

Development of the Forest Engineering Experiment Teaching Website Based on ASP

Li Chen , Xiao Sheng-ling* , Yang Xue-chun

Northeast Forestry University, China

* Corresponding Author: shenglingxiao@ yahoo.com.cn

Abstract

This paper built the Forest Engineering experiment teaching website based on ASP technology. It analyzed the working principle of ASP, explored the Access database connection method and the approach of SQL command operating database. There was an example of the administrator login section in order to introduce how to realize the function. Supported by the network and multimedia technologies, that developed an unlimited, independent, open space for the learner. It enhanced effectively the traditional experiment teaching methods.

Keywords: ASP, website, experiment teaching methods

1. Working principle of ASP

The full name of ASP is Active Server Pages, it is the development environment of the web server-side, it can create and execute dynamic, interactive, high-performance web service programs[1]. It is able to combine of HTML, scripting

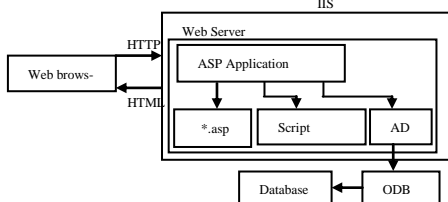


Fig. 1: Working principle of ASP

language and ActiveX component to form an application program which can run on the server, and the standard HTML page is sent to the client browser. The working principle of ASP is shown in Fig.1[2].

2. System module design

The whole website is divided into 6 modules including homepage, laboratory situation, teaching staff, experimental teaching, scientific research, and online answering, in addition, the entire website is managed by independent background management module. Several main modules and the structure frameworks are described as follows[3-4].

2.1. Homepage

Homepage includes three parts they are the forest engineering experiment teaching center situation, laboratory news and notification & announcement. The structure framework of laboratory news module is shown as Fig. 2[5].



Fig. 2: Structure framework of laboratory news module

2.2. Experiment teaching

Experiment teaching module consists of

teaching idea, laboratory distribution and experiment items. Experiment items introduce the different items separately for the different curriculum. Each item includes experimental principle, experimental equipment, experimental procedure and data processing sub-module. The experiment teaching module structure is shown in Fig. 3.

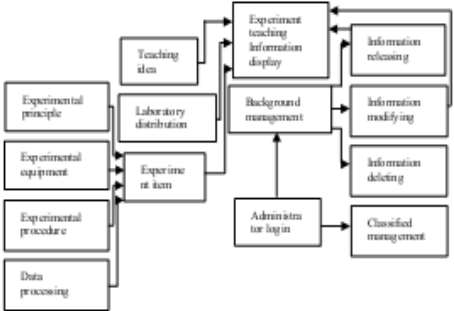


Fig. 3: Structure framework of experiment teaching module

2.3. Online answering

Browsers can have a dialogue with the experimental tutor during the learning process through online answering module. By online answering, not only the students and teachers can communicate well to solve problems, but also they can view the other students' questions and answers. Online answering module structure framework is shown in Fig. 4.

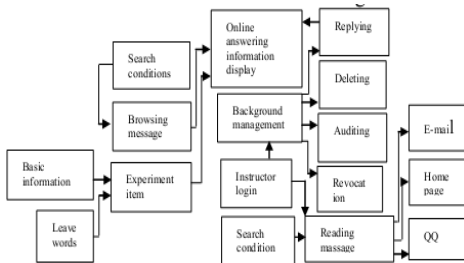


Fig. 4: Structure framework of online answering module

2.4. Background management

Background management is the module to maintain the entire website by administrator. The structure framework of the

background management module is shown as Fig. 5.

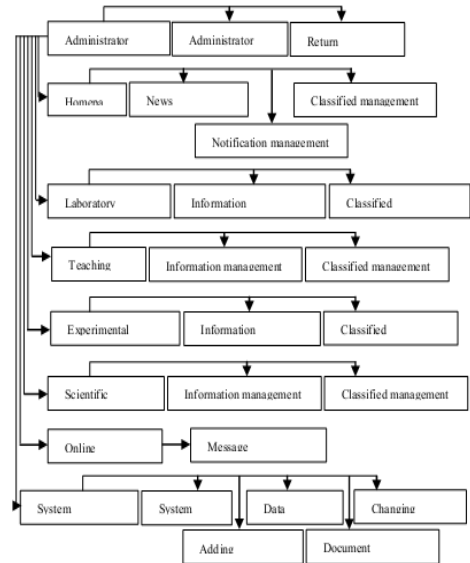


Fig. 5: Structure framework of background management module

3. Design of the database

Using the Microsoft Access to create the database, the database name is syjx.mdb. This database is designed four data tables as follows [6].

