Online Library Management System

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Abstract

The objective is to develop a web-based library management system based on HTML and PHP, MySQL in order to reduce the cost of management and make it convenient for the user. The web-based library management system includes the most popular components a common library management system has, administration, book seeker, leasing and e-mail. Besides, it has more humanistic functions such as library dues tracking. The website will be tested on some of the most popular browsers. The basic functions of Internet Information Services 7.5 and detail features of HTML and PHP were selected for the purpose of this project. The system and development tools are chosen based on their specific features that benefit the system. The first result of this study is an understanding of the advantages of HTML and PHP benefited a large project. The second result was building practical HTML and PHP projects based on a web server. The understanding of the development tools directly affected the quality of the website. The website of this project offered a high performance, secure, stable and an easy-to-maintain environment. In addition, the website will provide smooth link for attendance enquiry for the students on any kind of operating system. This website will mainly provide the overview of Central Library, library dues information, availability of books, list of books issued.

Keywords: Library management, Database, Web server.

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1. Introduction

Library Management System is an application which refers to library systems which are generally small or medium in size. It is used by librarian to manage the library using a computerized system where he/she can record various transactions like issue of books, return of books, addition of new books, addition of new students etc. Books and student maintenance modules are also included in this system which would keep track of the students using the library

and also a detailed description about the books a library contains. With this computerized system there will be no loss of book record or member record which generally happens when a non-computerized system is used.

2. Literature Survey

Many of the early LMSs used their own specially developed operating systems. However, during the 1990s many suppliers moved to developing systems that ran on the UNIX operating system. Similarly many of the early LMSs were designed around specially developed database management systems. During the 1990s there was a move away from these to industry standard relational database management systems such as Ingres (used by Galaxy 2000), Informix (used by Unicorn), Oracle (used by ALEPH and Olib) [1] and Sybase (used by Horizon and Talis) [2]. Another technological development of the 1990s was the adoption of the client-server architecture. In this model a split is made between the applications software (which runs on a computer known as the client) and the database software (which runs on a computer known as the server). The two communicate with each other over a network using a communications protocol (or set of rules). Processing which involves data manipulation or aspects of screen display can be carried out on the client computer and only database queries from the client and responses from the server need to be communicated across the network.

3. Methodology

An important aspect of modeling is its role as a communication tool in determining requirements. For users what they require, and is the current system satisfying their requirements. As we go through the project, we find out three types of user in this project. They are student, teacher & library supervisor. We visit them in different time to collect their requirements. Though all of the requirements are not same but we tried out to make an interface among their requirements. The project life cycle includes various development phases that occur in the life of project starting right from the inception of the project its final development at the client's end. The three development phases in a project life cycle are project initiation, project execution, project deployment.

(a) Project initiation

The project initiation phase is first phase of life cycle. This phase involves creating a complete plan for the project, specifying various activities that will be performed and assigning responsibilities to team members on the basis of their skill set [2].

(b) Project execution

After the project plan is made and the responsibilities assigned, the actual development of the project starts. The phase in which the actual development of the project takes place is known as the project execution phase [3]. This is the most crucial phase of any project and is subdivided into the following phases i.e. System analysis (Initial study, Information gathering, Feasibility study), System design (Design standard, High level design & design tools, Database design, Logical design), System implementation (Integration & testing, Post implementation) [4].

(c) Project development

After the project execution phase, the final phase of a project life cycle is the project development phase. This phase deployed at the client side. This phase also involves providing

customer support to the client for some specified period of time [5]. When project is built it may possibly remain error les of more, because several type of modification can take place several times. So for the very first time when we run the database web site we found few problems in tools potions. We fixed this problem including some minor problems immediately, and afterwards the application runs properly [6].

(d) Feasibility study
Feasibility study is the preliminary investigation into the system to evaluate the possibility of a computer system and estimate costs and benefits where quality and time also involve. This is the most effective method of solution [7]. Feasibility and risk analysis are related in many ways. If project risk is great, the feasibility of producing quality software is reduced.

