8360

Java: Server Pages + Tomcat Getting Started User Experience

Abstract: **This session will lead you thru the steps needed to build an Apache/Tomcat/MySQL Web site from the ground up. Topics covered will include: Fedora installation, Tomcat configuration, Database Connectors, Java Server Pages, Eclipse + sysdeo will not be covered (see 8368 Thursday).**

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My background: MVS (before zOS) Systems Support and Application programmer. Retired as Senior Director for Systems Support with staff of 24, still was primary support for System Managed Storage. Folks that worked for me did AIX but I had minimal exposure to Unix/Linux. Mucho experience with DB2/CICS/ROSCOE, some TSO.

Been doing Java Application programs since 1997. Recent applications included MySQL/Swing conference registration system and some SendMail applications. Day to day I do many data conversion and data analysis applications in VSE (DOS before the PC co-opted that name in 1982) mainframe, Windows 98 … XP, Linux, and AS/400 (aka iSeries) environments. Still do a lot of COBOL on mainframe but use Java whenever possible.

Also develop “static” web pages (html) but with a lot of Java Script. (browser variability a growing problem)

The dream: to be able to offer my web clients the kind of server centric (database) systems I used to develop on the mainframe prior to my retirement from State of Texas in 1999, but at a MUCH lower cost.

The plan: with the help of a friend, build an industrial strength Intel box in $1,000 price range. I am a software guy, if you need a screwdriver, I don’t do it. Then install Linux/Apache/Tomcat/J2EE/and Java Server Page support.

What happened: last spring, bought components starting with priceline.com then with guidance from friend who knew what we were doing, put the pieces together. The box had dual power supply, hot swappable, and two 80 GB disks installed with RAID 2 (mirroring) since these are components most likely to fail.

Lessons learned: power supply did not fix in first rack mount case, had to order another case $250 vs. $80 for first case. Next time I will get all components from Frys and pay them $80 to put it all together.

Since the box I was building was going to be installed at the data center that currently hosted my web sites (I support five domains there, plus 2 others that have their own ISP), I chose Fedora, since my ISP was familiar with Red Hat.

I had actually dithered for years over which Linux because I could not get any consensus about which one to use. One friend swore by Mandrake, IBM pushes Susi??. Since my ISP was going to be maintaining the OS after I finished the install, I just went with what he knew.

The Fedora install went very well. I did do this with the same friend who has helped me build the box. Whenever we had questions we found the on-line documentation to be helpful, along with some experimentation. I did not buy a console, keyboard or mouse. I did get a switch box so I

could use the same devices as my windows workstation. That worked well. After the initial installation (setting hardware and software option so it would re-boot itself if power was lost), I accessed system via secure shell, using VNC when I wanted full screen.

After deciding I did NOT like vi (or any of the command line text editors) I pretty much adopted the habit of editing everything I needed to change on my Windows box, just keeping a secure shell FTP window open on both machines.

It turns out that this paradigm works quite well for Java and jsp development as well, which is why this pitch will not say much about Eclipse or sysdeo. Perhaps I will do a pitch or even a lab on that in August! ;>)

Lessons learned: keep a log of the default directories for stuff you install. Trying to figure that out was toughest part of the Linux component installs. Here are some of my notes:

Domain Name: new.jsrsys.com

CATALINA_HOME: usr/local/bin/tomcat

My userID is sryder, so stuff I have done is in /home/sryder.

The Fedora install CD is in /install

WebMin install is in /install/WebMin

Other :

firewall rules are in /etc/sysconfig/iptables
after updating do "service iptables restart".
need this to authorize your ip address for other things.

JAVA_HOME: /usr/java/j2sdk1.4.2_05

Tomcat.sh (edited) is in /etc/init.d

A note on the firewall. I have the system tied up pretty tight, except for “normal” entries like web sites and email. I do not allow ANY ftp access. I do all file transfers thru only Secure Shell connections. Some functions (like Webmin and Tomcat Administration) are allowed only from a specified list of Ips, my home computer and my work computer.

The file server.xml contains the DataConnection definition.

