Dt : 21/6/2022

faq:

define JSP Life-Cycle?

 =>JSP Life-Cycle demonstrates different states of JSP program

from starting of execution to ending of execution.

 =>The following are the stages of JSP Life-Cycle:

   (a)Translation process

   (b)Compilation Process

   (c)Loading process

   (d)Instantiation process

   (e)Initialization process

   (f)Request Handling process

   (g)Destroying process

(a)Translation process:

   =>The process of separating the JavaCode(ServletCode) from JSP

programs is known as Translation process.

(b)Compilation Process:

   =>The process of compiling the Source code generated from

Translation process is known as Compilation process.

Note:

  =>After Compilation process the source code is destroyed.

(c)Loading process:

   =>The process of loading JSP program for execution is known

as Loading process.

(d)Instantiation process:

   =>When the JSP program is loaded then it is automatically

instantiated known as Instantiation process.

   =>After instantiation process we can find the following

Life-Cycle methods:

     (i)jspInit()

     (ii)jspService()

     (iii)jspDestroy()

(e)Initialization process:

   =>The process of making the programming components ready for

execution is known as Initialization process.
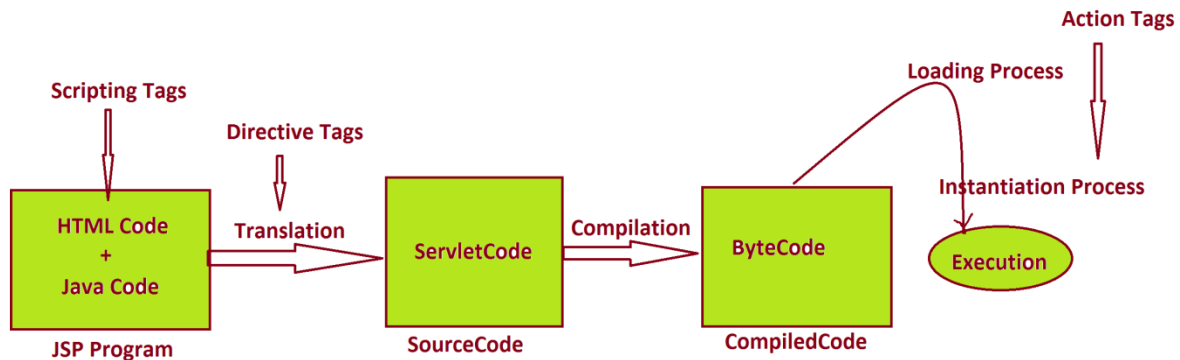
(f)Request Handling process:

   =>The process of accepting the request and providing the

response is known as 'Request Handling Process'.

(g)Destroying process:

=>The process of destroying the JSP instances is known as

sestroying process.

Diagram:

===
======

*imp

Web Architecture Models:(Web Application Architectures)

Two types of development models are used in Java for Web

applications,and these models are classified based on the

*different approaches used to develop Web applications.*

These models are:

1. Model-1 Architecture

2. Model-2 Architecture(MVC)

1. Model-1 Architecture:

The Model-1 architecture was the first development model used to develop Web applications and this model uses JSP to design applications and, which is responsible for all the activities and functionalities provided by the application.

