

Wi-Fi Message Broagdstasting Using QR Code

Khaire Pooja R¹, Zagade Sneha S², Dehsmukh Anagha A³ & Badgular Rinku ⁴

¹²³ Student, Dept. of Computer Engineering, BSITOR college, Maharashtra, India.

⁴ Professor, Dept. of Computer Engineering, BSIOTR college, Maharashtra, India.

Abstract -This paper contains Mall shopping system, for shopping different products and spend their valuable time in searching the products. After selecting the product the users have to wait in a long queue for billing. So, we are working on this system to avoid these drawbacks. In this system we are using Wi-Fi message broadcasting and also QR code for every product using QR code generator, as user goes for shopping he will receive all the advertisement after connecting to Wi-Fi and if user wants to purchase a product, he will scan the QR code of the product from his android device and user will get list of all the similar products in that range and any offers and discounts related to that product as he is connected to the Wi-Fi, this is done using searching and sorting algorithms. Once the user scans and adds the product to the cart the data provided to the server and the bill gets generated after adding all the products to the cart.

Key Words:Android OS, Broadcaster, Message, Messaging, Web-Server,Wi-Fi.

1.INTRODUCTION

The project idea is basically to design a system such that when a customer enters a shopping mall then he/she may connect to the Wi-Fi and using QR code scanner scan the products and view similar products and then buy them which significantly becomes easy for the customer to find more items similar to the items of their interest along with the special offers on the product. This will benefit the user and reduce efforts for the same.

With the improvement of living standards, most big shopping malls experienced reconstruction and scale expansion. Currently, shopping malls are bigger with more abundant goods and more variety of wares. People are in the pursuit of high quality consumer goods. At the same time, the pursuit of efficient shopping is gradually revealed. To solve the difficulty in customer shopping, large stores have launched a mall layout map, Touch Mall shopping system, and other shopping guide newsletter. In recent years, shopping guide has become a hot career. Shopping guide mall layout map is most common in the mall as a shopping guide, which shows the customer's

position and the layout of mall section directly. However, it may be little help for those first time customers or customers with bad sense of direction. To improve the customers shopping experience and to overcome the existing system we developed a system for the ease of customer's shopping.

Therefore,for merchant and customeer building a simple, fast and convenient shopping guide system has become a mutual concern .In earlier days ,mobile is popular customer products, a simple optimization method used to design shopping guide system that run on smart phones, with the help of QR code generation technology, wherein, we can store more data using the QR code. In this system, QR code can be used for the every product using QR code generator. when user goes for shopping and purchase a product, after that user can scan QR code of that product using QR code scanner, from his android device and he will get list of all the similar products in that range and product related offers and discounts, this is done using searching and sorting algorithms. Once the product scans by user , product adds to the cart the data gets provided to the server and the bill gets generated. The bill is sent to the user on his device and the products are delivered home and also bill payment is done online.

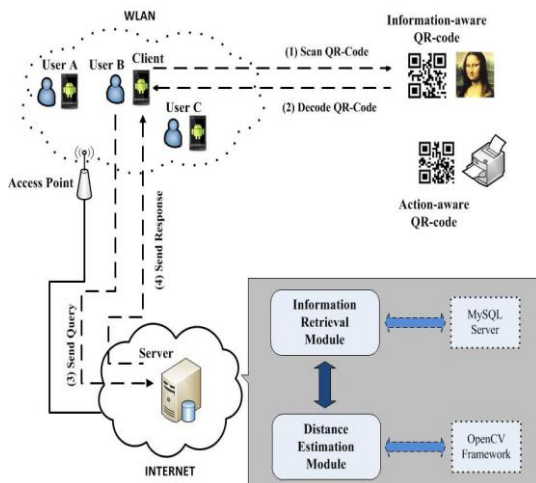
The proposed system can be used to show accurate and real time shopping destination, thus help shopping mall to mine customer data more accurately and scientifically. The system basically is intended to design a system such that when a customer enters a shopping mall then he/she may connect to the wifi and using QR code scanner scan the products and view similar products and then buy them which significantly becomes easy for the customer to find more items similar to the items of their interest along with the special offers on the product. This will benefit the user and reduce efforts

1.1 Objective

- Develop an android app for scanning the QR code of the product and seeing the offers and discounts of the particular product.

