Open Source Business Solutions: A Case Study and Application of SQL & PHP

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PHP (PHP: Hypertext Preprocessor) is a powerful scripting language that is designed to allow web developers to quickly and easily create dynamic web sites. PHP is among the most widely used scripting languages on the web. It is often used to create web-based database front-ends to simplify database administration. Many business problems can be addresses effectively and efficiently using open source solutions based on PHP and SQL. The three characteristics of PHP that make it a highly desirable choice for many web developers follow:

1) It is a free, open-source project
2) It is a server-based scripting language
3) PHP's relative ease of use

When PHP is combined with HTML (Hypertext Markup Language) and an SQL (Structured Query Language) based database, the possibilities are nearly endless for professional web developers. One popular application based on PHP and SQL is trouble-ticket software for help desk or problem tracking. The final paper will focus on the benefits, problems and requirements for successfully implementing a PHP driven front-end to an SQL database; specifically a database designed to track help desk trouble tickets. This paper will allow us to better understand the challenges and opportunities facing a business when implementing an open source system.

HISTORY OF PHP

PHP was created in the fall of 1994 by Rasmus Lerdorf. Initially, Rasmus designed PHP to create a simple page counter and track who was viewing his online resume. The initial public release (known then as Personal Home Page Tools) was made available in 1995. This version of PHP consisted mainly of a simple parser engine that understood a few special macros. Also included were a guestbook and visitor counter. The parser was rewritten in mid-1995 and renamed PHP/FI Version 2 (Personal Home Page tools/Form Interpreter). Rasmus combined the Personal Home Page tools scripts with a Form Interpreter and added mSQL support to create PHP/FI.

The next major revision of PHP was PHP 3.0. PHP 3.0 was created by Andi Gutmans and Zeev Suraski in 1997 as a complete rewrite of PHP/FI. In an effort to cooperate and start building upon PHP/FI's existing user-base, Andi, Rasmus and Zeev decided to cooperate and announced PHP 3.0 as the official successor of PHP/FI 2.0.

The current version of PHP is PHP 4.0, officially released in May 2000. This most recent version of PHP improved performance of complex applications and improved the modularity of PHP's code base. PHP 4.0 also includes support for a wider variety of Web servers, HTTP sessions, output buffering, more secure ways of handling user input and several new language constructs.

BUSINESS SOLUTIONS USING PHP AND SQL

Many business problems can be addresses effectively and efficiently using open source solutions based on PHP and SQL. One of the more popular applications developed using PHP and SQL is a shopping-cart system for eCommerce sites. Product information is pulled from a database, then parsed using PHP script to compute quantities, order totals and update inventory records.

Another popular application is trouble-ticket software for help desk or problem tracking. A trouble-ticket solution will be the main focus of the final report. I plan to investigate the hardware and software requirements needed to implement such a system. I will focus on both the technical needs of such a system, as well as the general usability of the system. This process of evaluation will allow us to better understand the challenges facing a business when implementing an open source system.

PROS AND CONS

The final paper will deal with the many of the challenges and opportunities facing a business developing and implementing a PHP and SQL application. Among the opportunities are low-cost or no-cost solutions to complex business problems. Because PHP and SQL are both open-source projects, the initial cost to business is essentially free. Another opportunity that exists is the ability of PHP to work with a wide variety of databases, from mySQL to Microsoft Access. This gives businesses much needed flexibility when developing applications using PHP. One potential challenge is convincing decision-makers that an application based on open standards is a viable replacement for a proprietary application. These challenges and opportunities will be further discussed in the final submission.

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