

Securing The User Credential In E-Commerce Application Using Laravel Framework

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Abstract- *The Internet is the global system of interconnected computer networks that uses the Internet protocol suite to communicate between networks and devices. E-commerce (electronic commerce) is the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the internet. E-commerce Security Risks Currently Faced by Online Retailers. Online retailers are most likely to face credit card fraud or data errors. Their online stores are also likely to face phishing attacks, distributed denial of service (DDoS) attacks and man-in-the-middle attacks. Laravel is a popular development platform that is well known for performance, It already has a robust user authentication process . Laravel offers several packages to enhance the security of its applications. Laravel security component mainly provides security for the roles/objects and integrates Symphony security core in Laravel. It uses voters to check role based privileges to different roles, so could validate its sec*

I. INTRODUCTION

E-commerce is the activity of electronically buying or selling of products on online services or over the Internet. It draws on technologies such as mobile commerce, electronic funds transfer, supply chain management, Internet marketing, online transaction processing, electronic data interchange (EDI), inventory management systems, and automated data collection systems. E-commerce provides business transactions occur either as business-to-business (B2B), business-to-consumer (B2C), consumer-to-consumer or consumer-to-business. In E-Commerce ,Customers can spend less time shopping for what they want. They can easily browse through many items at a time and buy what they like. When online, customers can find items that are available in physical stores far away from them or not found in their locality. It include helping one to choose from a wide range of products and get the order delivered too.

Searching for an item, seeing the description, adding to cart – all steps happen in no time at all. In the end, the buyer is happy because he has the item and didn't have to travel far. Sellers don't have to spend a lot of money to promote their items. The world of ecommerce has several affordable, quick

ways to market online. Ecommerce marketplaces are visual channels – and sellers can really show off their product.

II. SYSTEM ANALYSIS

The Existing System

The existing system i.e., classifieds and yellow pages system works by manually supplying information regarding an Advertisement to be placed in the media (say Newspapers, magazines etc.)which must be checked thoroughly before given for final print.. The existing system has got lot of intricacies within itself and need lot of human effort and paper works. All above the data need to be maintained properly and maintaining this is a tedious and risky process as a small printing error may completely change the sense of the Advertisement. Moreover to view a data or to keep a record of a particular Advertisement may need lot of paper to be searched.

Web scroll to thread the data in secure to the cloud computing E-commerce application. The security framework for used for e-commerce application is Public Key infrastructure. The exchange of data ,information and message via the internet takes place in PKI through key pair private key and public key. PKI can be an expensive overhead, and while it can be outsourced, time-consuming and costly. In applications where needed to work with large quantities of encrypted data on a regular basis, the computational overhead meant that public key systems could be very slow.

The Proposed system

Laravel is a free, open-source PHP web framework, intended for the development of web applications following the model–view–controller (MVC) architectural pattern and based on Symphony. Some of the features of Laravel are a modular packaging system with a dedicated dependency manager, different ways for accessing relational databases, utilities that aid in application deployment and maintenance, and its orientation toward syntactic sugar. Web application has implemented in layered structure based on the Laravel Framework. The first layer contains a Laravel core component

extension and Framework. The Second layer contains Laravel label extension and persistence layer of a database. The third layer contains a batch query for analysis page and common data persistence. Laravel can define a large amount of data for the business purpose. The system has greater accuracy and efficiency. This takes only limited time for retrieval of desired result from the user. It can be used to maintain efficiently the postings and retrieval of any type of Advertisement posted by a Poster. IT is also useful and helpful in checking out different Advertisements by a Viewer so that he/she can easily categorize and select the appropriate AD for him/herself depending on the requirement and his/her choice. He/she can also create his/her mail account using my system. Since my system is allowing Banner Advertisements to obtain revenue out of it, a user can post his/her company's or firm's Advertisement using my system. Pop-up menus to carry out transactions for a new user, and for other alert messages. Timely Report generation. Cloud hosting allows you to build e-commerce as quickly as your business grows. The scalability of the cloud perfectly complements the needs of the retail sector.