Diagram:
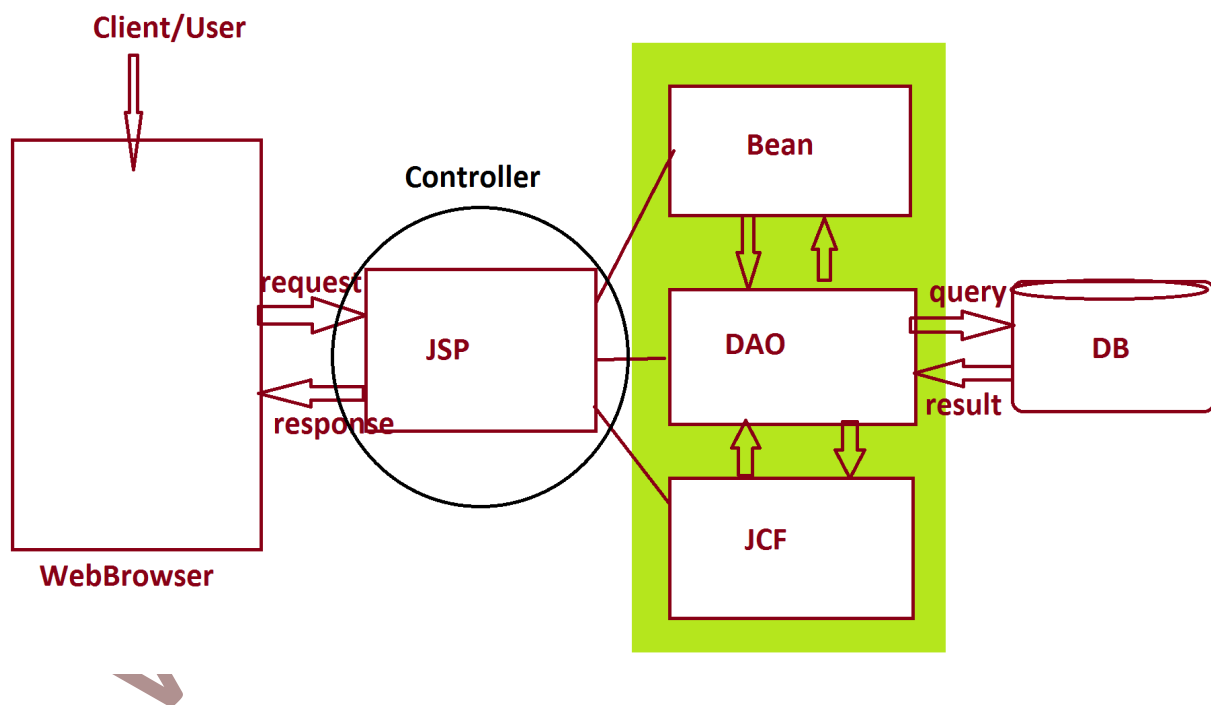
Limitations of the Model-1 Architecture:

(i).Applications are inflexible and difficult to maintain.

A single change in one page may cause changes in other pages,

leading to unpredictable results.

(ii).Involves the developer at both the page development and the

business logic implementation stages.

(iii).Increases the complexity of a program with the increase in

the size of the JSP page.

Exp:

  JSP_App1

  JSP_App2

  JSP_App3

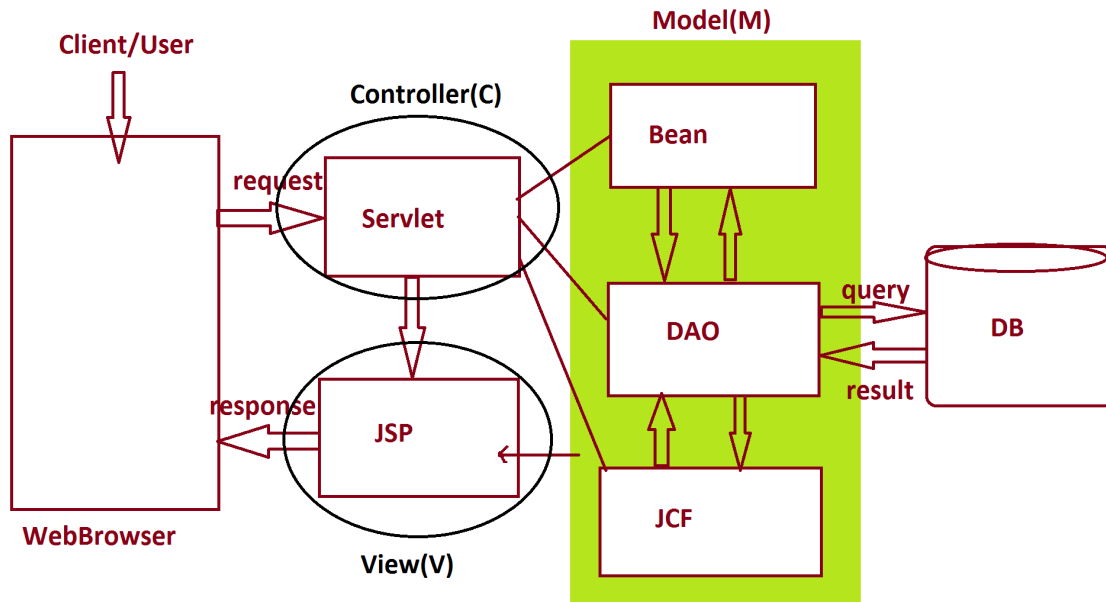==

2. Model-2 Architecture:

=>The draw backs in the Model-1 architecture led to the

introduction of a new model called Model-2.

