

Access to product information using QR-code

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Abstract— This paper is developed to help blind peoples in daily life. This required normal mobile camera to scan the QR-Code which is printed and attached on stand in D-mart or any shopping mall so that blind people does not required to scan full product to find QR-Code. This is very helpful finding out description and prized of packaged product to the blind people and so helping them in deciding to buy a product especially which are packaged. This is because it becomes very hard for the blind people to tell the difference between the packaged products. In order to use this system, all the user needs to do is scan the QR-code in the mobile phone. It will retrieve the data and price about the product. This application will also suggest other products under same category. So, this application really benefits blind and visually damaged/weakened peoples and so making their work of identifying products easy. This paper can be put into use in any shopping mall, supermarket, Book stores, Medical stores etc.

Index Terms— QR-code (QuickResponse Code), phone, **scanner**, visually impaired (damaged/weakened).

1 INTRODUCTION

According to our research on internet world health organization says that, visually impaired 285 million people whom 39 million are blind uncertainties 10 to 20 People 50 years and older represent 65% and 82% of visually impaired and blind, respectively.[1] Blind persons face so many problems in their life, one of the problem is detection of obstacles while walking and finding product details while shopping. We all have an idea about what kind of contents are most important to every customer while purchasing anything this content are such that actual prize of product, manufacture and expiry date of product, which ingredients are inside the packed food or any product. While purchasing medicines it is most important to know expiry date because it is harmful to every living things. And for blind people it is impossible to read this information. Most of the blind people are usually depends on others for shopping to daily life products. To make it easy for blind people while shopping we developed this paper. This paper gives the details of how an application is developed. We are using camera-based system which is mobile phone or smart phone which is now available to buy every person through this mobile phone camera our developed application scans the QR-Code which is stick on the stand in shopping malls and D-Marts it will read the information which is stored in the database. We will also recommend other options which are nearest to the scan product.

1.1 Objective

According to a recent survey by a national organization for eye doctors India accounts for 20 percent of the total blind population of the world, so our main aim is that make those peoples life better. Not only for blind peoples but also this system is useful for (usual/ commonly and regular/ healthy) people because system Recommend the best alternate product.

1.2 Purpose

Main purpose is to make the life of blind people easy. So that they can independently buy any product without depending

on others to purchase right product. This is very useful to blind persons because its helps to identify what they are purchasing, also this gives detail of the product such as manufacturing and expiry date of the product this will very helpful while purchasing medical product which are harmful to humans if expired products are used.

1.3 Scope

This paper will be used in shopping centers and malls especially for blind people. This will give details of product in voice form which is helpful to blind and visually impaired people. The application is restricted only for those shopping malls where have QR-Code printed on racks where product is arranged. Person (user) who is using this application are connected with the same network so they can easily get the access from the data base.

2 MOTIVATIONS

2.1 Correct Details about the product

While purchasing any product the customer always need to read out all the details of the product and also that information is written in a small and congested manner or another Way for customer is to ask for the details of the product to the product seller.

2.2 Blind people are dependent

While purchasing any product blind person always need help of another person in order to get correct details of any particular product.

2.3 Busy Shedule

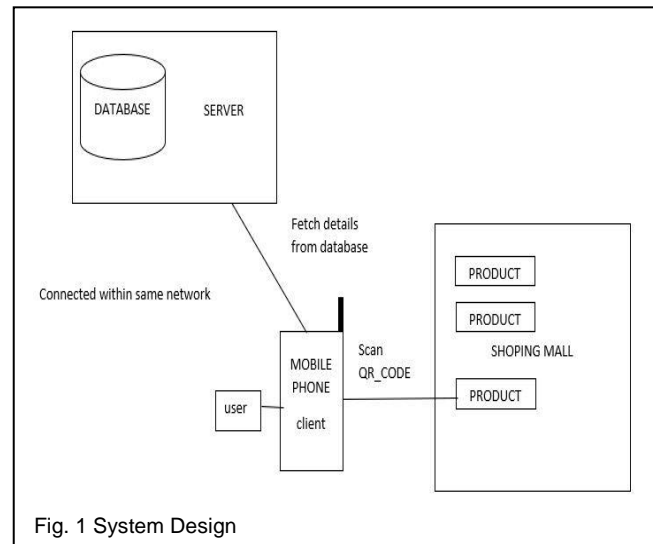
Due the busy schedule the situation may arise where the person may be busy and could not be able to help the blind person. In that case, there may be chances that blind person could

purchase wrong product.