4. Results
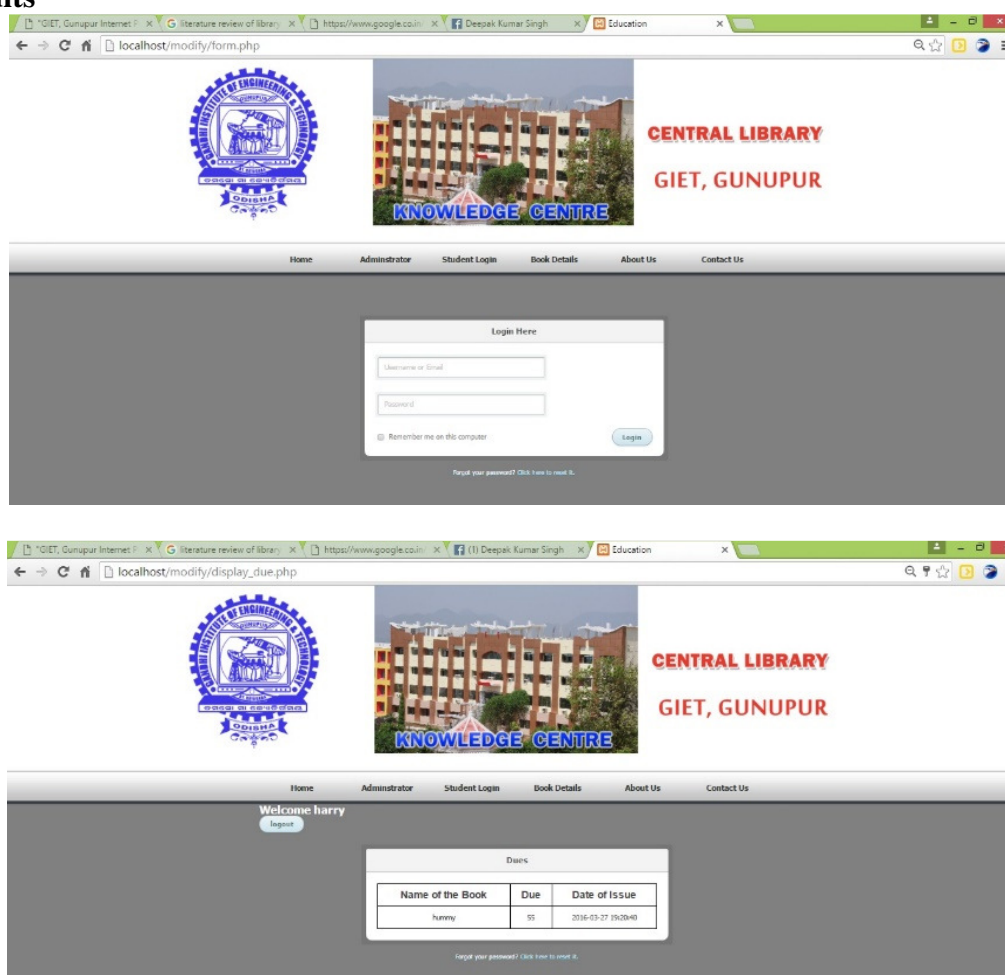
5. Conclusion
This library management system has been computed successfully and was also tested successfully by taking "test cases". It is user friendly, and has required options, which can be utilized by the user to perform the desired operations. The software is developed using HTML & PHP as front end and MySQL as back end in Windows environment. The goals that are achieved by the software are: Optimum utilization of resources, efficient management of records,

simplification of the operations, less processing time and getting required information, user friendly, and portable and flexible for further enhancement.

6. Future Scope

It is not possible to develop a system that makes all the requirements of the user. User requirements keep changing as the system is being used. Some of the future enhancements that can be done to this system area the technology emerge; it is possible to upgrade the system and can be adaptable to desired environment. Based on the future security issues, security can be improved using emerging technologies and also sub admin module can be added.

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