=>The Model-2 architecture was targeted at overcoming the

drawbacks of Model-1 and helping developers to design more

powerful Web applications and this Model-2 architecture is based

on the MVC design model.

Diagram:

=>MVC Stands for Model View Controller.

Model: Represents enterprise data and business rules that specify how data is accessed and updated,and which is generally implemented by using JavaBeans.

View: Shows the contents of a Model.The View component accesses enterprise data through the Model component and specifies how that data should be presented and this View Component is designed by JSP.

Controller: Receives HTTP requests. The Controller component receives requests from a client, determines the business logic to be performed,and delegates the responsibility for producing the next phase of the user interface to an appropriate view component. The Controller has complete control over each view, implying that any change in the Model component is immediately reflected in all the Views of an application.

The Controller component is implemented by servlets.

Advantages of Model-2 Architecture:

(i)Allows use of reusable software components to design the Business logic. Therefore, these components can be used in the business logic of other applications.

(ii)Offers great flexibility to the presentation logic, which can be modified without effecting the business logic.

JSP_MVC : UserApp

login.html

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
  <form action="log" method="post">
```

```html
UserName:<input type="text" name="uname"><br>
PassWord:<input type="password" name="pword"><br>
<input type="submit" value="Login">
<a href="register.html">NewUser></a>
</form>
</body>
</html>
```

register.html

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
  <form action="reg" method="post">
  UserName:<input type="text" name="uname"><br>
  PassWord:<input type="password" name="pword"><br>
  FirstName:<input type="text" name="fname"><br>
  LastName:<input type="text" name="lname"><br>
  Address:<input type="text" name="addr"><br>
  MailId:<input type="text" name="mid"><br>
  PhoneNo:<input type="text" name="phno"><br>
  <input type="submit" value="Register">
  </form>
</body>
</html>
```

link.html

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<a href="view">ViewProfile</a>
<a href="edit">EditProfile</a>
<a href="logout">Logout</a>
</body>
</html>
```

DBConnection.java

```java
/*SingleTon Class design pattern*/
```

```java
package test;
import java.sql.*;
public class DBConnection {
     private static Connection con=null;
    private DBConnection() {}
    static
    {
     try {
        Class.forName("oracle.jdbc.driver.OracleDriver");
        con = DriverManager.getConnection

("jdbc:oracle:thin:@localhost:1521:xe","system","manager");
     }catch(Exception e) {e.printStackTrace();}
    }//end of block
    public static Connection getCon()
    {
     return con;
    }
}
```

UserBean.java

```java
package test;
import java.io.*;
@SuppressWarnings("serial")
public class UserBean implements Serializable{
   private String uName,pWord,fName,lName,addr,mId;
   private long phNo;
   public UserBean() {}
public String getuName() {
    return uName;
}
public void setuName(String uName) {
    this.uName = uName;
}
public String getpWord() {
    return pWord;
}
public void setpWord(String pWord) {
    this.pWord = pWord;
}
public String getfName() {
    return fName;
}
public void setfName(String fName) {
    this.fName = fName;
```

```java
    }
    public String getlName() {
        return lName;
    }
    public void setlName(String lName) {
        this.lName = lName;
    }
    public String getAddr() {
        return addr;
    }
    public void setAddr(String addr) {
        this.addr = addr;
    }
    public String getmId() {
        return mId;
    }
    public void setmId(String mId) {
        this.mId = mId;
    }
    public long getPhNo() {
        return phNo;
    }
    public void setPhNo(long phNo) {
        this.phNo = phNo;
    }