3 LITERATURE SURVEY

In existing system there are so many applications which are only develops for blind peoples some of them are 1. LookTel: The Money Identifier App. This application is specially developed for visually impaired people for easily identifying currency. 2. KNFB Reader App: Reads Virtually Any Text Aloud. This application helps blind and visually impaired people while reading this will convert the text into voice form so they can help to read any book, newspaper easily. 3. TapTapSee: Identify Objects Through Photos. This application is help blind person easily recognize daily objects. While capturing the image it gives the details of that object. Motivating from this application. Existing Paper- In Existing system the barcode only provides some details of the product such as name, cost and expiry date of the product in the form of voice. This paper does not provide additional information to the blind person to choose the right product. In our survey there is one paper on the basis of this topic i.e. "Portable Camera-based Assistive Text and product Label Reading from Hand-held Objects for blind Persons." paper on the same topic but using the different technologies they used image processing technique in that they are simply capture the printed details of product i.e. name of particular product and process on that capture image means recognizing the written text and giving the details of the product in text format [2]. In our main base paper i.e. "Visual Product Identification for Blind" they will used the same technology which we are using only difference is they used barcode for scanning n we are using QR-codes also difference is that they are only displaying and speaking the result of that particular product this details are name, expiry date and prize [3]. but in our paper we also recommend alternate option of the same category. Other paper is passed on grocery shopping which is impossible to blind and visually impaired people this paper defines the various techniques for helpful to blind person [4]

4 METHODOLOGY



QR-Code

2d barcode readable by smartphones is known as a QRcode.it encodes over 4000 characteristics in 2D bar code.it is a registered trademark of DENSO WAVE IN CORPORATED. it is used in commercial tracking application and concenience-oriented applications. it is most used type of 2D code.

Generating QR-Code

```
Create QR-code object {QRCode barcode = new QRCode ();}
QRCode data text to encode {barcode. setData("Create-QR-Code-in-Java");}
Generate QRCode & barcode encode into JPEG format {barcode. drawBarcode ("C://barcode-qrcode.jp}
Scanning QR-code we'll use the ZXing (Zebra Crossing) library to carry out barcode scanning within an Android app. Add new package com.google.zxing.integration.android
Create two class IntentIntegrator and IntentResult. copy code from ZXing library and paste into this classes import the ZXing classes into your main Activity class.
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Scanning-

In main activity used Onclick method and import IntentIntegrator class Call IntentIntegrator {scanIntegrator.initiateScan();} Rereviewing scanning result Add onActivityResult method The Intent Result object provides methods to retrieve the content of the scan and the format of the data returned from it.

Zxing libraries for scanning

Users have no need of barcode scanner installed for this scanning purpose for that we are using Zxing library and integration class are provided will take care of this scanning process. Zxing integration classes are important into our project. It will very helpful for user to scan the product easier and focus our development efforts on handling the scanning results. In a follow-up series comming soon we will develop book scan-

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ning app. In which we will create this tutorial and we will add Google book API support so that it is easier to display information about scanned books system will show the all information or book details. Zxing is an open source library that provides access to testing and functional barcode scanning on Android platform. Mostly users already used the barcode scanning app in their devices so they can simply launch scanning intents and get the results of products. In this tutorial we also use the scanning method because it is main part of our system. We used the scanning via intent method for that scanning get easier. Intent method involves the importing couple of classes into app and this Zxing focuses on the instances where the user does not need to scanner installed. If the user doesn't have the scanner installed they will be suggest to user to download it.

Connectivity-

We have used eclipse for backend and android SDK for front-end eclipse is used for database and connectivity (server). Android SDK is used to form APK file for android users (client). For connection between eclipse and navicat8 (for My-SQL). Port no is in eclipse for connection with My-SQL. getConnection is used by calling port number.

Admin panel-

In our paper we also adding the admin pannel for more user freindly for administrator also admin does not need to enter all the details by updating the database admin pannel help to add new records in the data base quickly or esily added data will be store in the database in unique id which will help to generate QR-Code for that unique id. which will give the dtails which was enter in that place in dtatbase.

5 RESULT

5.1 Sample QR-Code



Fig. 2 Generated sample QR-code

5.2 User Interface



Fig. 3 User Interface for client.

4 CONCLUSION

In this paper, to solve the common aiming problem for blind users, we are implemented a camera-based product information reading framework to help blind persons read product information from hand-held objects in their daily lives. In this paper, we get the output in the form of audio. We are also recommending the option to buy the best product.

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