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Online Sales System for Company

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ABSTRACT

A trading company needs an online sales system, which automatically interacts with a warehouse management system and user, we choose the electronic industries company as a case study. The main idea for the proposed system is, offering products to the consumer through the Internet, across Iraq. The company concept is that it not only sells products through the Internet and therefore got more money on salesmen and shops. As a result, it can offer the customer products at a very competitive price. The company has bought a number of warehouses in some of the cities in the Iraq. The customer will place an order through the online sales site, where the customers will have the option of ordering a product from many warehouse around Iraq, to ensure fast delivery a warehouse nearby should be selected. The company wants to save money when buying products, and therefore plan to have an effective system to manage orders and their warehouses. The products do not have to be ordered from the main suppliers if the product is available in another warehouse. Products can be exchanged between warehouses and savings can be achieved by buying large amounts of products simultaneously. Last the company wants to be able to update and register products, product information and orders, for customer and administrative usage.

Keywords: Online Sales System, E-Commerce and Online Advertising.

1. INTRODUCTION

In today's modern world when we plan to develop a software application a lot of acronyms come into our mind. It is very hard to decide which technology to choose for building an application which best meet the business goals keeping in view other factors like development cost and reliability [1]. While cost is a very significant factor but most important is the reliability of system [2]. A system which involve cheap development cost but do not meet the business goal may not be a good choice.[3] So the system stability should be the first priority for any company deciding to launch their business on the World Wide Web where survival is only for fittest. So for this web shop the same thinking was in my mind to develop the system by using such technologies which are the best meeting the challenges of cost and stability.[4] So the technologies used for this web application are PHP, MYSQL, HTML, and CSS. The overall business logic was implemented using PHP. MYSQL was used to provide the database functionality in the system to store user's data including their account details order details and overall history of their buyings.HTML and CSS were used to design the front end of the system. These are the market proven technologies for building the attractive and reliable web application all over the world [5].

2. E-COMMERCE

E-commerce is a deal of buying or selling online. Electronic commerce point on technologies such as mobile commerce, electronic money transfer, suppliers management, Internet marketing, online dealing processing, electronic data Interchange (EDI), inventory management systems, and automated data collection systems. Modern electronic commerce usually uses the World Wide Web for at least one part of the transaction's life cycle although it may also use other technologies such as e-mail [6].

E-commerce businesses may employ some or all of the following:

- Online shopping web sites for retail sales direct to consumers.

- Business-to-business buying and selling.
- Gathering and using demographic data through web contacts and social media.
- Marketing to prospective and established customers by e-mail or fax (for example, with newsletters).
- Engaging in retail for launching new products and services [6].

3. DATABASE MODELING

1- Relational model: it's Depends on a specific relationship between data elements, such as the value of a component based on the summation of two elements, it is the most successful structure applied in the database world because it gives a variety in the type of relationship between the data; because the implementation of the relationship is greater than any other model. [7].

2- Non-relational model: A large table containing all the data is created, as a single sheet.

3- Hierarchal model: The sequence of the origin or the root takes place. This system begins to branch in the form of sections. Its function is to access the data in a sequential and branching manner. It may be from the top down or from the bottom up, such as one parent with several children [8].

4- Network model: This type of database appears after the hierarchical databases were known, but there is a possibility that the data will be linked to several children with several parents and vice versa [9].

4. PROPOSED SYSTEM

The state of problem is to provide system offer products to customers across Iraq and provide delivery process to user house as shown in figure (1)

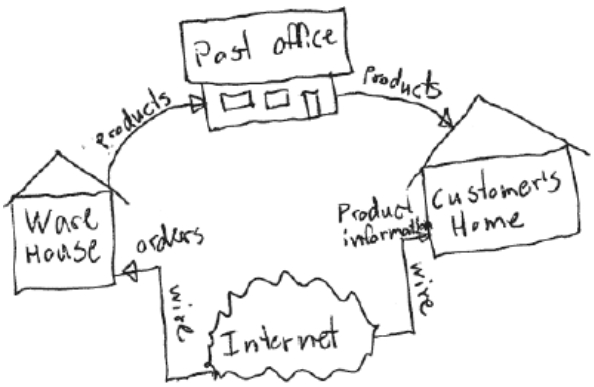

Figure (1) system problem domain

An online sales system, which consists of a web shop and an application for handling orders for numerous warehouses. The web shop will run on any ordinary web browser, where customers can browse through categories and products, and place orders. The web shop furthermore includes a track and trace system, which enables a customer to follow the progress of his/her orders.

The application for the warehouses enables the warehouse employees to process orders simple and efficient. The system will automatically keeps track of orders and products in the warehouses, and notifies when product counts are running low.

In the system we have two types of clients. One client is used for all the customers using the web shop, while the other is meant for the warehouses. The web shop is on the server-side, and uses the UIS (User Interface System) component to generate the web pages, that makes up the actual UI (User Interface) shown on the web shop client. So the customer's web browser only produces an user interface from the HTML documents, which the browser gets from the server. We like this choice, since it makes it unnecessary for the customer to install JRE on the computer. The UIS for the warehouses client simply uses javax.swing for the UI. Figure (2) show the structure of the company system.

