert any documents into soft copy. Basically it just converting hard copy of documents to soft copy of documents. Use of this as business card scanner is not a good idea.

TextFairy scans document and recognize text from the application. That text information generates document soft copy as PDF form. That PDF save in database and we can access whenever we need. This application is limited to just recognize text and well set as document, but this application is not provide other features what we need as business card scanner [4].

CamCard is a Business Card reader and also acts as a business card scanner. It has more than 5,000,000 users all over the world. CamCard enhance business card limitation by capture and recognizes business card information, contact information is then saves to Card Holder or user's address book. User are required to capture the image of the Business card, CamCard are will be extract directly from the business card. For new user who does not have a business card, CamCard provides several templates to create e-Business Card from information provided. User can choose to create a card manually or import a contact from phonebook, a card will be created automatically. After saving contact information, user allows to store their cards in Cloud securely provided by CamCard to serve as a private backup. Because of the use of Cloud, data can be restored if accidentally deleted by user. Not only restore, user allows to manage and synchronize cards across multi-devices with the Cloud Sync. CamCard charge money from users for original version of the application. This only gives limited space for business card, so user want more space than they have to pay for this application. This is the main limitation of the CamCard.CamCard provides many functions and features that impress user, however it have its limitations too. As tested with several business cards, results show that the information extract from the cards might not be accurate due to some of the external factors. Some factors will influence the result of extraction such as physical damage on the cards, resolution of the image, lightness, mixture of the color on the cards and so on. Furthermore, instance updating information also not supported in this application. Updated information are not manage to update the other user who sharing contact. Again, loss of contact might happen [5].

3. Proposed Technique

In our application we are converting a business card into a digital form, where user can access those data throughout their own phones. User can save data of business card in application storage, storing of the data is free. Existing systems charge money for their services but our systems do not charge any money from the users. To make this application we are using android [6].