The file TestApp.xml contains a Context for the TestApp webapp and is located at
<TOMCAT_HOME>/conf/Catalina/app.jsrsys.com/TestApp.xml
This context creates a ResourceLink to the Resource (created in October), which makes it available to the TestApp webapp.

```
<!-- (TestApp.xml) is placed at
<TOMCAT_HOME>/conf/Catalina/app.jsrsys.com/TestApp.x
ml -->
<Context path="/TestApp"
docBase="/home/sryder/apps_html/jsrsys.com/TestApp"
reloadable="true">
<ResourceLink name="jdbc/MySql"
type="javax.sql.DataSource" global="jdbc/MySqlDB"/>
</Context>

<!-- (rsaMember.xml) is placed at
<TOMCAT_HOME>/conf/Catalina/app.jsrsys.com/rsaMember
.xml -->
```

```
<Context path="/rsaMember"
docBase="/home/sryder/apps_html/jsrsys.com/rsaMember"
reloadable="true">
<ResourceLink name="jdbc/MySql"
type="javax.sql.DataSource" global="jdbc/MySqlDB"/>
</Context>
```

Tomcat Logs are in:
/usr/local/bin/tomcat/logs/[prefix][suffix]

Note the server.xml file goes in
"/usr/local/bin/tomcat/conf" aka "<TOMCAT_HOME>/conf".

The httpd.conf and workers2.properties files go in:
"/etc/httpd/conf" directory.

I used WebMin to edit httpd.conf file, but uploaded workers2.properties.

Tomcat Directory hint Summary:
<!-- (TestApp.xml) is placed at
<TOMCAT_HOME>/conf/Catalina/app.jsrsys.com/TestApp.xml -->
<!-- (rsaMember.xml) is placed at
<TOMCAT_HOME>/conf/Catalina/app.jsrsys.com/rsaMember.xml -->
----------.xml is application context file
---------- is dir per virtual server.

Tomcat Logs are in:
/usr/local/bin/tomcat/logs/[prefix][suffix]

server.xml file goes in "/usr/local/bin/tomcat/conf" aka "<TOMCAT_HOME>/conf".

httpd.conf and workers2.properties files go in: "/etc/httpd/conf" directory.
I used WebMin to edit httpd.conf file, but had to upload workers2.properties.

Note: due to a bug in tomcat, Virtual Servers for Tomcat must be defined in workers2.properties file.

Virtual server entries for the pure html sites in https.conf:
User WebMin/Servers/Apache/Edit Config Files... to edit.
Virtual Host code is at bottom.
VirtualHost example:

httpd.conf (changes were in this section)

```
### Section 3: Virtual Hosts
<VirtualHost *:80>
ServerName new.jsrsys.com
DocumentRoot "/home/sryder/public_html/jsrsys.com"
<Directory   "/home/sryder/public_html/jsrsys.com">
allow from all Options +Indexes
</Directory>
ServerAlias *.jsrsys.com
ScriptAlias /cgi-bin/
/home/sryder/public_html/jsrsys.com/cgi-bin/
CustomLog /home/sryder/logs/jsrsys.com/access.log
combined
</VirtualHost>
```

workers2.properties (added following at end to support Tomcat virtual servers):

```
[uri:app.jsrsys.com/*]
worker=ajp13:localhost:8009

[uri:app.rsoa.org/*]
worker=ajp13:localhost:8009

[uri:app.stmattsaustin.org/*]
worker=ajp13:localhost:8009

[uri:secure.jsrsys.com/*]
worker=ajp13:localhost:8009
```