}
```

RegisterDAO.java

```java
package test;
import java.sql.*;
public class RegisterDAO {
    public int k=0;
    public int register(UserBean ub)
    {
    try {
        Connection con = DBConnection.getCon();
        PreparedStatement ps = con.prepareStatement
        ("insert into UserReg44 values(?,?,?,?,?,?,?)");
        ps.setString(1,ub.getuName());
        ps.setString(2,ub.getpWord());
        ps.setString(3,ub.getfName());
        ps.setString(4,ub.getlName());
        ps.setString(5,ub.getAddr());
        ps.setString(6,ub.getmId());
```

```java
                    ps.setLong(7,ub.getPhNo());
                    k = ps.executeUpdate();
            }catch(Exception e) {e.printStackTrace();}
            return k;
        }
}
```

RegisterServlet.java

package test;

import java.io.*;

import javax.servlet.*;

import javax.servlet.http.*;

import javax.servlet.annotation.*;

@SuppressWarnings("serial")

@WebServlet("/reg")

public class RegisterServlet extends HttpServlet{

    protected void doPost(HttpServletRequest req,

    HttpServletResponse res)throws ServletException,IOException

    {

        UserBean ub = new UserBean();//Bean Object

        ub.setuName(req.getParameter("uname"));

        ub.setpWord(req.getParameter("pword"));

        ub.setfName(req.getParameter("fname"));

        ub.setlName(req.getParameter("lname"));

        ub.setAddr(req.getParameter("addr"));

        ub.setmId(req.getParameter("mid"));

```java
                ub.setPhNo(Long.parseLong(req.getParameter("phno")));

                int k = new RegisterDAO().register(ub);

                if(k>0) {

                        RequestDispatcher rd=

                                        req.getRequestDispatcher("register.jsp");

                        rd.forward(req, res);

                }

        }

}
```

register.jsp

```jsp
<%@ page language="java"
        contentType="text/html; charset=ISO-8859-1"
        pageEncoding="ISO-8859-1"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<%
 out.println("User registered Successfully...<br>");
%>
<jsp:include page="login.html"/>
</body>
</html>
```

LoginDAO.java

```java
package test;

import java.sql.*;

import javax.servlet.http.*;

public class LoginDAO {
```

```java
public UserBean ub=null;

public UserBean login(HttpServletRequest req)

{

        try {

                Connection con = DBConnection.getCon();

                PreparedStatement ps = con.prepareStatement

                ("select * from UserReg44 where uname=? and pword=?");

                ps.setString(1,req.getParameter("uname"));

                ps.setString(2,req.getParameter("pword"));

                ResultSet rs = ps.executeQuery();

                if(rs.next())

                {

                        ub = new UserBean();//Bean Object

                        ub.setuName(rs.getString(1));

                        ub.setpWord(rs.getString(2));

                        ub.setfName(rs.getString(3));

                        ub.setlName(rs.getString(4));

                        ub.setAddr(rs.getString(5));

                        ub.setmId(rs.getString(6));

                        ub.setPhNo(rs.getLong(7));

                }

        }catch(Exception e) {e.printStackTrace();}

        return ub;

}
```

```java
}
```

LoginServlet.java

```java
package test;

import java.io.*;

import javax.servlet.*;

import javax.servlet.http.*;

import javax.servlet.annotation.*;

@SuppressWarnings("serial")

@WebServlet("/log")

public class LoginServlet extends HttpServlet{

 protected void doPost(HttpServletRequest req,

            HttpServletResponse res)throws ServletException,IOException

 {

        UserBean ub = new LoginDAO().login(req);

        if(ub==null) {

                req.setAttribute("msg","Invalid Login Process...<br>");

                RequestDispatcher rd=req.getRequestDispatcher("Invalid.jsp");

                rd.forward(req, res);

        }else {

                HttpSession hs = req.getSession();

                hs.setAttribute("ubean",ub);

                RequestDispatcher rd=req.getRequestDispatcher("Valid.jsp");

                rd.forward(req, res);

                }
```

```
    }

}
```

Valid.jsp

```jsp
<%@ page language="java"
    contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"
    import="test.*"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<%
UserBean ub = (UserBean)session.getAttribute("ubean");
out.println("Welcome User "+ub.getfName()+"<br>");
%>
<jsp:include page="link.html"/>
</body>
</html>
```

Invalid.jsp