- Tab.1 is the teacher information to save the teachers and administrators' information.
- Tab.2 is the experiment information to save the course experiment item information.
- Tab.3 is the message information to save the student message.
- Tab.4 is the reply information to save the teachers' reply.

Tab.1: Teacher information

Head	Explanation	Type (length)
ID	Teacher number	Int(4)
UserName	User name	Char(20)
PWD	Pass word	Char(20)
Purview	purview	Char(10)

Tab. 2: Experiment information

Head	Explanation	Type (length)
ID	Courses number	Int(4)
Name	Courses name	Char(10)
Course Type	Course Type	int(6)
Profession	Profession	int(6)
Ename	Experiment name	Char(20)
Eyl	Experimental principle	Char(100)
Eyq	Experimental equipment	Char(100)
Ebz	Experimental procedure	Char(500)
Ecl	Data processing	Char(500)

Tab. 3: Massage information

Head	Explanation	Type (length)
ID	Reply number	Int(4)
TopicID	Topic number	Int(4)
Content	Reply content	ntext(16)
Reply time	Reply time	smalldatetime(4)
Author	Author	nchar(50)
Face	Face	nchar(15)

Tab. 4: Reply information

Head	Explanation	Type (length)
ID	Title number	Int(4)
Title	Title	nchar(225)
Content	Content	ntext(500)
Create time	Create time	smalldatetime(4)
Author	Author	nchar(50)
Face	Face	nchar(15)
Email	Email	nchar(50)
QQ	QQ number	Char(10)
Homepage	Homepage	Char(100)
Hit	The frequency of hit	Int(4)
Reply	The frequency of reply	Int(4)
ReplyT	The time of reply	smalldatetime(4)