server.xml: just for reference, defines DataConnection.

```
<?xml version='1.0' encoding='utf-8'?>
<Server>
  <Listener className="org.apache.catalina.mbeans.ServerLifecycleListener"/>
  <Listener className="org.apache.catalina.mbeans.GlobalResourcesLifecycleListener"/>
  <GlobalNamingResources>
    <Environment name="simpleValue" type="java.lang.Integer" value="30"/>
    <Resource auth="Container" description="User database that can be updated and saved"
              name="UserDatabase" type="org.apache.catalina.UserDatabase"/>
    <Resource auth="Container" name="jdbc/MySqlDB" type="javax.sql.DataSource"/>
    <ResourceParams name="UserDatabase">
      <parameter>
        <name>factory</name>
        <value>org.apache.catalina.users.MemoryUserDatabaseFactory</value>
      </parameter>
      <parameter>
        <name>pathname</name>
        <value>conf/tomcat-users.xml</value>
      </parameter>
    </ResourceParams>
    <ResourceParams name="jdbc/MySqlDB">
      <parameter>
        <name>factory</name>
        <value>org.apache.commons.dbcp.BasicDataSourceFactory</value>
      </parameter>
```

```
<parameter>
  <name>url</name>
  <value>jdbc:mysql://localhost.localdomain/rsa?autoReconnect=true</value>
</parameter>
<parameter>
  <name>password</name>
  <value>*</value>
</parameter>
<parameter>
  <name>maxWait</name>
  <value>10000</value>
</parameter>
<parameter>
  <name>maxActive</name>
  <value>50</value>
</parameter>
<parameter>
  <name>driverClassName</name>
  <value>com.mysql.jdbc.Driver</value>
</parameter>
<parameter>
  <name>username</name>
  <value>*</value>
</parameter>
<parameter>
  <name>maxIdle</name>
  <value>5</value>
```

```
      </parameter>
    </ResourceParams>
  </GlobalNamingResources>
  <Service name="Catalina">
    <Connector acceptCount="100" connectionTimeout="20000" disableUploadTimeout="true" port="8080"
redirectPort="8443">
    </Connector>
    <Connector acceptCount="60000" connectionLinger="0" connectionTimeout="0"
connectionUploadTimeout="0" enableLookups="true" port="8009" protocol="AJP/1.3"
protocolHandlerClassName="org.apache.jk.server.JkCoyoteHandler" redirectPort="8443"
tcpNoDelay="false">
    </Connector>
    <Engine defaultHost="localhost" name="Catalina">
      <Host appBase="/home/sryder/apps_html/jsrsys.com" name="app.jsrsys.com">
        <Logger className="org.apache.catalina.logger.FileLogger" prefix="app.jsrsys.com_log."
suffix=".txt" timestamp="true"/>
      </Host>
      <Host appBase="/home/sryder/apps_html/rsoa.org" name="app.rsoa.org">
        <Logger className="org.apache.catalina.logger.FileLogger" prefix="app.rsoa.org_log."
suffix=".txt" timestamp="true"/>
      </Host>
      <Host appBase="/home/sryder/apps_html/stmattsaustin.org" name="app.stmattsaustin.org">
        <Logger className="org.apache.catalina.logger.FileLogger" prefix="app.stmattsaustin.org_log."
suffix=".txt" timestamp="true"/>
      </Host>
      <Host appBase="/home/sryder/apps_html/secure.jsrsys.com" name="secure.jsrsys.com">
```

```
        <Logger className="org.apache.catalina.logger.FileLogger" prefix="secure.jsrsys.com_log."
suffix=".txt" timestamp="true"/>
      </Host>
      <Host appBase="webapps" name="localhost">
        <Logger className="org.apache.catalina.logger.FileLogger" prefix="localhost_log." suffix=".txt"
timestamp="true"/>
      </Host>
      <Logger className="org.apache.catalina.logger.FileLogger" prefix="catalina_log." suffix=".txt"
timestamp="true"/>
      <Realm className="org.apache.catalina.realm.UserDatabaseRealm"/>
    </Engine><!-- server.xml file goes in "/usr/local/bin/tomcat/conf" aka "<TOMCAT_HOME>/conf". -
->
  </Service>
</Server>
```

tomcat-users.xml:

```
<?xml version='1.0' encoding='utf-8'?>
<tomcat-users>
  <role rolename="manager"/>
  <role rolename="admin"/>
  <user username="sryder" password="xxx" fullName="Steve
Ryder" roles="admin,manager"/>
  <user username="steveg" password="xxx" fullName="Steve
Goetze" roles="admin,manager"/>
  <user username="david" password="xxx" fullName="David
Patron " roles="admin,manager"/>
</tomcat-users>
```

Java Hints:

Over the years I have developed a few Java classes (for batch applications) that I wanted to use on the web.

I have not used Eclipse yet.

Was not able to run stuff just in classes because could not build an import. Needed a package.
Fix was to create ...classes/com/jsrsys/web
label Classes as package com.jsrsys.web;
note: had to make some methods public that sloppily had not been before so programs out of package could see.

procedure is to put source in classes directory (so import com.jsrsys.web.* will find other classes),

do compile, then move the class down into the package directory (MoveClass.bat).

Then was able to compile into this directory, and simply upload to TestApp/WEB-INF/classes/....web/ dir.
Was able to modify JsrSysout so it just accumulates log info, then added a getLast(##) method to view.
Surprised that class seems to only persist through a given session. This is OK.

Then worked on JsrLineOut (which calls JsrSysout). This worked!
However, the output file "TestApp.txt" appeared in /etc/rc.d/init.d/... (where Tomcat.sh is run).
Attempting to write to /home/sryder/jsrsys.com/TestApp fails! Must be permissions.
chmod 777 TestApp then... this worked.