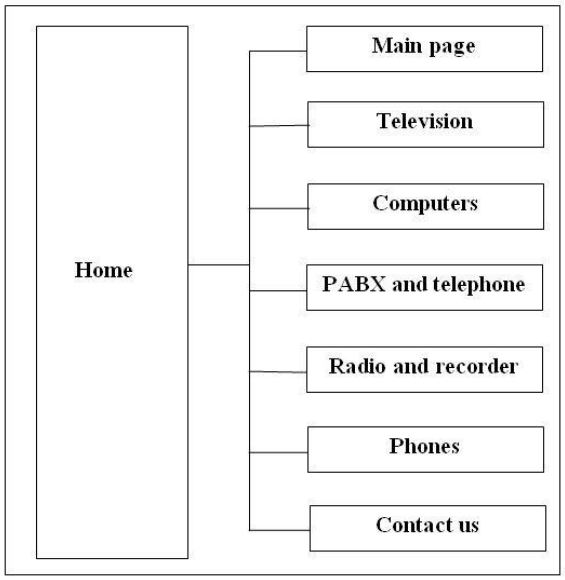

Figure (2) company structure

The system has three actors, the customer, warehouse employee, and a ware-house secretary. The customers can use the system to register themselves, order products and later on follow the orders via the track & trace service. The system automatically informs the warehouses about new orders, where the employees have the ability to process the orders. Automatically the sys-tem also monitors the warehouses to make sure the product quantity is not running low. The secretary's job is to update information about warehouses, products and warehouse employees. Figure (3) describes all use cases for every actor in the system. However the actors work in different domains, so the use cases have to be put into groups in order to specify what functionality is needed in each domain. The customer will probably be sitting at home and using a web browser, while the warehouse worker and secretary will be in a warehouse and using an application to interact with the system.

The grouping of the use cases is shown in figure 3. It shows that the customer takes part in all the use cases in the web shop, and the warehouse secretary and warehouse worker take part in each their use cases in the warehouse

application. We could have chosen to make a web page where the warehouse worker and the warehouse secretary could login and do their tasks; however for security reasons it seemed more convenient to separate them. So despite having a web shop, we also create a warehouse application.

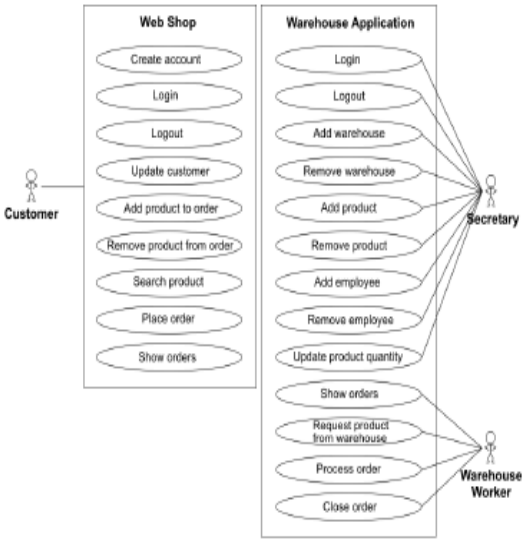

Figure (3) Grouping of use cases

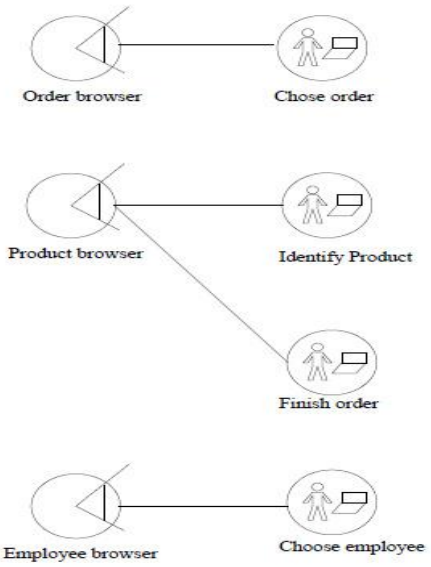

Figure (4) Interaction model for process order

5. USE CASES

In figure 4 we have the process order interaction diagram. From this diagram it can be seen that system will separate this use case into three different windows. The first will be an order browser that lists the different orders and the next will be a product browser that lists which items an order contains. If a warehouse receives a large amount of orders the data quickly becomes unclear, by doing the above mentioned we distribute the output and clarify the data. The last screen will appear when an order is finished and will prompt the user to enter his or her name. It will

be placed as a separate screen appearing every time a user finishes an order. In this way the user cannot accidently forget to put his name on a processed order.

The dialog-model in figure 5 shows the order in which the tasks must be completed. The first thing a user does is to choose an order. After this the user will be taken to a screen that displays the order, and here he will identify and find each product in the order. When he has found all the items he will finish his order and put his name on it.