III. SYSTEM REQUIREMENTS

Introduction

Software requirement specification (SRS) is the starting point of the software development activity. Little importance was given to this phase in the early days of software development. The emphasis was first on coding and then shifted to design.

As systems grew more complex, it became evident that the goals of the entire system cannot be easily comprehended. Hence the need for the requirement analysis phase arose. Now, for large software systems, requirements analysis is perhaps the most difficult activity and also the most error prone.

The SRS is a means of translating the ideas in the minds of the clients (the input), into formal document (the output of the requirements phase). Thus, the output of the phase is a set of formally specified requirements, which hopefully are complete and consistent, while the input has none of these properties.

Non-functional requirement

System Requirements

Operating System: Window

Technology : Java and J2EE Web Technologies: Html, JavaScript, CSS IDE : My Eclipse
Web Server : Tomcat
Database : Oracle
Java Version : J2SDK1.5

Hardware requirements:

Hardware : Pentium
RAM : 1GB

IV. SYSTEM DESIGN

ER diagram

Data Flow Diagramming is a means of representing a system at any level of detail with a graphic network of symbols showing data flows, data stores, data processes, and data sources/destination.

The data flow diagram is analogous to a road map. It is a network model of all possibilities with different detail shown on different hierarchical levels. This processes of representing different details level is called "leveling" or "partitioning" by some data flow diagram advocates. Like a road map, there is no starting point or stop point, no time or timing, or steps to get somewhere. We just know that the data path must exist because at some point it will be needed. A road map shows all existing or planned roads because the road is needed.

Details that is not shown on the different levels of the data flow diagram such as volumes, timing, frequency, etc. is shown on supplementary diagrams or in the data dictionary. For example, data store contents may be shown in the data dictionary.

Data Flow Diagram (DFD) uses a number of symbols to represent the systems. Data Flow Diagram also known as 'Bubble Chart' is used to clarify system requirements and identifying the major transformations that will become programs in system design. So it is the starting point of the design phase that functionally decomposes the requirements specifications down to the level of details.

Feasibility analysis

The key consideration in feasibility analysis are :

1. Economic Feasibility
2. Technical Feasibility
3. Operational Feasibility

Economic feasibility

It looks at the financial aspects of the project. It determines whether the management has enough resources and budget to invest in the proposed system and the estimated time for the recovery of cost incurred. It also determines whether it is worth to invest the money in the proposed project. Economic feasibility is determined by the means of cost benefit analysis. The proposed system is economically feasible because the cost involved in purchasing the hardware and the software are within approachable. The personal cost like salaries of employees hired are also nominal, because working in this system need not required a highly qualified professional. The operating-environment costs are marginal. The less time involved also helped in its economic feasibility. It was observed that the organization has already using computers for other purpose, so that there is no additional cost to be incurred for adding this system to its computers. The backend required for storing other details is also the same database that is Sql. The computers in the organization are highly sophisticated and don't needs extra components to load the software. Hence the organization can implement the new system without any additional expenditure.

Technical Feasibility

It is a measure of the practicality of a specific technical solution and the availability of technical resources and expertise. The proposed system uses Java as front-end and Oracle 8.0 as back-end tool. Oracle is a popular tool used to design and develop database objects such as table views, indexes. The above tools are readily available, easy to work with and widely used for developing commercial application. Hardware used in this project are- p4 processor 2.4GHz, 128 MB RAM, 40 GB hard disk, floppy drive. These hardware were already available on the existing computer system. The software like Oracle 8i, Weblogic Server, Thin Driver, JDK, JSDK, J2EE and operating system WINDOWS-XP' used were already installed On the existing computer system. So no additional hardware and software were required to purchase and it is technically feasible. The technical feasibility is in employing computers to the organization. The organization is equipped with enough computers so that it is easier for updating. Hence the organization has not technical difficulty in adding this system.