JsrSQL: modify to use DataSource instead of standard connnect. Compile fails. Change to JDK1.4, OK.

My first jsp page:

```
<%@page import="java.sql.*"%>
<%@page import="javax.naming.Context"%>
<%@page import="javax.naming.InitialContext"%>
<%@page import="javax.sql.DataSource"%>
<%!
String codeWord;
String lastName;
String firstName;
String state;
String stateUpper;
String country;
String message1;
String message2;
String eMessage = "";
%>
```

```
<%
   codeWord = request.getParameter("x");
   if     (codeWord == null)  codeWord  = "";
   lastName = request.getParameter("lastName");
   if     (lastName == null)  lastName = "";
   firstName = request.getParameter("firstName");
   if     (firstName == null)  firstName = "";
   state = request.getParameter("state");
   if     (state == null)  state = "";
   country = request.getParameter("country");
   if     (country == null)  country = "";
   message1 = "";
   message2 = "";
%>
<SCRIPT language="JavaScript">
function giveFocus()
```

```
{
  document.Mainform.lastName.focus();
}
function resetForm()
{
  document.Mainform.lastName.value="";
  document.Mainform.firstName.value="";
  document.Mainform.state.value="";
  document.Mainform.country.value="";
  giveFocus();
}
</SCRIPT>
<html>
  <head>
    <title>RSA: Member&#180;s Directory Query</title>
  </head>
```

```
  <body onLoad="giveFocus()">
  <H3 align=center>RSA: Member's Directory Query <FONT
SIZE="-1">Version 2004-11-28</FONT></H3>
Please enter the last name, first name, state (TX, MA,
etc.) and/or country, then <B>press Submit Query</B><BR>
Any combination can be entered.  All entered values must be
matched.  <BR>
Only the length of the value entered is compared. For
example: "SN" will match SNELL and SNOOPY.   <BR>
<A HREF="http://www.rsoa.org/changeAddress.htm"
TARGET="_blank"><B>Link to Change of Address
Form</B></A><BR>
<FORM name=Mainform action=./index.jsp method=get>

 Last Name: <INPUT size=12 maxLength=30
name='lastName'  VALUE='<%= lastName %>' >
```

```
 First Name: <INPUT size=12 maxLength=30
name='firstName' VALUE='<%= firstName %>' >
 State: <INPUT size=2  maxLength=2  name='state'
VALUE='<%= state %>' >
 Country: <INPUT size=12 maxLength=30 name='country'
VALUE='<%= country %>' ><BR><BR>
 Passcode: <INPUT TYPE='password' size=10 maxLength=10
name='x'  VALUE='<%= codeWord %>' >
 <INPUT title='Submit Query' type=submit value='Submit
Query' name='submitbutton'>
<INPUT title='Clear' type=button value='Reset Values'
name='clearbutton' onClick="resetForm()">


</FORM>
<HR>
```

```
<%
if (!codeWord.toUpperCase().equals("xxx"))
{
   message1 = "PASSCODE is required for searches - you
must be an RSA Member to access directory - if you don't
have the passcode email <A
HREF='mailto:debbyrsa@bga.com?subject=passcode:'>debby
rsa@bga.com</A> or call 512-454-0022.";
   if (codeWord.length() > 0)
       message2 = "You entered: "+codeWord;
}
else
{
   doQuery();
```

```
   out.print("Click here to <A
HREF=\"Membership.pdf\">view print format version</A>
for all members.<BR>");
}

%>
    <%= eMessage %>
    <B>RSA: Member&#180;s Directory Query Results:
    <%= message1 %>
    </B>
    <%= message2 %>



    <HR>
  </body>
</html>
```

```
<%!
void doQuery()
{
    String andX = "";
    String queryWhere = "";
    if (lastName.length() >  0)
    { queryWhere =
"SUBSTRING(lastName,1,"+lastName.length()+") = '" +
lastName + "'";
      andX = " AND ";
      if (lastName.equals("***"))
         queryWhere ="LastName > ' '";
    }
    if (firstName.length() > 0)
```

```
   { queryWhere += andX +
"SUBSTRING(firstName,1,"+firstName.length()+") = '" +
firstName + "'";
     andX = " AND ";
   }
   if (state.length()     > 0)
   { queryWhere += andX +
"SUBSTRING(state,1,"+state.length()+") = '" + state + "'";
     andX = " AND ";
   }
    if (country.length()  > 0)
   { queryWhere += andX +
"SUBSTRING(country,1,"+country.length()+") = '" + country
+ "'";
     andX = " AND ";
   }
```

```
    if (queryWhere.length() == 0) queryWhere = "lastName =
'';
    message1 = "";
    message2 = "";
    eMessage = "";
    int    countRows = 0;
    Connection con = null;
    Statement stmt = null;
    ResultSet rs = null;
    try {
          Context myContext = new InitialContext();
          Context envContext =
(Context)myContext.lookup("java:comp/env");
          DataSource ds =
(DataSource)envContext.lookup("jdbc/MySql");
          con = ds.getConnection();
```

```
        stmt = con.createStatement();
        rs = stmt.executeQuery("SELECT count(*) FROM
Who WHERE "+queryWhere);
        rs.next();
        countRows = rs.getInt(1);
        message1 = "Query matched "+ countRows +"
persons.";
        if (queryWhere.length() == 0 && countRows == 0)
message1 = "";
        if (countRows > 0)
        {
        rs = stmt.executeQuery("SELECT * FROM Who
WHERE "
                                + queryWhere
                              + " ORDER BY
LastName,FirstName");
```

```
boolean isNext = false;

while (isNext = rs.next())
{
        stateUpper =
putNotNull(rs.getString(11)).toUpperCase();
        message2
          += "<BR><HR>" +
putNotNull(rs.getString(4))
          + putNotNull(rs.getString(5))
          + putNotNull(rs.getString(6))
          + putNotNull(rs.getString(7))
          + putNotNullLine(rs.getString(8))
          + putNotNullLine(rs.getString(9))
          + putNotNullLine(rs.getString(10))
          + ", " + stateUpper
```

```
                    +
putNotNull(rs.getString(12)).toUpperCase()
                    + putNotNull(rs.getString(13))
                    + "<BR>"   + putNotNull(rs.getString(14))
                    + putNotNullLabel(" Fax: ",
rs.getString(15))
                    + putNotNullLine(rs.getString(16))
                    + "<BR> Email: " +
putNotNull(rs.getString(17)).toLowerCase()
                    + putNotNullLabel("<BR>Joined: ",
rs.getString(19))
                    + putNotNullLabel(" Code: ",
rs.getString(18))
                   +"<BR>";

          }
```

```
            }
        } catch (Exception e) {
            eMessage ="JDBC test Failed.  Exception: " +
e.toString() +"<BR>WHERE " + queryWhere;

    } finally {
            try {
                if (rs != null) rs.close();
                if (stmt != null) stmt.close();
                if (con != null) con.close();
            } catch (SQLException sqle) {
                //eat
        }
    }
} // end doQuery
```

```
String putNotNullLabel(String label, String maybeNull)
{
   if  (maybeNull == null || maybeNull.trim().length() == 0 ||
maybeNull.equals("null")) return "";
   else                                  return label + maybeNull;
} // end putNotNullLine

String putNotNullLine(String maybeNull)
{
   if  (maybeNull == null || maybeNull.length() == 0 ||
maybeNull.equals("null")) return "";
   else                                  return "<BR>" + maybeNull;
} // end putNotNullLine

String putNotNull(String maybeNull)
{
```

```
   if  (maybeNull == null || maybeNull.length() == 0 ||
maybeNull.equals("null")) return "";
   else                                  return " " + maybeNull;
} // end putNotNull
%>
```

