E-Services Based on Web-Utilities

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Abstract- *E-Commerce is now seen as a reality for several businesses and a traditional part of a business plan. The immediate benefits in terms of cost savings, efficiencies and enhanced profitability are clear at every stage within the supply chain. Adopting E-Business is not any longer a competitive advantage, but a traditional business process without which an enterprise is unlikely to survive within the new economy. The shopping cart is mainly useful for who haven't time to go to shopping, those will just enter into this mobile application and bought whatever they want. Even it is night or morning they can open this application and choose different categories items. After chosen items customer can bought into payment process are accepted in this application. Customer can happily shop at their rest place. This system allows you to skip the charges of service provider in the shopping system. Also, it has web and android application shoppers can use this app for their many more types of online shopping business. If middle man's charges are reduced due to this system the shopkeeper will be able to give more offers to their customers and will be able to grow their business more.*

Keywords- E-Commerce, E-Services, M-Commerce, Online Business, Android Based Smart Shopping, Online Store

I. INTRODUCTION

E-Commerce is a term for a business or business exchange that includes the change of data over the internet. Online business permits clients to electronically trade products and ventures with no boundary of time or distance. Customizable commerce mobile applications was developed and built getting to shorten the time to determine a online buying for seller and customer. The points of interest offered by E-Services are online shopping of anything whenever, employing a mobile device and at wherever, clients can discover the things on online based business which is not any accessible in physical markets, it decreases cost and time, without venturing out from home it can get our item at reception.

Practically everything accessible in the conventional market is accessible on the web. It can purchase products of the vegetables, grocery, apparel, fruits, stationery, electronic things like laptops, TV's, mobiles, home appliances, child care things, accessories, bags, etc. A few locales have

even empowered booking of bikes and cars online. It simply needs to present the subtleties and required records and the car will be conveyed at the doorstep.

Fig 1. Life Cycle

The rest of the paper is organized as follows, Section I contains the introduction of E-Services based on Web-Utilities. Section II deals with the related work consisting of the existing work. Section III deals with the proposed system. Section IV explains the methodology of our system. Section V describes the result and discussion. Section VI contains the recommended requirement (Hardware and Software Requirements). Section VII contains the conclusion and scope of our project and Section VIII concludes research work with features direction.

II. RELATEDWORK

Shaozhong zhang, dingkai zhang, haidong zhong, guorong zang author describes review information on an object is published and updated by a large number of consumers, and accumulated over time in to a multi classification data set with complex structure, diverse content, sentiments and emotions. This kind of data includes many types of information, including the user's evaluations, attitudes, and behavior's which are determined to certain things, such as events, commodities and services. It is very important to extract this valuable knowledge from this amount of data to provide valuable services for enterprises, institutions and individuals [1].

Liqun Wen, Jia Du, Jifan Ren, Yao Pan, has introduced the use of the Internet continues to grow, the trust in ecommerce has enhanced. But consumers are still worried about privacy and security issues compare to offline transaction, because the online suppliers are often invisible or even unknown. Consumers have to bear the risk of unacceptable quality of the products, or failure to arrive on time, or receive no product at all. Besides, if the seller is unable to protect the data, consumer's personal information and even payment information will be accessed illegally[2].

Rajesh Kannan Megalingam, Souraj Vishnu, Swathi Sekhar, Vishnu Sasikumar, Sreekumar S and Thejus R Nair, has described research on the India is among the largest marketing hub in the world. The production, as well as consumption in India, has increased drastically over the past few decades and it's very important that we provide consumers with the best experience. When it comes to shopping, people find it rather difficult and tiring to locate the products they wish to buy. Long and crowded billing counters make shopping a time consuming task. With the advancement in technology, mobile devices are not just tools for making calls or sending a message. They have become our communication hub, entertainment portal, our wallet and the gateway to real-time information designed to our needs[3].