4. Module realization

Using JavaScript language edits ASP program, programming method conforms to the principles of JavaScript. For the length of the article is limited, there only lists the programs of the administrator login screen of background management system.

```
<%abcffisd=2%>
<!--#include file = "../Include/DBClass.inc1.asp"-->
<!--#include file = "../Include/MD5.asp" -->
<% Dim Position, aAction, Errmsg, aUserID, aPassWD,
aRePassWD, aLevel
Position = GetSafeInt(Trim(Request("Position")),0)
If Position < 1 Then
    Errmsg = ""
    Position = 1
Else
    Errmsg = "<font color=#FF0000><b>You do not login or stay
too long, please re-login ! </b></font>"
End If
aAction = GetSafeStr(Request.Form("action"))
```

```
If aAction = "true" Then Dim Server_v1, Server_v2
Server_v1=Cstr(Request.ServerVariables("HTTP_REFERER"))
Server_v2=Cstr(Request.ServerVariables("SERVER_NAME"))
aUserID = Trim(Request("a_userid"))
aPassWD = Trim(Request("a_pwd"))
aRePassWD = Trim(Request("a_rpwd"))
If aUserID <> "" And aPassWD <> "" and aRePassWD <> ""
Then
If aRePassWD = CStr(Session("pSN")) Then
sSql = "SELECT * FROM Admin WHERE A_UserID
=&"&aUserID&"'"
oRs.Open sSql, oConn, 1, 1
If Not oRs.EOF Then
If oRs("A_PWD") = md5(aPassWD) Then' Login Successful!
aLevel = oRs("A_Level")
Session("Sys_Admin") = aUserID
Session("Sys_Level") = aLevel
If Position = 2 Then
Response.Write
"<script language=JavaScript>top.document.location.reload
();</script>"
Else
Response.Redirect "Admin.asp"
Response.End
End If
Else
Errmsg = " Notice: the password input error ! "
End If
Else
Errmsg = "Notice: The user name input error or does not exist!"
"
End If
oRs.Close
Set oRs = Nothing
Else
Errmsg = "Notice: Verify Code input errors ! "
End If
Else
Errmsg = "Notice: User name or password or Verify Code can
not be empty ! "
End If
End If
%>
<HTML>
<HEAD>
<TITLE><%=Homepage.Title%>--Management Center --
Administrator Login </TITLE>
<meta http-equiv="Content-Type" content="text/html; char-
set=gb2312">
<script language="JavaScript">
<!--
function window_onload() {
document.mail.a_userid.focus();
function cancel()
{
mail.reset();
function IsValid()
{
if (document.mail.a_userid.value=="")
{
alert("User name can not be empty");
document.mail.a_userid.focus();
return false; }
if (document.mail.a_pwd.value=="")
{
alert("Password can not be empty");
document.mail.a_pwd.focus();
return false; }
if (document.mail.a_rpwd.value=="")
{alert("Verify code can not be empty");
document.mail.a_rpwd.focus();
return false; }
return true;
}
}
%>
<!--#include file = "../Include/DBClass.inc1.asp"-->
<!--#include file = "../Include/MD5.asp" -->
<% Dim Position, aAction, Errmsg, aUserID, aPassWD,
aRePassWD, aLevel
```

```

Position = GetSafeInt(Trim(Request("Position")),0)
If Position < 1 Then
    Errmsg = ""
    Position = 1
Else
    Errmsg = "<font color=#FF0000><b>You do not
login or stay too long, please re-login ! </b></font>"
End If
aAction = GetSafeStr(Request.Form("action"))
If aAction = "true" Then Dim Server_v1, Server_v2
Server_v1=Cstr(Request.ServerVariables("HTTP_REFERER"))
Server_v2=Cstr(Request.ServerVariables("SERVER_NAME"))
aUserID = Trim(Request("a_userid"))
aPassWD = Trim(Request("a_pwd"))
aRePassWD = Trim(Request("a_rpwd"))
If aUserID <> "" And aPassWD <> "" and aRePassWD <> ""
Then
If aRePassWD = CStr(Session("pSN")) Then
sSql = "SELECT * FROM Admin WHERE A_UserID
='&aUserID&'""
oRs.Open sSql, oConn, 1, 1
If Not oRs.EOF Then
If oRs("A_PWD") = md5(aPassWD) Then' Login Successful!
aLevel = oRs("A_Level")
Session("Sys_Admin") = aUserID
Session("Sys_Level") = aLevel
If Position = 2 Then
Response.Write
"<script language=JavaScript>top.document.location.reload
()</script>"
Else
Response.Redirect "Admin.asp"
Response.End
End If
Else
Errmsg = " Notice: the password input error ! "
End If
Else
Errmsg = "Notice: The user name input error or does not exist! "
End If
oRs.Close
Set oRs = Nothing
Else
Errmsg = "Notice: Verify Code input errors ! "
End If
Else
Errmsg = "Notice: User name or password or Verify Code can
not be empty ! "
End If
End If %>
<HTML>
<HEAD>
<TITLE><%=Homepage_Title%>--Management Center --
Administrator Login </TITLE>
<meta http-equiv="Content-Type" content="text/html; char-
set=gb2312">
<script language="JavaScript">
<!--
function window_onload() {
    document.mail.a_userid.focus();
}
function cancel()
{
    mail.reset();
}
function IsValid()
{
    if (document.mail.a_userid.value=="")
    {
        alert("User name can not be empty");
        document.mail.a_userid.focus();
        return false; }
    if (document.mail.a_pwd.value=="")
    {
        alert("Password can not be empty");
        document.mail.a_pwd.focus();
        return false; }
    if (document.mail.a_rpwd.value=="")
    {
        alert("Verify code can not be empty");
        document.mail.a_rpwd.focus();

```

```

        return false; }
        return true;}

```

5. Acknowledgment

This subject supported by Heilongjiang Province higher education reform project and Northeast Forestry University reform project.

6. Summary

Experiment teaching method based on WEB makes a breakthrough at the time and space limitation for working, improving learning efficiency, cutting the operation costs. It is an effective means to improve the resources utilization ratio.

7. References

- [1] Paul Davard. Development of the Network Technologies. Communieatio-n & Computer. vol.14, pp.35-36,2010.
- [2] http://lwcool.com/lw/newsfile/2008/4/6/200846_lwcool_14974.html.
- [3] Li Chen, Xiao ShengLing, You ShiZhou. Development of the Packaging Engineering Experimental Teaching Platform Based on Interaction Design Concept. Proceedings of 2010 Second International Conference on MultiMedia and Information Technology, pp.162-166, 2010.
- [4] Xiao Shengling; Li Chen; Zhang Peijian. Research on Scheme Design and Construction Method of Forest Engineering Network Virtual Laboratory. Forest Engineering.Vol. 25, NO.3, pp.125-128, 2010.
- [5] Cao YanLong. ASP/ASP.NET practical engineering cases selected of database development. Beijing: Posts & Telecom Press, pp.236-245, 2011.
- [6] Xu Chunyan. Construction and Realization on the Professional Technology Demonstration School Website with the ASP Technology.ChangChun: Jilin University,pp.11-12,2011.