```jsp
<%@ page language="java"
        contentType="text/html; charset=ISO-8859-1"
        pageEncoding="ISO-8859-1"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<%
String msg = (String)request.getAttribute("msg");
out.println(msg+"<br>");
%>
<jsp:include page="login.html"/>
</body>
</html>
```

LogoutServlet.java

```java
package test;

import java.io.*;

import javax.servlet.*;

import javax.servlet.http.*;

import javax.servlet.annotation.*;

@SuppressWarnings("serial")

@WebServlet("/logout")

public class LogoutServlet extends HttpServlet{

 protected void doGet(HttpServletRequest req,

                HttpServletResponse res)throws ServletException,IOException

 {

        HttpSession hs = req.getSession(false);

        if(hs==null) {

                req.setAttribute("msg","Session Expired...<br>");

        }else {

                hs.removeAttribute("ubean");

                hs.invalidate();

                req.setAttribute("msg","User LoggedOut Successfully...<br>");

        }

        RequestDispatcher rd = req.getRequestDispatcher("Invalid.jsp");

        rd.forward(req, res);

 }

}
```

ViewProfileServlet.java

```java
package test;

import java.io.*;

import javax.servlet.*;

import javax.servlet.http.*;

import javax.servlet.annotation.*;

@SuppressWarnings("serial")

@WebServlet("/view")

public class ViewProfileServlet extends HttpServlet{

 protected void doGet(HttpServletRequest req,

        HttpServletResponse res)throws ServletException,IOException{

      HttpSession hs = req.getSession(false);

                //Access existing Session

      if(hs==null) {

            req.setAttribute("msg","Session expired...<br>");

            RequestDispatcher rd=req.getRequestDispatcher("Invalid.jsp");

            rd.forward(req, res);

      }else {

            RequestDispatcher rd =

                        req.getRequestDispatcher("View.jsp");

            rd.forward(req, res);

                   }

  }


}
```

View.jsp

```jsp
<%@ page language="java"
         contentType="text/html; charset=ISO-8859-1"
         pageEncoding="ISO-8859-1"
         import="test.*"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<%
UserBean ub = (UserBean)session.getAttribute("ubean");
out.println("page of "+ub.getfName()+"<br>");
out.println(ub.getfName()+"&nbsp&nbsp"+ub.getlName()+
        "&nbsp&nbsp"+ub.getAddr()+"&nbsp&nbsp"+
            ub.getmId()+"&nbsp&nbsp"+ub.getPhNo()+"<br>");
%>
<a href="edit">EditProfile</a>
<a href="logout">Logout</a>
</body>
</html>
```

EditProfileServlet.java

```java
package test;

import java.io.*;

import javax.servlet.*;

import javax.servlet.http.*;

import javax.servlet.annotation.*;

@SuppressWarnings("serial")

@WebServlet("/edit")

public class EditProfileServlet extends HttpServlet{

    protected void doGet(HttpServletRequest req,

        HttpServletResponse res)throws ServletException,IOException{

            HttpSession hs = req.getSession(false);
```

```java
            if(hs==null) {

                    req.setAttribute("msg","Session expired...<br>");

                    RequestDispatcher rd =

                            req.getRequestDispatcher("Invalid.jsp");

                    rd.forward(req, res);

            }else {

                    RequestDispatcher rd =

                            req.getRequestDispatcher("Edit.jsp");

                    rd.forward(req, res);

            }

        }

}
```

Edit.jsp

```jsp
<%@ page language="java"
        contentType="text/html; charset=ISO-8859-1"
        pageEncoding="ISO-8859-1"
        import="test.*"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<%
UserBean ub = (UserBean)session.getAttribute("ubean");
%>
<form action="update" method="post">
Address:<input type="text" name="addr" value="<%=
ub.getAddr()%>"><br>
MailId:<input type="text" name="mid" value="<%=
ub.getmId()%>"><br>
PhNo:<input type="text" name="phno" value="<%=
ub.getPhNo()%>"><br>
```

```html
<input type="submit" value="UpdateProfile">
</form>
</body>
</html>
```

UpdateDAO.java