III. PROPOSEDSYSTEM

The E-Commerce services is basically an android application in which all the features are provided to client in single application only. The term E-Services based on E-commerce are representing the E-Commerce android application where all features are present for the service providers who do not afford the costly software present in the market.
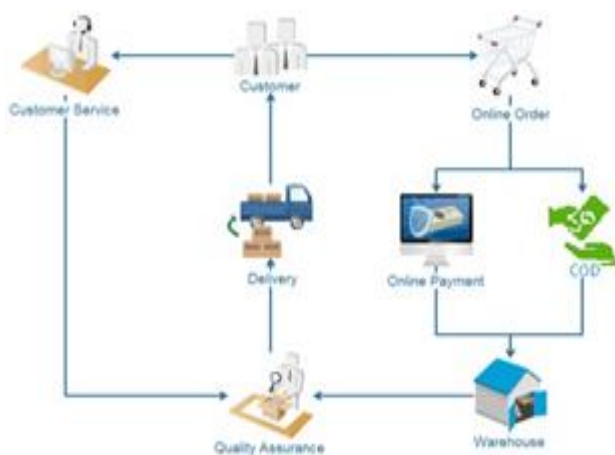

Fig 2. System Workflow

The purpose of the proposed system is to turn the existing system into the E-Service's that runs over the internet and it provides many more facilities to the service providers and their customers. Thus by making use of E-Commerce Android application and the admin panel can be accessed by the customers and service providers. So that users operate the android application and service provider manage all users by through admin panel using internet. Advanced GUI is used to make system more convenient. Data is made much more secure and advanced encryption algorithms makes passwords non accessible to even administrator for security concern. It can provide highly secure transactions and their details. Uses reliable payment gateway's for the users.

This system works on two modules. Android application for user and web application (admin panel) for store admin. Admin will add store information, products, services to web server by using web application (admin panel). Admin can send notifications to users by using Google firebase messaging service (FCM). Google firebase is a real time cloud hosted NoSql database that enables data to be stored and synchronize between users and web server in real time. The user will use the services provided by his/her application like select product, search product, add product to cart. After adding the products in the cart, he/she select the payment method and place the order. All users will pay and place orders by selecting the payment method as per their liking, convenience and available to them. Using Google firebase in this system will synchronize all the activity store and users in the database of webserver.

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IV. METHODOLOGY

Android application development supports the application resources externalization. This feature was exploited in this research to enable rapid commerce mobile application development and become the features of the customization web application. The web application will be used to modify the value of variables declared in application resources XML file and replace any files used in the mobile applications, such as logo images. After users finished the customization process, the developer will generate XML file that will replace similar files in the Android application project and recompile it to produce customized commerce mobile application installation file.
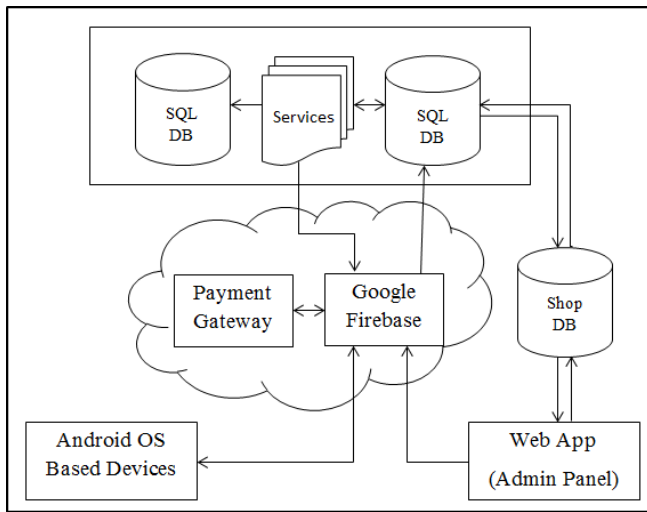
Fig 3. Block Diagram

The Google Firebase (middleware application) implements a web service application that uses JavaScript Object Notation (JSON), a lightweight data format, for the data exchange. This data format is platform free and easy to use in web service. To easily develop the web service, that framework that runs on PHP platform. The web service consumption process in the mobile application was helped by retrofit plugin that hid the complexity of connecting to web server, sending and fetching data from it.