My next jsp page:

```
<%@page contentType="text/html"%>
<%@page pageEncoding="UTF-8"%>
<%@page import="com.jsrsys.web.*"%>
<%@page import="java.util.*"%>
<%!
JsrUtil          u = new JsrUtil();
JsrSQL  sql;
String  codeWord = "";
String   whoID   = "1";
String[] colName;
int    [] colSize;
int lastCol = 0;
int lastRow = 0;
String[] rowValue;
%>
```

```
<HTML>
<HEAD>
<TITLE>Update Membership Edit</TITLE>
</HEAD>
<%
   codeWord = request.getParameter("x");
   if     (codeWord == null)  codeWord  = "";
   whoID = request.getParameter("WhoID");
   if     (whoID == null)  whoID  = "1";
%>
<% if (!codeWord.toUpperCase().equals("xxx"))
   {%>
<jsp:forward page="update.jsp" />
<% } %>
<BODY>
```

```
<H3 align=center>RSA: Member's Directory Update <FONT
SIZE="-1">Version 2004-11-20</FONT></H3>
<A HREF="update.jsp?x=<%= codeWord %>">Return to
Update Query Page</A>
      <A HREF="getLog.jsp"
TARGET="_blank">View Status Log</A>

<TABLE><TR><TD>
<FORM name="SQLUpdate" method="get"
action=updateResults.jsp>
<INPUT title='Update' type=submit value='Update'
name='updateButton1'>
</TD><TD>
<%
sql = new JsrSQL("rsa");
String sqlQuery = "Who WHERE WhoID=" + whoID;
```

```
int rowCount = sql.setSelect(sqlQuery);
if (rowCount == 1)
{
%>
Please press Update button after changing desired fields.
<%
}
else
{
%>
Row Count: <%= rowCount + " " + sqlQuery %>
<% } %>
</TD></TR></TABLE>
<TABLE>
<%
```

```
colName = sql.getColNames();
colSize = sql.getColDisplaySize();
lastCol = colName.length;
sql.setNextRow();
rowValue = sql.getRowValues();
sql.close();
for (int i=2; i < lastCol; i++)
{
int size = colSize[i];
if (size > 80) size = 80;
%>
<TR>
<TD ALIGN="right">
<%= colName[i] %>:
</TD>
<TD>
```

```
<INPUT
NAME='<%= colName[i] %>'
size="<%= size %>" type="Text"
maxlength="<%= colSize[i] %>"
VALUE="<%= rowValue[i] %>">
</TD>
</TR>
<%
}
%>
</TABLE>
<INPUT TYPE='hidden' size=5 maxLength=10 name='x'
VALUE='<%= codeWord  %>' >
<INPUT TYPE='hidden' size=5 maxLength=10
name='WhoID'  VALUE='<%= whoID  %>' >
```

```
<INPUT title='Update' type=submit value='Update'
name='updateButton2'>

</FORM>
<A HREF="update.jsp?x=<%= codeWord %>">Return to
Update Query Page</A>
      <A HREF="getLog.jsp"
TARGET="_blank">View Status Log</A>

</BODY>
</HTML>
```