- Design a web portal for functionalities like billing system and admin related work

2. System Architecture



Architecture is the client-server paradigm: it consists of client that is the application that runs on the mobile device (client) and the server. The client uses the API and the Barcode Scanner open-source application, for scanning and decoding QR-codes. The server may contain two modules, namely, the information retrieval, and the distance estimation module. In the information retrieval, the server deploys a MySQL database that contains information regarding all points of interest, while a framework is used to perform the distance estimation. The multi-threaded server is able to support a significant number of clients/requests. Android app designed using DES algorithm & QR code technology. It is the advanced technology to be designed for customer for convenient shopping and going through the entire mall. This system will carry out the entire activity of mall shopping from products scanning, listing the discounts and offers of products as well as similar products in the same price range to users, adding the products to cart and online billing, which will consume time of users of waiting in a queue and reduce the overhead of carrying the products at home. We will develop an android app for scanning the QR code of the product and seeing the offers and discounts of the particular product. Web portal will be designed for functionalities like billing system and admin related work.

3. Algorithm

3.1 Binary Algorithm

```
int binary_search(int arr[],
    int find,
    int first, int last)
{ int middle, found; found = 0;
  while((first <= last) && !found)
```

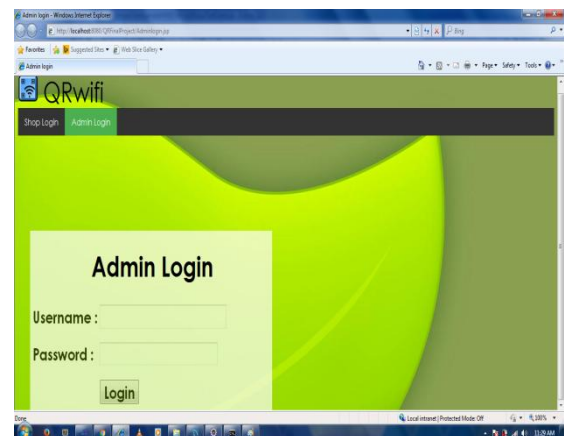
```
{ /* Step 1 */ middle = (first + last) / 2; /* Step 3 */
  if (arr[middle] == find) found = 1;
  /* Step 5 */
  else if (arr[middle] < find) first = middle+1;
  /* Step 4 */
  else last = middle - 1; }
  /* Step 3 */
  if (found) return middle;
  /* Step 2 */ else return -1;
}
```