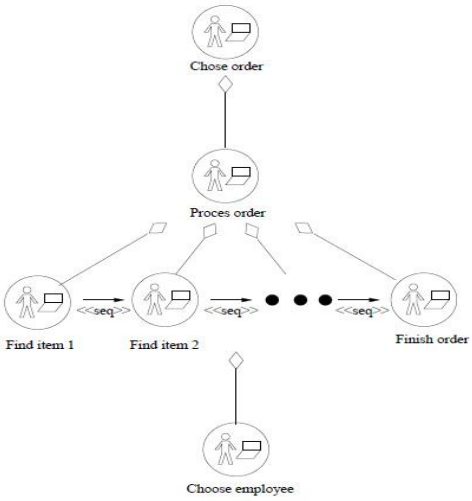

Figure (5) Dialog model for process order

In figure 6 we have the corresponding interaction diagram for this use case. We have chosen to display the available information and functions in three screens. The first screen will be the log in screen. If the user has not already logged in when the place order button is pressed he will be presented with the login screen. A log out button will appear when the user is logged in and is visible at all times for log out. The second screen will display all information about an order so the user can review it and change it if necessary. In this way an user can get a complete overview of his or her order without thinking about changing screens or other unnecessary tasks. The last screen will only show the created invoice for the order so the user gets confirmation on his order. Here he will have the ability to print out the invoice.

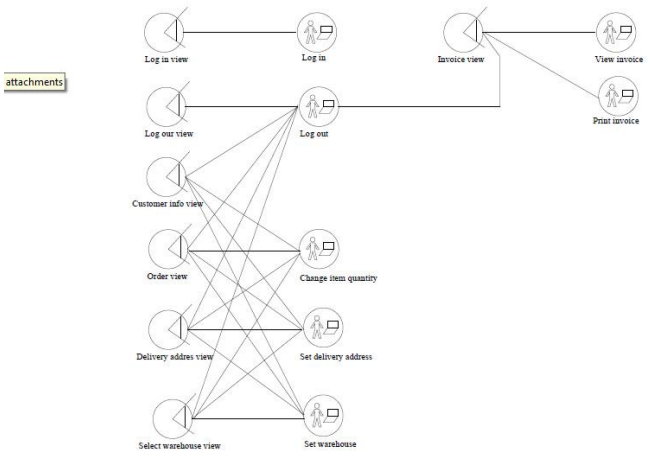

Figure (6) Interaction model for place order

The dialog model, seen in figure 7, is for this use case a little challenging because the user has a lot of optional choices and the ability to log out whenever he or she wishes, but the general dialogue is that the user logs in, he presses place order then accept order, and then logs out.

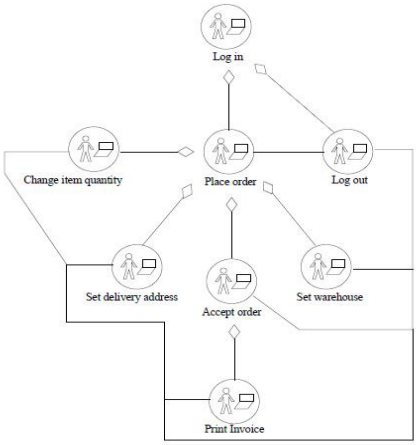

Figure (7) Dialog model for place order

6. CONCLUSION

Electronic Industries Company is a company dealing with different type of electronics products like TV, mobile phones, air conditioning and others. The management of company planned to launch the business over the web to attract more customers worldwide. Previously Electronic Industries Company had a static website which was not able to meet the new business requirements so an online shop system is developed to carry out the business tasks. The newly developed web system is based on modern web technologies and it is secure, user friendly and has a lot of features. Through this system customers can buy products online and make payments electronically. This new system is very easy to manage and has ability for administrators to manage products and add new products easily.

REFERENCES

[1] Chittil, Shibin, Nidheesh Chittil, and MR RISHIKESE. "Online Shopping System." (2014).

[2] "Shop Direct celebrates 20 years of online shopping". Shopdirect.com. 2014-08-11. Retrieved 2016-12-12.

[3] Doherty, N.F.; Ellis-Chadwick, F.; Hart, C.A. "Cyber retailing in the UK: the potential of the Internet as a retail channel". International Journal of Retail & Distribution Management. 27 (1): 22–36.

[4] Rohm, Andrew J; Swaminathan, Vanitha (2004-07-01). "A typology of online shoppers based on shopping motivations". Journal of Business Research. Marketing on the web – behavioral, strategy and practices and public policy. 57 (7): 748–757.

[5] Waldon, John (March 2015). "The Digital High Street 2020" (PDF). Department for Communities and Local Government. Retrieved 12 December 2016.

[6] 1982 Videotex Communications, Collected Papers Aldrich Archive, University of Brighton December 1982.

[7] 1980 TV paves the way for Information Brokerage, Minicomputer News p. 12 London May 1980, the most comprehensive report of the March 1980 Press Conference launching the Redifon R 1800/50 computer system. Is 'Information Brokerage' aka 'browser industry'?

[8] 2011 M. Aldrich 'Online Shopping in the 1980s' IEEE 'Annals of the History of Computing' Vol 33 No4 pp57-61 October–December 2011 ISSN 1058-6180.

[9] Hopson, David B., and Kemberly S. Keys. "Online shopping system." U.S. Patent No. 7,590,567. 15 Sep. 2009.