V. RESULT ANDDISCUSSION

E-Services functionality was provided by installing a web application (admin panel) on a web server. The research suggested that mobile phones such as Android- based Smartphones were appropriate for installing the android application on them. The research also illustrated that using JSON-based web services promoted data communication between android app and the admin panel. The native support of JSON in JavaScript and it being comparatively lightweight was the significant reason why this report suggested JSON should be selected rather than the XML dataformat.

The actual Admin panel provided several web services but the research forwarded that these web services would not be feasible with every application. For instance, often there was an excessive amount of unneeded information on a products listing web service. For this reason and that of network latency, not only did an application hamper but in response to the JSON object. The processing of JSON in JavaScript was increased. The research also suggested that the required data like the ID, title, the short description and slug were obtained by overriding that particular webservice.

As the research elaborated, counting on the screen size of mobile phones, it was often the case that image sizes for the admin panel were either too large or too small. Fortunately, the paperclip library that's available within the admin panel was able to regenerate all the images after their smaller sizes were introduced. The research also suggested that for the UI components of a Smartphone, jQuery and jQuery Mobile should be employed. The research also illustrated the fact that no image was used for UI components but rather CSS3 features were used, making this library the preferred option. The research indicated that jQuery guidelines were used to create a robust code and jQunit, which is a jQuery-based unit testing library dedicated to unit testing. The research highlighted the fact that Android Smartphones followed a similar process. Android development and the IDE plug-ins had to be installed in this case. Ultimately, the research indicated that the Android emulator had to be utilized to compile and test the application. This was the process used to execute the application and ensure its success.

In figure 4 shows the admin panel login window and after successful login with cardinals he/she will get admin dashboard window displayed in figure 5.
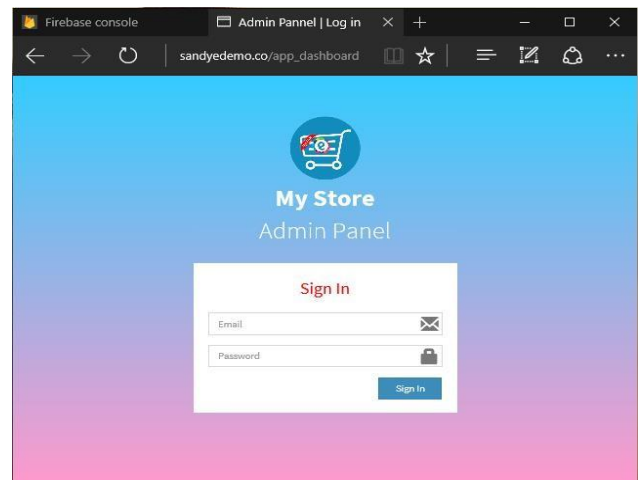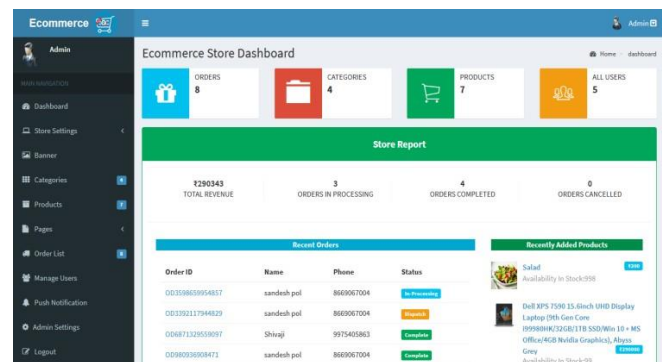