```java
package test;
import java.sql.*;
public class UpdateDAO {
    public int k=0;
    public int update(UserBean ub) {
      try {
            Connection con = DBConnection.getCon();
            PreparedStatement ps = con.prepareStatement
              ("update UserReg44 set addr=?,mid=?,phno=? where
uname=? and pword=?");
            ps.setString(1,ub.getAddr());
            ps.setString(2,ub.getmId());
            ps.setLong(3,ub.getPhNo());
            ps.setString(4,ub.getuName());
            ps.setString(5,ub.getpWord());
            k = ps.executeUpdate();
      }catch(Exception e) {e.printStackTrace();}
      return k;
    }
}
```

UpdateProfileServlet.java

package test;

import java.io.*;

import javax.servlet.*;

import javax.servlet.http.*;

import javax.servlet.annotation.*;

@SuppressWarnings("serial")

```java
@WebServlet("/update")

public class UpdateProfileServlet extends HttpServlet{

    protected void doPost(HttpServletRequest req,

        HttpServletResponse res)throws ServletException,IOException{

        HttpSession hs = req.getSession(false);

        if(hs==null) {

            req.setAttribute("msg","Session Expired...<br>");

            RequestDispatcher rd=

                    req.getRequestDispatcher("Invalid.jsp");

            rd.forward(req, res);

        }else {

            UserBean ub = (UserBean)hs.getAttribute("ubean");

            ub.setAddr(req.getParameter("addr"));

            ub.setmId(req.getParameter("mid"));

            ub.setPhNo(Long.parseLong(req.getParameter("phno")));

            int k = new UpdateDAO().update(ub);

            if(k>0) {

                RequestDispatcher rd =

                        req.getRequestDispatcher("Update.jsp");

                rd.forward(req, res);

            }

        }

    }

}
```

Update.jsp

```jsp
<%@ page language="java"
        contentType="text/html; charset=ISO-8859-1"
        pageEncoding="ISO-8859-1"
        import="test.*"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<%
UserBean ub = (UserBean)session.getAttribute("ubean");
out.println("Page of "+ub.getfName()+"<br>");
out.println("Profile Updated Successfully...<br>");
%>
<jsp:include page="link.html"/>
</body>
</html>
```

web.xml

```xml
<?xml version="1.0" encoding="UTF-8"?>
<web-app>
  <welcome-file-list>
      <welcome-file>login.html</welcome-file>
  </welcome-file-list>
</web-app>
```

==

DBConnection.java

```java
/*SingleTon Class design pattern*/
package test;
import java.sql.*;
public class DBConnection {
     private static Connection con=null;
    private DBConnection() {}
    static
    {
     try {
         Class.forName("oracle.jdbc.driver.OracleDriver");
         con = DriverManager.getConnection

("jdbc:oracle:thin:@localhost:1521:xe","system","manager");
      }catch(Exception e) {e.printStackTrace();}
    }//end of block
    public static Connection getCon()
    {
     return con;
    }
}
```

ProductBean.java

```java
package test;
import java.io.*;;
@SuppressWarnings("serial")
public class ProductBean implements Serializable{
    private String code,name;
    private float price;
    private int qty;
    public ProductBean() {}
    public String getCode() {
        return code;
    }
    public void setCode(String code) {
        this.code = code;
    }
    public String getName() {
        return name;
    }
    public void setName(String name) {
        this.name = name;
```

```java
        }
    public float getPrice() {
        return price;
    }
    public void setPrice(float price) {
        this.price = price;
    }
    public int getQty() {
        return qty;
    }
    public void setQty(int qty) {
        this.qty = qty;
    }

}
```

home.html

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
  <form action="home" method="post">
  <input type="submit" name="s1" value="UserLogin">
  <input type="submit" name="s1" value="AdminLogin">
  </form>
</body>
</html>
```

HomeServlet.java

```java
package test;

import java.io.*;

import javax.servlet.*;

import javax.servlet.http.*;

import javax.servlet.annotation.*;

@SuppressWarnings("serial")
```

```java
@WebServlet("/home")

public class HomeServlet extends HttpServlet{

    protected void doPost(HttpServletRequest req,

        HttpServletResponse res)throws ServletException,IOException{

        String s1 = req.getParameter("s1");

        ServletContext sct = this.getServletContext();

        sct.setAttribute("logintype", s1);//Added to Context Object

        if(s1.equals("UserLogin")) {

                RequestDispatcher rd =

                        req.getRequestDispatcher("Login1.html");

                rd.forward(req, res);

        }else {

                RequestDispatcher rd =

                        req.getRequestDispatcher("Login2.html");

                rd.forward(req, res);

        }

    }

}
```