Tools Used:

1. J2EE Library
2. J2SDK 2.0
3. JDK 1.2
4. WebLogic 8.1
5. Oracle 8i.

Operational Feasibility

The system will be used if it is developed well then be resistance for users that undetermined. No major training and new skills are required as it is based on DBMS model. It will help in the time saving and fast processing and dispersal of user request and applications. New product will provide all the benefits of present system with better performance. Improved information, better management and collection of the reports. User support and User involvement in the building of present system is sought to keep in mind the user specific requirement and needs. It will have control over their own information.

Important information such as pay-slip can be generated at the click of a button. Faster and systematic processing of user application approval, allocation of IDs, payments, etc. used had greater chances of error due to wrong information entered by mistake.

Behavioral Feasibility

People are inherent to change. In this type of feasibility check, we come to know if the newly developed system will be taken and accepted by the working force i.e. the people who will use it.

V. DATA FLOW DIAGRAM

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Terms in Data flow Diagram**Process**

A process transforms data values. The lowest level processes are pure functions without side effects. An entire data flow graphics high level process.

Data flows

A data flow connects the output of an object or process to input of another object or process. It represents the intermediate data value within a computation. It is represented by an arrow and labeled with a description of data, usually its name or type.

Actors

An actor is active object that drives the data flow graph by producing or consuming values.

Data store

A data store is a passive object with in a data flow diagram that stores data for later access.

External Entity

A rectangle represents an external entity such as a librarian ,a library member

Output Symbol

This box represented data production during human computer interaction

VI. MODULES AND DESCRIPTION MODULES

User module
Administrator module
Advertisement module.

User module

A user must be registered with the system to avail the services. A user can either purchase or sell a product through the system. A user can view the details of a specific display item and is allowed to contact the owner of that item.

Login

In this module Poster enter the User id and password is checked and only valid user and password will get entry into member's zone.

This is a security feature to avoid entry of unauthorized users.

Registration Process

Through this module new posters can registered them. After giving their details, they will get a user id and password. Then to get entry into poster section they need to provide this id and password and only poster with valid id and password will get entry into poster zone. This is also a security feature to avoid entry of unauthorized user.

Log Out

To provide functionality to logout your id and return to home page.

Administrator module

This module provides administrator related functionalities. Administrator can add, delete, edit and view the details of advertisements and classifieds. Administrator will moderate the system and can allow or ban the users.

The eCommerce administration modules are used to administrate products, prices, orders, offers, invoices, customers, financials and product packaging. The modules can be freely placed and used together to define multiple eCommerce solutions. Below is a list of the eCommerce administration modules with a short description.

Order administration

This module presents a table view of orders and provides a merchant with all needed tools to administrate orders, offers and invoices. The order administration module contains search options like search by customer, order id, price and order states to filter the order list.

Invoice and offer administration

Enables a merchant to review, create and change invoices and offers online. This module implements merchant and customer addresses, company information, order lines, shipping and payment calculations, additional order lines and more.

Label and envelope administration

This services enables a merchant to create and print labels and envelopes. The label wizard contains settings to print single labels and label sheets.

Order state administration

Review and change order states like order placed, paid, shipped, offer request, offer rejected, offer accepted, offered, backorder, cancelled, failed, new and order template.

Notifications and emails

The order administration module posts notifications to customers when order states have been changed, furthermore a merchant can post shipping tracking codes and customer emails.

Product administration

Because Xsdot products and prices are place-able in a hierarchical tree it can be sometimes difficult to get a global view of the implemented products as they are scattered in the ecommerce application. The solution to this problem is the Product administration module, it displays all products and prices in a table view. The product administration module implements product search and order options and enables a merchant to edit products and prices directly in the table.

Customer administration

Enables a merchant to create and administrate customer addresses and customer account settings. Multiple customer groups can be implemented and used in the order and other administration tools.

Financial administration

This is a stripped down module of the order administration module specifically developed for the use by financial administrators.

