

# GROCEROUS: A WEB BASED SOLUTION FOR DAILY GROCERY NEEDS

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## ABSTRACT

*This paper helps in presenting a great method to provide ease in online shopping and the sense of security in sense of money as well as for customer satisfaction while shopping offline. This paper is all about providing a human-centred approach for designing a ubiquitous computing system which aims at providing a better experience for shoppers at a supermarket and a comfortable way for a stress-free shopping experience, which reduces the problems involved in the usual way of shopping for both the customer and the retailer. The implementation is also provided with a user scenario in each phase which successfully contributed to the system design by giving a clear picture of user experiences. Along with this the customer would be informed about the best on-going offers in the shop. Different modes of payments are also available.*

**Keywords- Android, Ecommerce, Grocery, Market Place, Multi-vendor.**

## I. INTRODUCTION

At the current situation shopping is stressful and no comfort and ease involved in it. There are various factors to keep in mind when it comes to traditional way of shopping such as products search, billing and payment and most importantly searching for a good shop. This android application is developed in such a way that it can provide an interactive user environment and enhance the shopping experience. The recent development in Technological has provided and still developing to provide solutions to various departments and has resulted into a safe and comfortable environment to live in. When it comes to big supermarket, Concept stores like the Wal-Mart or Dmart which uses radio frequency identification tags (RFID), stores also have integrated self-checkout points to speed up the paying process while others integrate barcode scanners either at a common section or in separate shopping trolleys. Android is an operating system developed for smartphones and tablets. It is based on Linux kernel and uses Dalvik Virtual Machine (DVM) for executing Java byte code [1].

The technology keeps improving in the smart phones. From the last few years, the mobile phones capabilities have been improved rapidly. Mobile phones are multiprocessing so they can work fast as a computer [2]. With

the help of mobile payment, customer will speed up the transaction process and can check the balance, and if customer needed then add balance from their bank accounts. NFC (Nearest Field Communication) is used for the mobile transactions [3]. Earlier shopping was very much time consuming. The rapidly increasing use of online shopping reduced the load but still customer will prefer to buy product in supermarket to check the quality. In earlier the customers should wait in the long queue for the billing because cashier scans the barcode fetch product so it will take more time to generate the bill. Now a day every smart phone has facility of NFC reader. Most of the Smart phones are developed by the Android. It uses Dalvik Virtual Machine (DVM) for the execution of Java Byte Code [4].

## **II. LITERATURE REVIEW**

The retail industry has been advocating “Smart Shopping” for many years by adopting various technologies to enhance the shopping experience at the retail environment. The vision of smart shopping promises is to provide on-the-spot information about various discounts, schemes, etc. at your fingertip [6]

The advantages of mobile commerce are- • Customer satisfaction • Cost savings • New business opportunities • Time saving • Allow for considerable profit • Improvement of Customer relations

While coming across various technologies such as Online Shopping [5], where items are purchased online through various websites, the drawbacks encountered were –

• Fraud • Shipping cost • Deprives our Tangibility • Lack of Options

In traditional shopping method various difficulties faced are- • Long queues • Huge waiting time • Carrying heavy items home

Survey was conducted at three shops – • Star Bazaar • Mini Mart super bazaar

Issues- • Long queues • Barcode scanning for each item • Payment issues on a regular basis

This paper assumes that the application described would be a prototype that would shape the future & there still remains much to do in terms of development and improvement of the existing models. Applications created with ease of understanding and the design can be created and tailored to the shopping process to make it more effective and user friendly, thus making it easier & convenient for the users to do the entire shopping process with the use of this application [6]

## **III. DATABASE FOR ANDROID APPLICATION**

For Android Shopping application SQLite is the best choice to create databases, however other database can be chosen too. It is an in-process library that implements a self-contained, server-less, zero-configuration; transactional SQL database engine which does not requires any database setup or administration.

Mobile Shopping application has one SQLite database in the SD card. It has all the items in the table. It has following tables: [8]

1. *User table*: It contains the username and password.
2. *ProductMain table*: It contains all items available in store.
3. *Checkout and Cart table*: It manages the list of items user want to purchase.
4. *Offer and Promotion table*: It contains all the discounts/offers in the store.
5. *Similar product*: This table contains the records of related products.
6. *Locationmaster table*: It contains the location details of all items in the store.

Here the SQLite database is created and all the operations are done on table using java interface.

#### **IV. DESIGN AND IMPLEMENTATION**

Almost all the e-commerce website or mobile application structure are based on the given fig[1]. Here the user who wants to sell a product will refer to the administrator to post an advertisement. Following which the user will be paying for the shipping provider & database. The customer at the other end can see the products posted by the user & can we also see the details of the seller. Then the payment is done using one of the payment modes available on the application. Using this concept, we can bring in some security over the methods which are not using public & private options for the owner's details.[9]



## **V. TRADITIONAL TECHNIQUES VS GROCERIOUS**

### **In traditional techniques,**

1. The payment and billing system was in context with paper-pen based approach which requires lots time and high probability of human errors.
2. The customer has to wait for a long time for billing which itself is a drawback in terms of time.
3. There were many instances of customer missing many things present in the shop because of lack of proper item list.
4. Maximise the load of shop workers.

### **In Grocerous,**

1. The billing system is based on mobile application based approach which saves lots of time and minimizes the error.
2. This will actually avoid customer to stand in a queue for much longer period.
3. This app provides the shop list so that nothing can be missed by the customer.
4. Minimizes the load of shop workers.

## **VI. CONCLUSION**

This study helps in understanding the development of an interactive web page and the technologies used to implement it. The development of the project has given us a precise knowledge about how PHP is used to develop a website, how it connects to the database to access the data and how the data and web pages are modified to provide the user with an ecommerce application. This project helped us in gaining valuable information and practical knowledge on several topics like designing web pages using HTML & CSS usage, database connection using PHP, and management of database using MySQL. The purpose of this project was to develop a webpage/Application for Online grocery ordering systems in movie theatres. We learned how to test different features of a project also we learned PHP language in detail.

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