

Design and Implementation of the WebSite Based on PHP & MYSQL

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Abstract—PHP and MYSQL has been the main web development tool for it is free and open source. The authors have discussed the environmental issues in development process based on PHP and MYSQL and the implementation process of the website ZhuoQi.

Keywords- PHP; MYSQL; Development and. Implementation

I. INTRODUCTION

With the development of Web technology, it is inevitable choice for all kind of corporate growth to combine traditional marketing with network marketing. The effective method of network marketing is to establish the website which is suitable for their company. At present the website development's mainstream platform includes: LAMP (Linux operating system, Apache network server, MySQL database, PHP programming language), J2EE and. Net commercial software. Because PHP and MYSQL is free, open source and so on, they are noted for IT professionals. From the perspective of website traffic, more than 70% of website traffic is provided with LAMP, which is most popular platform for developing the website[1].

In this paper, we designed a website ZhuoQi based on PHP+MySQL. The paper is organized as follows. Section 1 analyzes development environment. In Section 2, we proposed the development model based on PHP. Then, case study in Section 4. we make conclusion In Section 5.

II. DEVELOPMENT ENVIRONMENT ANALYSIS

A. The Choice of Development Language

ASP.NET, PHP & JSP are three mainstream languages of the website development, which have their advantages and disadvantages respectively, the comparison between them is shown in Table I [2,3]:

The project takes PHP as the development language, the reason is as follows:

- Free. the project is small, which is no need to use the payment development platform such as asp.net and jsp.
- Strong supporting. Middle and small scale websites, even some large-scale websites such as baidu, Sina in China take PHP as the development language, which

can contribute to solve the problem during the programming.

- Good portability. Although it is designed to use in the environment of Linux and Apache Web server system at first, now PHP is already transplanted any operating system and compatible standard Web server software.
- Simple grammar. PHP has many similarities with the C programming language, so it is easy to program using PHP for the C programmers.
- Rapid development. Because the source code is open, PHP will continue to develop rapidly.

TABLE I. THE COMPARISON BETWEEN ASP.NET, PHP AND JSP

	ASP.NET	PHP	JSP
security	Safety is good, but there exist certain degree of security vulnerabilities	PHP is a recognized safety performance	Safety is the highest
platform incompatibility	single platform	multiplatform	multiplatform
operating efficiency	high	higher	highest
cost	high	free	high

B. Build Development Environment

At present there are many development platform based on PHP. Generally most developers like the development environment LAMP. Those who have certain development experience can set up their development platform by choosing the related server, DBMS, and operating system. There are some PHP IDE(integrated development environment) such as AMPServ, WAMP, XMAPP, AppServ, PHPStudy in the market for the developers develop the website by using PHP.

At present the main PHP IDE is Zend Studio, which has included developing components for PHP. It reduces the development time and simplifies the complex application plan during edition, debugging, analysis and optimization. The Zend

Studio not only has code for high measurement, grammar shrinking automatically and bookmark, but also its embedded debugger which fits for local and remote debugging patterns. It is many high debugging functions such as variable tracking, Single-step operation, breakpoint, function calling, and so on. Moreover, it is also very stable in supporting Chinese for the latest version[4].

C. Notes in Building the Development Environment

Those who are unfamiliar with the development environment do not set it up by himself for it may cause a conflict between various edition, moreover it is very difficult to solve the complex configuration problem.

- PHP language version. Before development, you must ensure consistence of the edition between PHP language and the server. Now PHP mainly has two editions (PHP4 and PHP5). The different versions have the difference with SESSION, exception handling, the variable range, the data type and so on.
- Server problem. The program which is edited with PHP in the windows platform will be arranged on the apache server. If it is arranged on IIS it leads to some incompatible problems and some update by manual such as writable rights is set up before uploading the document. There are not these problems if it is arranged on the apache server.
- Database problem. DBMS using with PHP has MySQL, ORACLE and so on. MySQL is welcomed by most of the developers for it is open source, free, and efficient. MySQL is perfect database server software for medium and small application system. Besides standard ANSI SQL, it also supports many platforms. On the Unix/Linux system, MySQL also supports the multi-thread. MySQL becomes the first choice of middle and small level PHP website for it is open source and it provides a series of supports such as read-write access.

III. THE DEVELOPMENT MODEL BASED ON PHP

PHP becomes the main development language in the small and medium-sized enterprise website for it is free, open source, etc. The development step is as follows:

A. Demand analysis

There are various demands for a website project. Those demands often stem from or company oneself needs, most of which is the actual needs of customers. What extent the project leaders understand the user's needs has decided whether is success or failure in developing the website. Therefore user's needs in the form of document can clearly be transformed into all project development members, which is the main problem during the project development.

Besides basic user's needs, there are some problems as follows are needed to notice:

- The demand analysis will be come from the receiving party of the project or approved it by them.

- The demand should be confirmed by way of the document.
- The feasibility and price of their demands are informed to the demand side after effective analysis and discussion.

B. Functional module design

The demand report will be organized as some modules according to the principles of high cohesion and low coupling and related experience by the website developers.