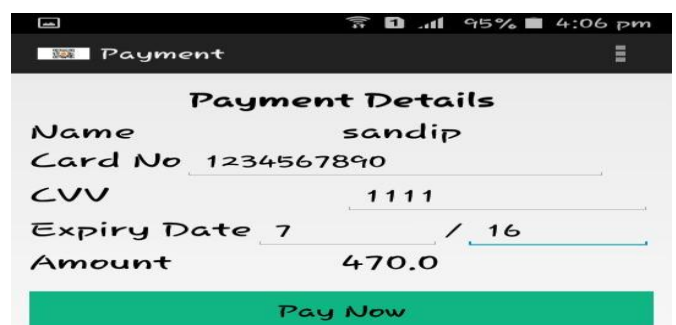
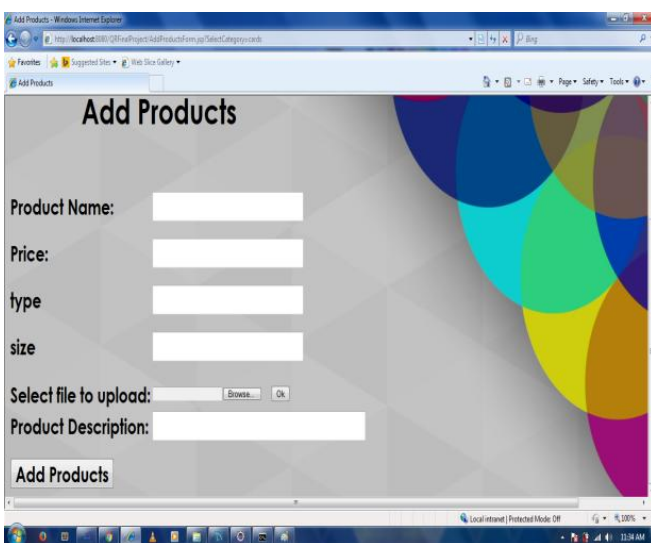
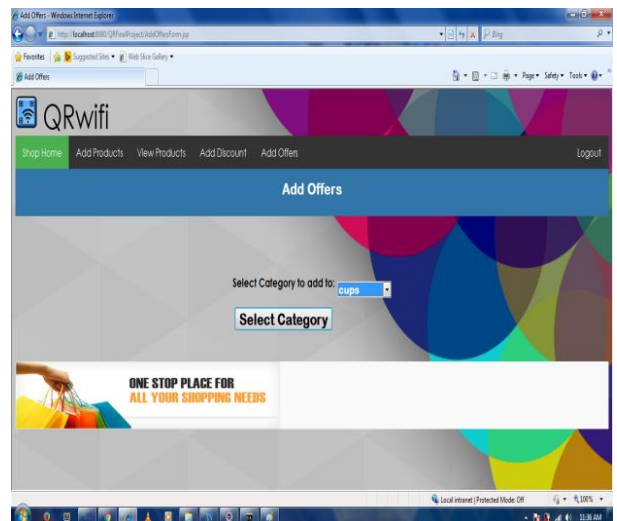
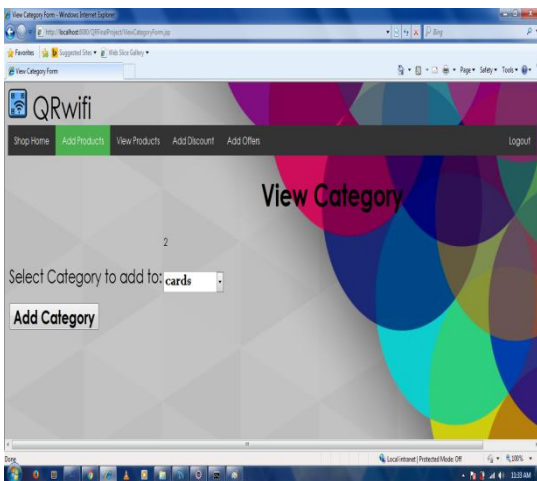
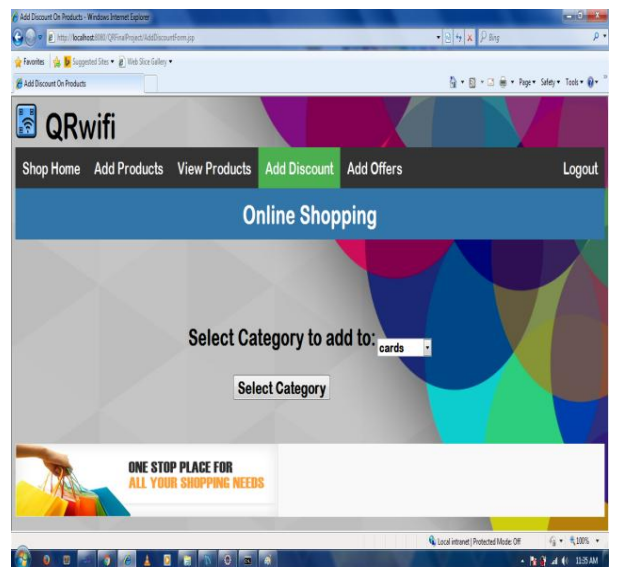
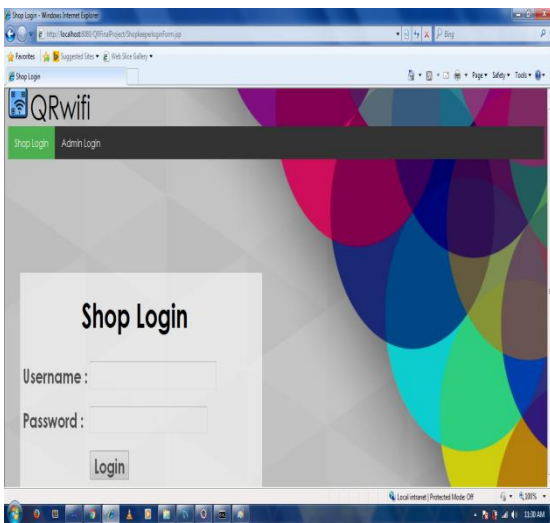
3.2 Quick sort