Business Card Wallet's main functionality is to scan the card and collect the information using Optical Character Recognition and classifies into proper manner. Business card wallet application is uniquely designed with dynamic outlook. It is very useful application that you need not to handle a lot of business cards in your wallet or office desk. It has efficient scanner with no bugs at all. Exchange e-cards with people. Connect quickly to the owners or company via call, message and emails just on one click. Add the reminder within each card for the meeting and appointments and get notify time to time. Card Holder, the application's own storage, provides convenient business card search, as well as sorting and grouping of contacts. You can quickly find business contact you need. Business card scanner is effective at reading the data without any bother. Easy to use with user friendly interface. Search address of your business contact with just one tap using map. Ass text notes to each business card. Save as much cards as you want to save within your application. Directly visits website of company.
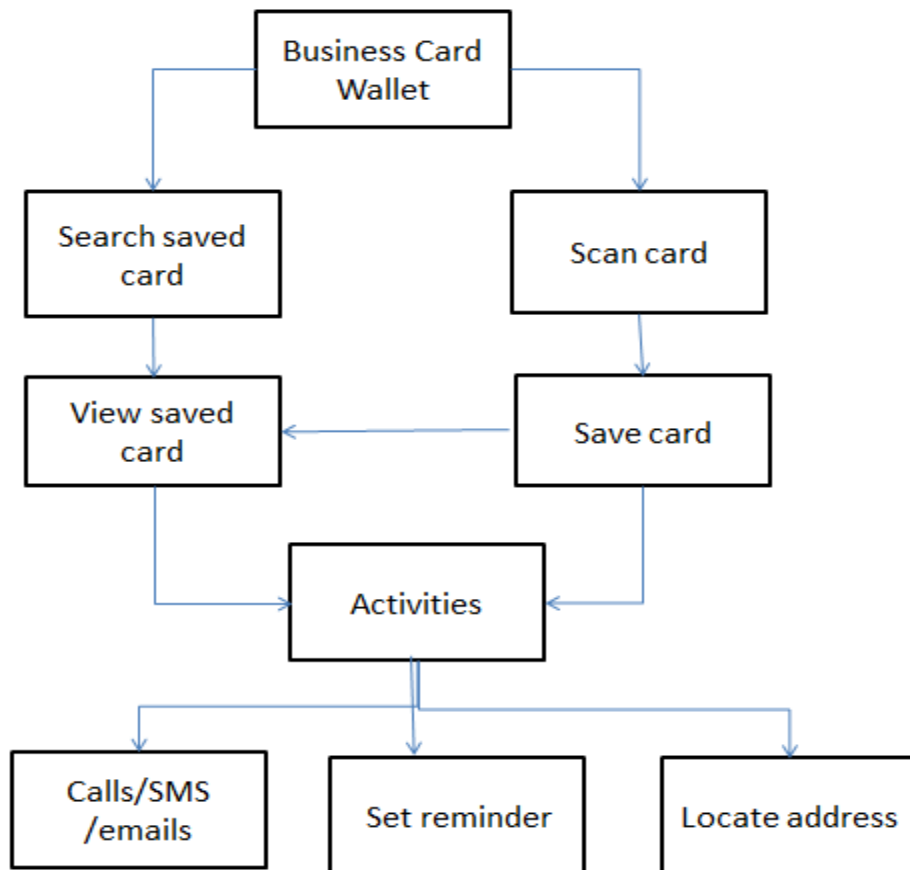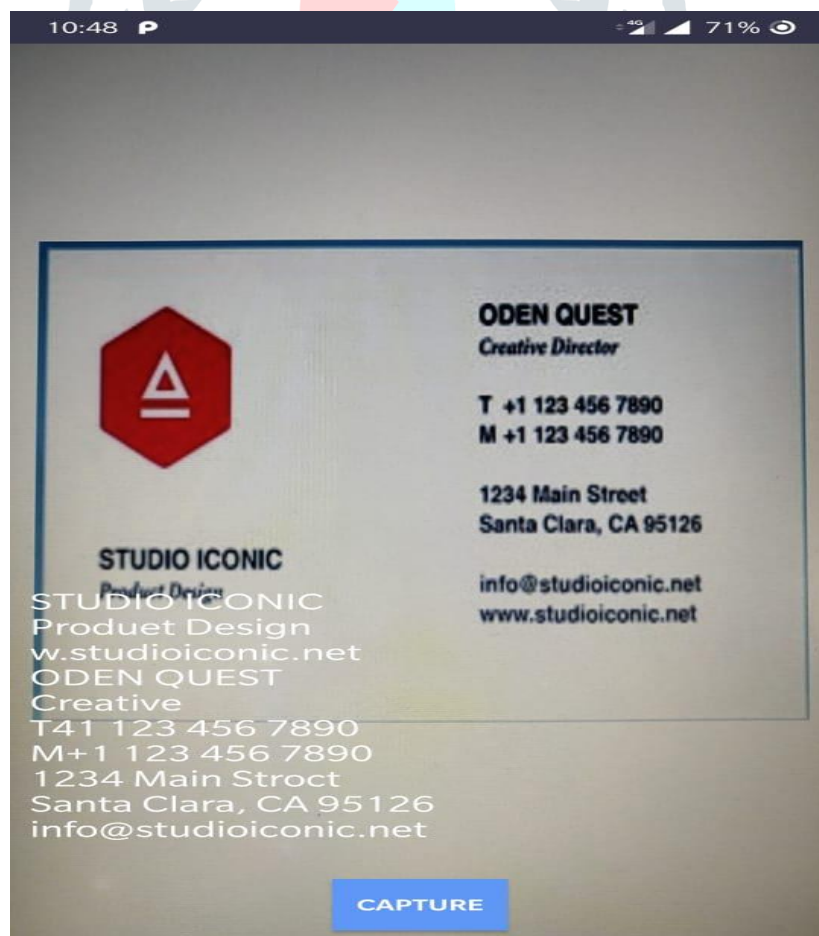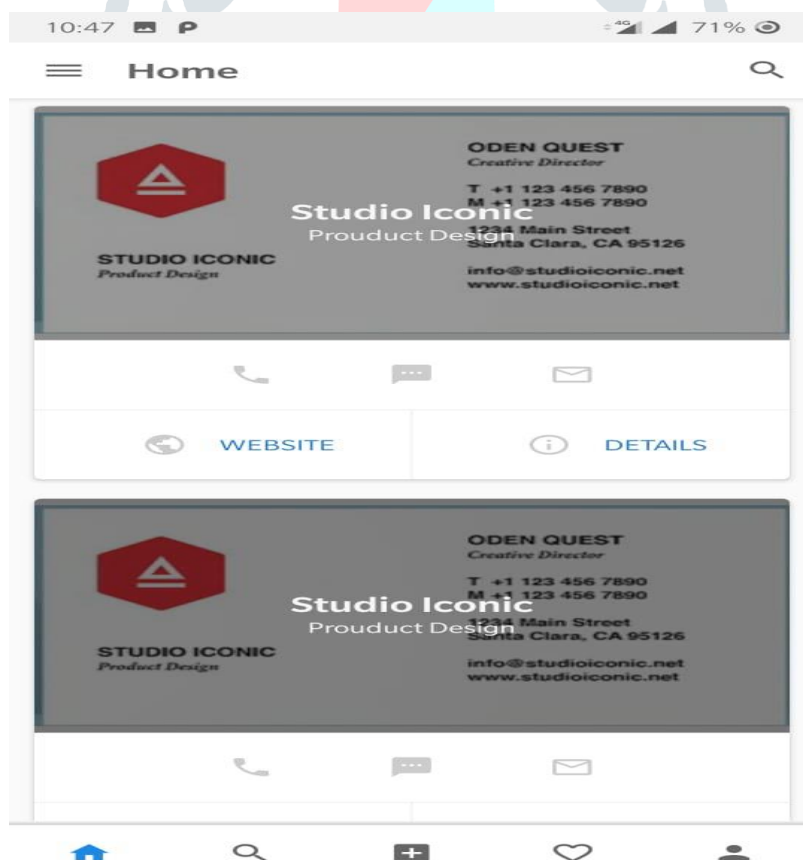
Fig.2 Business Card Wallet system