JsrUser: passing values in a persistent data object:

```
<%@page contentType="text/html"%>
<%@page pageEncoding="UTF-8"%>
<%@page import="com.jsrsys.web.*"%>
<%@page import="java.util.*"%>
<jsp:useBean id="user" class="com.jsrsys.web.JsrUser"
scope="session" />
<%!
JsrUtil          u = new JsrUtil();
JsrSQL  sql;
String sqlQuery;
String  codeWord = "";
String   userID  = "";
String   project = "";
String   ugreqno = "";
```

```
String   status  = "";
String userFix   = "";
%>
<%
   codeWord = request.getParameter("x");    // x =
password
   if     (codeWord == null)  codeWord  = "";
   userID = request.getParameter("u");       // u = UserID
   if     (userID == null)  userID = "";
   project = request.getParameter("p");       // p = project
   if     (project == null)      project = "MVSS";
   if     (project.length() < 4) project = "MVSS";
   project = project.toUpperCase();

if (userID.length() == 0)
```

```
    status = "Please enter UserName, Password and
Project:";
else
{
  //  Who:
UserName,FirstName,LastName,CompanyName,InstallationCo
de,Passcode,email
  // Auth: UserName,Authority,Approve_Groups
  sql = new JsrSQL("reqs");
  userFix = userID;
  if (userFix.length() > 0 &&
      userFix.indexOf("\\") < 0 &&
     userFix.indexOf("'") > 0)
     {
        userFix = u.replaceAll(userFix, "'", "\\'");  // allows
for ' in userID
```

```
    }
  sqlQuery = "reqs.Who WHERE UserName='" + userFix
+"'";
  int rowCount = sql.setSelect(sqlQuery);
  if (rowCount == 0)
    status = "UserName/Password not found";
  else
  {
    status = "UserName/Password not found";
    sql.setNextRow();
    if (!codeWord.equals(sql.getString("Passcode")))
      status = "UserName/Password not found";
    else
    {
```

```
        //  Who:
UserName,FirstName,LastName,CompanyName,InstallationCo
de,Passcode,email
        user.setValue("WhoID", sql.getString("WhoID"));
        user.setValue("FirstName",
sql.getString("FirstName"));
        user.setValue("LastName", sql.getString("LastName"));
        user.setValue("InstallationCode",
sql.getString("InstallationCode"));
        user.setValue("CompanyName",
sql.getString("CompanyName"));
        user.setValue("email", sql.getString("email"));
        user.setValue("userName", userID);


        sqlQuery = "reqs.Auth WHERE UserName='" + userFix
```

```
                + "' AND Approve_Groups LIKE
'%"+project+"'";
      rowCount = sql.setSelect(sqlQuery);
      if (rowCount == 0)
         status = "No Authority record found for UserName
" + userID + " Project "+ project;
      else
      {
        sql.setNextRow();
        //  Who:
UserName,FirstName,LastName,CompanyName,InstallationCo
de,Passcode,email
        // Auth: UserName,Authority,Approve_Groups
        user.setValue("Authority",
sql.getString("Authority"));
        user.setValue("Project",   project);
```

```
        status = "OK: <A  HREF='reqsVote2.jsp'>Click here
to continue</A> or change Project to enter another area of
interest.";
        status = "OK";
      }
    }
     sql.close();
  }
}
if (status.equals("OK"))
{%>
   <jsp:forward page="reqsVote3.jsp" /><%
}
%>

<HTML>
```

```
<HEAD>
<TITLE>Login SHARE Requirements</TITLE>
</HEAD>
<BODY onLoad="document.login.u.focus()">
<H3 align=center>Login SHARE Requirements <FONT
SIZE="-1">Version 2005-02-14</FONT></H3>

<B><%= status %></B><BR>

<Form name=login action=reqsLogin.jsp>
<TABLE>
<TR><TD align=right>UserName: </TD>
    <TD><INPUT name=u type=text size=20
value='<%=userID%>'></TD></TR>
<TR><TD align=right>Password: </TD>
```

```
    <TD><INPUT name=x type=password size=10
value='<%=codeWord%>'></TD></TR>
<TR><TD align=right>Project:  </TD>
    <TD><INPUT name=p type=text size=4
value='<%=project%>'></TD></TR>
</TABLE>
<TABLE><TR><TD>
<INPUT type=submit value=Login>
</Form>
</TD><TD>
</TD></TR></TABLE>
</BODY>
</HTML>
```