Fig 4. Admin Panel Login

Fig 5. Admin Dashboard

The android application was tested on different android smartphones. Figure 6 shows the signup and sign-inpage. Figure 7 shows the dashboard. The homepage is displayed in figure 8 and figure 9 shows the highly integrated payment method.
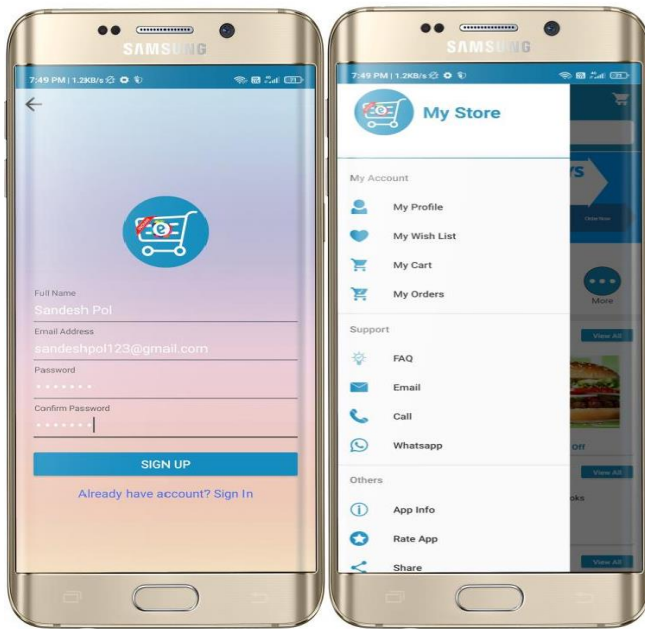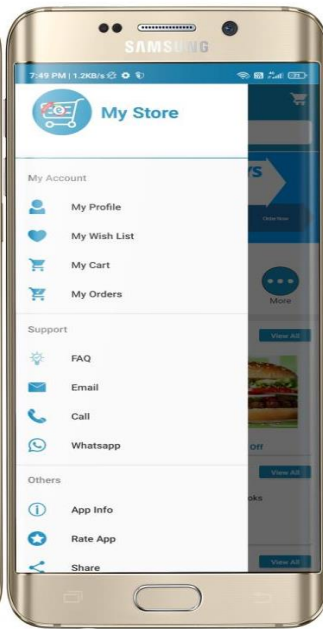

Fig 6. Login   Fig 7. Dashboard

Fig 8. Homepage   Fig 9. Payment

VI. REQUIRMENTANALYSIS

Hardware requirement specification:

1. RAM 4 GB(min)
2. HDD 80 GB(min)
3. 1280 x 800 Screen Resolution(min)
4. Android Smart Phone (v4.4 orAbove)
5. Internet

Software requirement specification:

1. Windows 7/8/10 32/64 BitOS
2. Visual StudioCode
3. PHP 7.2.5 orAbove
4. XAMPServer
5. Java Development Kit (JDK)7
6. Android Studio 3.1.2 orAbove
7. Web Browser

VII. CONCLUSION AND FUTURESCOPE

E-Services are widely considered the buying and selling of products over the web, but any transaction that's completed solely through electronic measures can be considered E-Commerce. In our routine life internet plays an important role. We use internet day by day nearly for each and every work. Before E-Commerce purchasing and selling were managed without internet physically in the business sectors however after the appearance of online based business in our life has become increasingly helpful on account of its number of points of interest. E-Commerce business of E-Services allow to any type of business exchange directed on internet. The most prominent case ofE- Services based on web utilities application based shopping, which is characterized as purchasing and selling of merchandise by means of the application on any smart mobiles. The points of interest offered by E-Services are online shopping of anything whenever and at wherever, clients can discover the items on online based business which is no accessible in physical markets, it decreases cost and time, without venturing out from home it can get our item athome.

Scope of application:

The basic functionality delivered by the application features main factors, product listing category wise and a product detail page. Two changes were made. Web applications (Admin panel) were modified in order to show complete data in our mobile application. The functionality needed in order that the mobile application can list products by requesting web services provided by the web application (admin panel) was added. The functionality of the mobile application was improved to show complete information on a product by requesting a second web-service from the web application(admin panel). Best practices were employed for making the user interface of the mobile application functional.

VIII. RESEARCH WORK WITHFEATURES

Our future works are aimed toward incorporating the subsequent features into the application. Beacon devices read the items in our wish-list or in our cart and that can send notification to smartphone if we go near physical retail stores. Role of Artificial Intelligence (AI) in E-Commerce will be inventible in the near future. Investors are on a quest to invest in innovative technologies. AI is one means to improvising E-Commerce. It is quite amazing to see it happening in real life. The scalability of the system is higher so in future if the system requires to expanding its range it can be done without more efforts.

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