Screenshot 1

Screenshot 2

Screenshot 3

4. Conclusion and future scope:

Our aims to provide a simple business card management that would aid all marketing, business, shopkeepers, real estate and our application help them to manage the business card efficiently. Our application has been designed to keep it lighter as possible by including only the basic needed functionalities. Throughout the application, we will take up the challenges and solve it to the best possible way such that at the end application serves the actual purpose.

Our system will go to integrate multiple cards at one scan and support different patterns of business card
. Also we are working to provide multiple languages support for fetch data from the card.

References:

[1]A Survey on Optical Character Recognition System, Journal of data & Communication Technology-JICTVol.10 Issues. 2, December 2016, Noman Islam, Zeeshan Islam, Nazia Noor, ISSN-2409-6520

[2] Optical Character Recognition Systems for Different Languages with Soft Computing Chaudhuri, A.:Mandaviya, K.:Badelia, P.:K Ghosh, S. 2017, XIX , 248 p.95 illus., Hard Cover ISBN:978-3-319-50251-9

[3]https://play.google.com/store/applications/details?id=com.intsig.camscanner

[4]https://play.google.com/store/applications/details?id=com.renard.ocr

[5]https://play.google.com/store/applications/details?id=com.intsig.BCRLite

[6][online][last visit: 02-11-2019 8:35PM]https://www.tutorialspoint.com/android/

[7] An summary of Character Recognition targeted on Offline Handwriting, IEEE Transactions on Systems, Man and information processing – half C: Applications and Reviews, Arica, N., Vural, F.T. Y., 31(2), pp. 216–233, 2001.

[9] A Survey on Handwritten Character Recognition Techniques for various Indian Languages, International Journal of Computer Applications,Dholakia, K., 115(1), pp.17–21, 2015.

[10] Optical Character Recognition Techniques: A Survey, Journal of Emerging Trends in Computing and Information Sciences, Singh, S., 6 (4), pp. 545–550, 2013.