Using the persistent data object:

```
<%@page contentType="text/html"%>
<%@page pageEncoding="UTF-8"%>
<%@page import="com.jsrsys.web.*"%>
<%@page import="java.util.*"%>
<jsp:useBean id="user" class="com.jsrsys.web.JsrUser"
scope="session" />
<%!
JsrUtil          u = new JsrUtil();
JsrSQL  sql;
JsrSQL  sqlVote;
%>
<%
String   access   = user.getValue("Authority");
if (access.length()==0)
{%>
```

```
   <jsp:forward page="reqsLogin.jsp" /><%
}
int     whoID     = u.getInt(user.getValue("WhoID"));
String  firstName = user.getValue("FirstName");
String   lastName = user.getValue("LastName");
String   userID  = user.getValue("userName");
String   project = user.getValue("Project");
String   company = user.getValue("CompanyName");
String   email   = user.getValue("email");
String   instCode = user.getValue("InstallationCode");
String   ugreqno = "";
%>

<HTML>
<HEAD>
<TITLE>Vote SHARE Requirements</TITLE>
```

```
</HEAD>

<BODY>
<H3 align=center>Vote SHARE Requirements <FONT
SIZE="-1">Version 2005-02-26</FONT></H3>

Member <%=firstName%> <%=lastName%> of
<%=company%> (<%=instCode%>)
has been granted <%=access%> level access to  project
<%=project%>. <BR>
Email: <%=email%>, UserName= <%= userID %>.<BR>
<TABLE><TR><TD>

</TD><TD>
<%
sql     = new JsrSQL("reqs");
```

```
sqlVote = new JsrSQL("reqs");
String sqlVoteQuery = "";
int    voteCount    = 0;
String sqlQuery = "reqs.Text WHERE UGPROJ='" + project
+"' ORDER BY UGREQNO";
int rowCount = sql.setSelect(sqlQuery);
if (rowCount == 0)
{
%>
No requirements are open for voting for <%= project %>
<BR>SQL: <%= sqlQuery %> <A HREF="getLog.jsp"
TARGET="_blank">View Status Log</A>
<%
}
else
{
```

```
%>
<B><BR>
<%= project %> has <%= rowCount %> requirements open
for voting.</B>
<% } %>
</TD></TR></TABLE>

<BR><B>
+5 VITAL to your installation, +4  Important, +3 Useful, +2
"Nice", +1  NO importance<BR>
 0 means Abstain.  The vote is NOT counted in
computing the average.<BR>
-1 disagreement of NO importance, -2  low impact, -3
medium impact, -4 high impact, -5 extreme
impact<BR><BR>
</B>
```