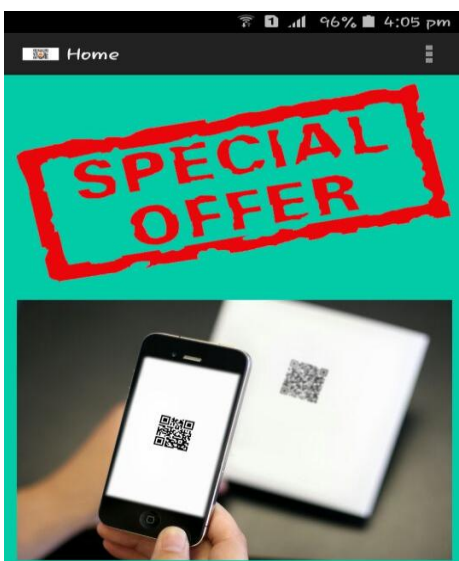
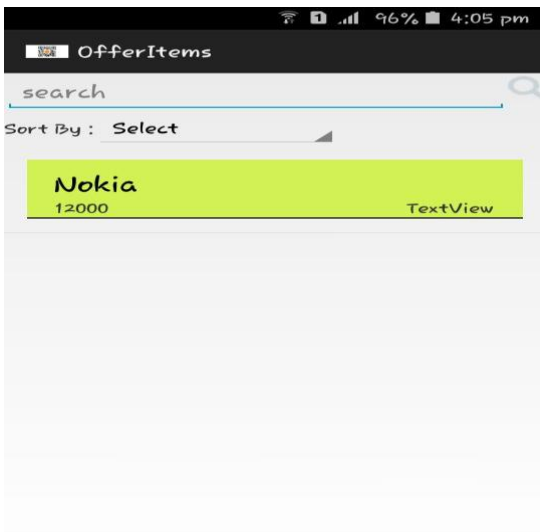
```
step ← m;
while step > 0
for (i ← 0 to n with increment 1)
do temp ← 0;
do j ← i;
for (k ← j+step to n with increment step)
do temp ← A[k];
do j ← k-step;
while (j >= 0 && A[j] > temp)
do A[j+step] = A[j];
do j ← j-step;
do Array[j]+step ← temp;
do step ← step/2;
```

4 Results

4.1 Snapshot of project







5. CONCLUSIONS

In this paper basic idea of how the customers can easily find the products just by scanning the QR code on product and finally purchase the item of the choice. In this system architecture QR code for every product is used, user can scan the product QR code using QR code Scanner, from his android device and user can see the all the similar products and product related offers and discount using searching and sorting algorithms. Once the user scans and adds the product to the cart the data is provided to the server and the bill gets generated. Then bill is sent to the users smartphone and the products are delivered home and also bill payment is done online.

REFERENCES

- [1] Antwerpen, Belgiumfgeert.vanderhulst, “Dynamic Barcodes for a Better Ubiquitous UnderstandingGeert Vanderhulst and LievenTrappeniersAlcatel-Lucent”, Bell LabsCopernicuslaan 50, 2018 lieven.trappeniersg@alcatel-lucent.com
- [2] StoresRui Wang1, Shuo Chen2, XiaoFeng Wang1, Shaz Qadeer21 Indiana University BloomingtonBloomington, IN, USA[wang63, xw7]@indiana.edu2 Microsoft ResearchRedmond, WA,USA[shuochen, qadeer]@microsoft.com “How to Shop for Free OnlineSecurity Analysis of Cashier-as-a-Service Based Web”, 2011 IEEE Symposium on Security and Privacy.
- [3] International Journal of Computer Applications “Reversible Data Hiding using QR Codes for Android” (0975 – 8887) Volume 97– No.11, July 2014 .
- [4]Cameron Browne, Member, IEEE, Edward Powley, Member, IEEE, Daniel Whitehouse, Member, IEEE,Simon Lucas, Senior Member, IEEE, Peter I. Cowling, Member, IEEE, Philipp Rohlfshagen,Stephen Tavener, Diego Perez, SpyridonSamothrakis and Simon Colton” Survey of Monte Carlo Tree Search Methods”,IEEE transactions on computational intelligence and ai in games, VOL. 4, NO. 1, MARCH 2012 1A
- [5] StandardSalih Mohammed SalihIEEE Member ,“Modified Key Model of Data Encryption “, Electrical DepartmentCollege of Engineering, University of Anbar, IraqE-Mail: dr_salih_moh@yahoo.com



Miss Pooja R. Khaire is doing her BE From BSIOTR college, Wagholi, Pune university, and have completed diploma in Terna Polytechnic Navi-Mumbai ,MSBTE.



Miss Sneha S. Zagade is doing her BE From BSIOTR college, Wagholi, Pune university, and have completed diploma in BSP Polytechnic ,Wagholi ,MSBTE .



Miss Anagha A. Deshmukh is doing her BE From BSIOTR college, Wagholi, Pune university, and have completed diploma in Polytechnic ,Navi-Mumbai ,MSBTE.



Ms.Rinku A. Badgujar received her M.Tech degree in Computer Science from Jawaharlal Nehru Technological University,Hyderabad.She has total 8 years of teaching experience. Currently she works as a Asst.Professor in JSPM'S BSIOTR Wagholi. She taught the subjects like Data Warehousing and Data Mining,Computer Graphics and Logic Design,Microprocessor and Interfacing Techniques etc.