C. Database design and implementation

It contains the demand analysis, the concept design, the logical design, the physical design, the system implementation, the operation and the maintenance. The following problems should be paid attention to during the database design and implementation:

Database security [5]: The database is the core of website, in which the data security is very important. The damage and lose or illegal duplication of data can cause a lot of trouble, moreover the mistake is very difficult to restore. MYSQL security measures are as follows:

- Account security: Each account of MySQL is composed of user name, password as well as the position, which includes reasonable rights and security check. The reasonable rights demand that there are different rights for the different account and as identical user there are different rights for different database or data sheet. There are three different security checks in the MySQL: register confirmation, authorization, access control.
- Stored data encryption [6]: for the massive information in application program, you only want to encrypt a very small part of it, such as user password. These passwords should not store in the form of plaintext but encryption in the database. In general, the sensitive data is encrypted by Hash algorithm in most DBMS including MySQL.

The database character set and coding [7]: The default code used in web server software installed, like Apache, is not UTF-8. The webpage is normally browsed when we input data into table coded in UTF-8, but Chinese in phpMyAdmin turns into messy code. The solution is that the default code in MySQL turned into UTF-8 or the data code (UTF-8) is assigned when the database is connected[8].

D. The Functional Module Implementation

A few codes, detailed annotation and standardized writing are demanded during functional module implementation. The goal is high reusability, high reliability, efficiency, high security and so on.

IV. CASE STUDY

The authors developed the consult website (ZhaoQi, domain name address is <http://www.zhaoqichina.com/>) based

on PHP. ZhuoQi mainly includes nine modules, such as the retrieval module, the expert consult module, the issue maintenance module, the member interaction module, the problem discussion module, the documents browsing module, the registration module, the help module and other auxiliary modules, as shown in Figure 1.

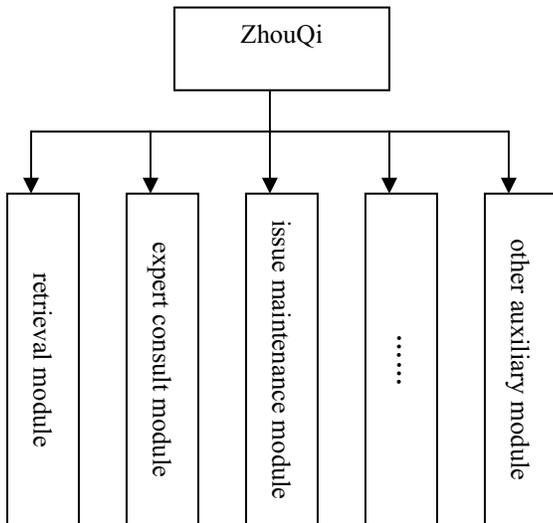


Figure 1. The Framework of The Website ZhouQi

Each module consists of a large number of functional modules, for example, retrieval module in the website ZhouQi mainly consists of the front module, input check module, matching search module, and display return module, etc. The front code in implementing retrieval module is shown in Figure 2, The end code is shown in Figure 3.

```

<div class="search">
<form name="theform" id="class" method="post" action="searchDeal.php" onSubmi="return"
<div class="form">
<div class="form">
<input type="text" value="搜索"/>
</div>
</div>
</div>
<?php
$sort_query="select sortID,sortName from zq_webSort";
$sort_result=mysql_db_query($database,$sort_query);
?>
<option selected value="">按职能</option>
<?
while($mysql_fetch_array($sort_result))
{
$sortID=$s["sortID"];
$sortName=$s["sortName"];
echo "<option value=$sortID>$sortName</option>\n";
}
?>
</select>
<select name="sub">
<option selected value="">两位</option>
</select>
<font color="#993300" style="font-weight:bold; font-size:12px">取</font>
<select name="attrc">
<?php
$attrc_query="select * from zq_webAttrc order by attrcCode";
$attrc_result=mysql_db_query($database,$attrc_query);
?>
<option selected value="">问题点</option>
<?
while($mysql_fetch_array($attrc_result))
{
$attrcID=$s["attrcID"];
$attrcName=$s["attrcName"];
echo "<option value=$attrcID>$attrcName</option>\n";
}
?>
  
```

Figure 2. The Front Code

```

}
}
if($offset=="")
{
$offset=0;
}
if($key!="")
$info_query="SELECT * FROM zq_webNews WHERE (newsTitle like '%$key%' || newsKey 1:
else if($key=="")
$info_query="SELECT * FROM zq_webNews WHERE ";
if($sort!="&&$key!="")
{$info_query.="&& sortID=$sort";}
else if($sort!="&&$key!="")
{$info_query.="&& sortID=$sort";}
if($sub!="&&$sort!="")
{$info_query.="&& subID=$sub";}
else if($sub!="&&$sort!="")
{$info_query.="&& subID=$sub";}
if($attrc!="&&$sub!="")
{$info_query.="&& attrcID=$attrc";}
else if($attrc!="&&$sub!="")
{$info_query.="&& attrcID=$attrc";}
$info_result=mysql_db_query($database,$info_query);
$total=mysql_num_rows($info_result);
$offset=" order by newsDate desc limit $offset,20";
$info_result=mysql_db_query($database,$info_query);
echo "<b>搜索结果:</b> 共有 <font color=#FF0000>$total</font> 份符合条件的文档资料";
echo "<p>";
echo "<p align=right>";
if($offset!=0)
{
  
```

Figure 3. The End Code

The specific process is that the user input the related retrieval information into the search box shown in figure 4, then the information will be sent to the end processing page after the button "retrieval" is pressed. The information inputted is checked by calling the end code. If which is valid, the results matched successfully will be displayed in the predetermined format after matching between the information inputted and the information in the database. The results are shown in figure 5.



Figure 4. The initial retrieval interface



Figure 5. The interface of search results

V. CONCLUSION

PHP and MYSQL has been the main web development tool for it is free, open source, high reliability, portability.

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