<!-- LI>Click on underlined requirement # to see full display for that requirement.</LI>
<LI>** column is priority of any votes you cast earlier. </LI -->
<TABLE BORDER=8>
<TR><TH valign="bottom">+5</TH><TH VALIGN="bottom">+4</TH><TH VALIGN="bottom">+3</TH><TH VALIGN="bottom">+2</TH><TH VALIGN="bottom">+1</TH><TH VALIGN="bottom">0</TH>
<TH VALIGN="bottom">-1</TH><TH VALIGN="bottom">-2</TH><TH VALIGN="bottom">-3</TH><TH VALIGN="bottom">-4</TH><TH VALIGN="bottom">-5</TH><TH VALIGN="bottom">**</TH>
<TH align="left"></TH><TH align="left" valign="bottom">

```
    <FORM name="switch" action=reqsVote3.jsp>
    <INPUT type=submit value='Display Title and
Description'></FORM>
</TH>
</TR>
<FORM name="SQLUpdate" method="get"
action=reqsVoteResults2.jsp>
<%
while (sql.setNextRow())
{
  ugreqno = sql.getString("UGREQNO");
  sqlVoteQuery = "Vote WHERE UGREQNO='" + ugreqno +"'
AND WhoID =" + whoID ;
  voteCount = sqlVote.setSelect(sqlVoteQuery);
  if (voteCount == 0) sqlVoteQuery = "  ";
  else
```

```
  {
    sqlVote.setNextRow();
    sqlVoteQuery = sqlVote.getString("VoteXX");
  }
%>

<TR> <TD><INPUT  type="Radio" value="+5" name="<%=
ugreqno %>">
</TD><TD><INPUT  type="Radio" value="+4" name="<%=
ugreqno %>">
</TD><TD><INPUT  type="Radio" value="+3" name="<%=
ugreqno %>">
</TD><TD><INPUT  type="Radio" value="+2" name="<%=
ugreqno %>">
</TD><TD><INPUT  type="Radio" value="+1" name="<%=
ugreqno %>">
```

```
</TD><TD><INPUT  type="Radio" value="00" name="<%=
ugreqno %>">
</TD><TD><INPUT  type="Radio" value="-1" name="<%=
ugreqno %>">
</TD><TD><INPUT  type="Radio" value="-2" name="<%=
ugreqno %>">
</TD><TD><INPUT  type="Radio" value="-3" name="<%=
ugreqno %>">
</TD><TD><INPUT  type="Radio" value="-4" name="<%=
ugreqno %>">
</TD><TD><INPUT  type="Radio" value="-5" name="<%=
ugreqno %>">
</TD>
<TD>
<%= sqlVoteQuery %>
</TD>
```

```
<TD>
<A TARGET="_blank" HREF='reqsDisplay2.jsp?r=<%=
ugreqno %>'>
<FONT FACE='Lucida Console'><B><%= ugreqno
%></B></FONT></A>
</TD>

<TD>
<%= sql.getString("Title") %>
</TD>
</TR>
<%
}
sql.close();
sqlVote.close();
%>
```

```
</TABLE>

<TABLE>
<TR><TD>
<INPUT TYPE='hidden' name='n' VALUE='<%= rowCount
%>' >
<INPUT title='Vote' type=submit value='Commit Vote'
name='voteButton'>
</FORM> </TD><TD>
<Form name="logout" method="post"
action="reqsLogout.jsp">
<INPUT type=submit value=Logout>
</Form></TD>
</TD>
<% if (!access.equals("member"))
{%>
```

```
<TD>
<Form name="voteDisplay" method="post"
action="reqsVoteRep.jsp">
<INPUT type=submit value=DisplayVotesSoFar>
</Form></TD>
<%}%>

</TR></TABLE>
<B>
<LI>You can vote as often as you want, only your most
recent vote will be recorded.   Thus if you are not
sure about a vote, go ahead and vote anyway.   Then
later, perhaps after confering with a colleague, you can
come back and change the vote. </LI>
</B>
```

</BODY>
</HTML>