Package administration

Enables a package manager to review order packages and print out package papers, envelopes and labels.

Advertisement module.

This module maintains all advertisements posted by the users and authorized by the administrator. The validity and duration of a classified depends on the administrator. The advertisements and classifieds can belong to categories such

as education, rental, real estate, vacancies, cinema, cars, matrimonial etc.

Using Blade Templating engine and it uses the blade.php file extension and are typically stored in the resources/views directory. file extension

An advertising model involves posting web ads onto websites. These ads are targeted for consumers. For example, DoubleClick's DART for Advertisers provides a way to manage online advertising, serving and reporting.

A business users use DART for Advertisers to manage multiple digital advertising campaigns, such as targeting a campaign to publish ads through channels like Yahoo. Serving refers to a server that posts ads in appropriate locations, and reporting refers to providing performance information back to an advertiser. With reports, an advertiser can decide which ads are having the most success, such as getting clicked on the most by online consumers.

Poster

Through this module a poster can post a new ad, update ad details. He can update including user name and password and search and shortlist the Viewers, check the status of advertisement's response. He can reply to the viewers In short this module deals with the whole advertisement process.

An advertisement (often shortened to advert or ad) is the promotion of a product, brand or service to a viewership in order to attract interest, engagement and sales.

Advertisements come in many forms, from copy to interactive video, and have evolved to become a crucial feature of the app marketplace.

VII. IMPLEMENTATION

Introduction

System implementation is the stage when the user has thoroughly tested the system and approves all the features provided by the system. The various tests are performed and the system is approved only after all the requirements are met and the user is satisfied.

The new system may be totally new, replacing an existing manual or automated system, or it may be a major modification to an existing system. In either case, proper

implementation is essential to provide a reliable system to meet organizational requirements.

Successful implementation may not guarantee improvement in the organization using the new system (that is a design question), but improper will prevent it.

Implementation is the process of having systems personnel check out and put new equipment into use, train users, install the new application and construct any files of data needed to use it. This phase is less creative than system design. Depending on the size of the organization that will be involved in using the application and the risk involved in its use, systems developers may choose to test the operation in only one area of the firm with only one or two persons. Sometimes, they will run both old and new system in parallel way to compare the results. In still other situations, system developers stop using the old system one day and start using the new one the next.

The implementation of the web based or lan based networked project has some extra steps at the time of implementation. We need to configure the system according the requirement of the software.

For the project we need to install and configure Weblogic server 8.1 , database server, and the deployment directory for the project.

Aspects of Implementation

The two aspects of implementation are:

- Training Personnel
- Conversion Procedures

Training Personnel

Even well designed and technically elegant systems can succeed or fail because of the way they are used. Therefore the quality of the training received by the personnel involved with the system in various ways helps or hinders, and may even prevent, the successful implementation of an information system.

Since, Human Resource Recruitment Process is web-based and user friendly, not much effort was required in training process.

Conversion Procedures

Conversion is the process of changing from the old system to the new system. There are two methods of handling systems conversion:

- Parallel Run
- Immediate cut-off

Parallel Run

In this approach, the old system and the new system are used simultaneously for some period of time so that the performance of the new system can be monitored and compared with that of the old system. Also in case of failure of the new system, the user can fall back on the old system. The risk of this approach is that the user may never want to shift to new system.

Immediate cut-off

In this method, the use of the old system ceases as soon as the new system is implemented and bought in to palace. The old system becomes redundant from the day of implementation of the new system. There is the high risk involved in this approach if the new system is not tested rigorously. This is because of the fact that if the new system fails, then there will not be anything to fall back upon. The advantage of this approach is that both the systems need not be used simultaneously.

Implementation Tools

The project was implemented using Java server pages, HTML, Java beans. The implementation work was carried out in Windows XP/2000 server platform.

- 1) J2EE
- 2) Weblogic 8.1
- 3) Oracle 8i

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