



An Expiry Date Alert through Bar Code Using Image Processing

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ABSTRACT-

The growing number of people living in relative poverty is leading to an increase in food insecurity in Europe. Few products can't last forever, especially when it comes to food and medicine it is necessary to know the description, manufacture and expiry date of products.

It becomes then necessary to acquire the expiry date of a product displayed on a shelf by means other than barcode.

Keywords: - text-to-speech, Quick Response Code (QR Code)

I. INTRODUCTION

Android in mobile phone is becoming the important part of people's life. A user having a camera phone equipped with the correct reader software can scan QR code and decode it to launch and redirect a phone's browser to an embedded URL or to resolve text embedded in the scanned QR code.

A system is needed for visually impaired to identify the product using QRcode with voice announcement using a Smartphone. The system is developed to facilitate identification of various items that exist in already created inventory. The designed system is composed of a database, Web service for intermediary access to the database via Web, and the client Android application, that can be run on mobile phones.

Many retail stores still use Barcodes including only the Global Trade Identification Number (GTIN). It becomes then necessary to acquire the expiry date of a product displayed on a shelf by means other than barcode reading. In order to extract the text in such images, many algorithms have been proposed.

The motivation behind taking this project is that the data on the QR codes are not so easily understandable without previous knowledge of the manner of their formation.

II. LITERATURE SURVEY

In "Compressed QR code based mobile voice guidance service for the visually disabled" proposed by Jung Hoon Kim, Minseo Kim, Taejun Yang, Insu Kim, Jun Seo, Sunmoo Kang In this paper QR Code and text compression algorithm SMAZ and TTS(Text to speech synthesis) is used Here a system is developed that reads the story books, its location information and so on. The QR Code is scanned with help of libraries of Zxing android which is used as the scanning library and similar for text to speech the libraries are used, the compressed QR Code is restored through mobile application and information is provided to visually impaired people, this application also provides guidance to the location of the book in the library for visually impaired person.

In "Product Barcode and Expiry date detection for visually impaired using a smart phone" proposed by En Peng, Patrick Peursum, Ling Li. The proposed system in this paper has focused on helping the blind people to locate the barcode and the expiration date on the product package, after locating the barcode on the packaging it is decoded and OCR(Optical Character Recognition) technique is utilized to obtain the required information of the product, here the text detection technique is used to extract the expiry date on the packaging

III. METHODOLOGY

This application proposes QR code detection and product recognition through Speech which can be used to overcome existing system drawbacks. From this system we can get the product description and directions to different places through speech. There are two options either the person can choose scanning of the QR Code or the person can locate the places such as super markets, medical stores etc. below figure 1 shows the process of audio output of product details. Figure 1: proposed system process International Journal of Engineering Research & Technology (IJERT) ISSN: 2278-0181 Published by, www.ijert.org NCRACES - 2019 Conference Proceedings Volume 7, Issue 10 Special Issue - 2019 2 A. Generation of QR Code: This application is basically designed to perform all the tasks that previous system cannot perform. The system is based on the idea of utilizing QR codes (two-dimensional barcode) affixed to an object and scanned using a camera phone equipped with QR reader software. The reader decodes the barcode to a URL and directs

the phone's browser to fetch an audio file from the Web that contains a verbal description of the object. Our proposed system is expected to be useful where QR Code generated with help of Zxing libraries of android. B.Scanning of QR Code and restoration of original text: The product details that are compressed within the QR Code is read by the proposed application The QR Code is Scanned and decoded using the Zxing android and java getByte function to decode the QR Code into original text C.Text-to-speech: The information from the QR Code is extracted and the output of the text is given through audio or voice. The blind person in this application can also get to know only the particular information rather than the entire product information. Suppose if the blind person wants to know only the expiry date of the product then it is possible for him to do so. If the blind person has not heard the product details properly then he can say repeat in the application to get to know the product details again through audio. Advantages • The project aims at introducing a voice based message for blind persons through an android mobile regarding the product description stored in the QR Code and display location direction through map and give place description and direction through speech. • User will scan the QR Code and recognize the product and get the details of expired products and other description through speech

IV. PROJECT SCOPE

Future prospects aim to deploy this technique in a real time application that can be used to effectively collect identify the Expiry dates on the products in real time and reduce the instances of any mishaps significantly.

- Bar code authentication using Image Processing
- Expiry date alert rising Bar code authentication through web camera is economically feasible task
- Using image processing for the barcode authentication is the new idea
- Alerting user for the expiry date is the best thing in consumer priority

V. EXPERIMENT ANALYSIS

The QR Codes given below are generated by using the proposed application among these QR Code Figure 2a contains the information of chocolate such as its name allergic substance(lactose) nutritional facts, manufactured date and expiry date and another QR Code Figure 2b gives information about the skin cream through speech.



Figure 2: Generated QR Code Datasets

VI. CONCLUSION

The proposed system provides ease for shopping to visually impaired people, since they can buy the products and get to know the details of it even at home. With the help of this application .The visually impaired or the blind person can avoid consuming the expired product or product containing allergic substance by gaining prior knowledge of the product through speech.there is also facility of locating near by places(supermarkets,medical stores) direction for the visually impaired through speech.

VII. FUTURE SCOPE

In current system as we know that much information can not be stored in the barcode so in further development storing more information in barcode is required so that more information can be extracted even through the barcode for the blind or visually impaired people.

REFERENCES

- [1] Recognition of 2D barcode images using edge detection and morphological operation, Priyank Gaur, Shamik Tiwari, International Journal of Computer Science And Mobile Computing IJCSMC-2014.
- [2] Portable Camera Based Assistive Text And Product Label Reading from hand held ojects for blind persons, Chucai Yi, Yingli Tian, Aris Arditi, International Conference IEEE-2014

[3] CHEN Rong, LIU Zhen-ya, JIANG Yan-hu,Zhang Yi, Tan Li-yu,” Coding Principle and Implementation of Two-dimensional PDF417 Bar Code ” 978-1-4244-8756-1/11 c 2011 IEEE.

[4] Expiry Remainder, Vipul Singh, Pathamesh Verlekar ,Naina R.Mishra,Shuheb Shaikh International Journal for Innovative Research in Science And Technology IJRST -2016