Login1.html(UserLogin)

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
  <form action="log1" method="post">
  UserName:<input type="text" name="uname"><br>
  PassWord:<input type="text" name="pword"><br>
```

```html
    <input type="submit" value="Login">
    <a href="Register.html">NewUser?</a>
    </form>
</body>
</html>
```

Login2.html(AdminLogin)

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
    <form action="log2" method="post">
    UserName:<input type="text" name="uname"><br>
    PassWord:<input type="text" name="pword"><br>
    <input type="submit" value="login">
    </form>
</body>
</html>
```

UserBean.java

```java
package test;
import java.io.*;
@SuppressWarnings("serial")
public class UserBean implements Serializable{
    private String uName,pWord,fName,lName,addr,mId;
    private long phNo;
    public UserBean() {}
public String getuName() {
    return uName;
}
public void setuName(String uName) {
    this.uName = uName;
}
public String getpWord() {
    return pWord;
}
public void setpWord(String pWord) {
    this.pWord = pWord;
}
public String getfName() {
    return fName;
}
```

```java
public void setfName(String fName) {
    this.fName = fName;
}
public String getlName() {
    return lName;
}
public void setlName(String lName) {
    this.lName = lName;
}
public String getAddr() {
    return addr;
}
public void setAddr(String addr) {
    this.addr = addr;
}
public String getmId() {
    return mId;
}
public void setmId(String mId) {
    this.mId = mId;
}
public long getPhNo() {
    return phNo;
}
public void setPhNo(long phNo) {
    this.phNo = phNo;
}

}
```

LoginDAO.java

package test;

import java.sql.*;

import javax.servlet.*;

import javax.servlet.http.*;

public class LoginDAO {

    public UserBean ub=null;

    public UserBean login(HttpServletRequest req) {

```java
try {

        Connection con = DBConnection.getCon();

        ServletContext sct = req.getServletContext();

        String s1 = (String)sct.getAttribute("logintype");

        if(s1.equals("UserLogin")) {

         PreparedStatement ps = con.prepareStatement

        ("select * from UserReg44 where uname=? and pword=?");

         ps.setString(1,req.getParameter("uname"));

         ps.setString(2,req.getParameter("pword"));

         ResultSet rs = ps.executeQuery();

         if(rs.next()) {

                ub = new UserBean();

                ub.setuName(rs.getString(1));

                ub.setpWord(rs.getString(2));

                ub.setfName(rs.getString(3));

                ub.setlName(rs.getString(4));

                ub.setAddr(rs.getString(5));

                ub.setmId(rs.getString(6));

                ub.setPhNo(rs.getLong(7));

         }

        }else {

         PreparedStatement ps = con.prepareStatement

          ("select * from AdminReg44 where uname=? and pword=?");

         ps.setString(1,req.getParameter("uname"));
```

```java
            ps.setString(2,req.getParameter("pword"));

            ResultSet rs = ps.executeQuery();

            if(rs.next()) {

                    ub = new UserBean();

                    ub.setuName(rs.getString(1));

                    ub.setpWord(rs.getString(2));

                    ub.setfName(rs.getString(3));

                    ub.setlName(rs.getString(4));

                    ub.setAddr(rs.getString(5));

                    ub.setmId(rs.getString(6));

                    ub.setPhNo(rs.getLong(7));

              }

              }

      }catch(Exception e) {e.printStackTrace();}

      return ub;

   }

}
UserLoginServlet.java

package test;

import java.io.*;

import javax.servlet.*;

import javax.servlet.http.*;

import javax.servlet.annotation.*;

@SuppressWarnings("serial")
```

```java
@WebServlet("/log1")

public class UserLoginServlet extends HttpServlet{

  protected void doPost(HttpServletRequest req,

    HttpServletResponse res)throws ServletException,IOException{

        UserBean ub = new LoginDAO().login(req);

        if(ub==null) {

            req.setAttribute("msg","Invalid Login Process...<br>");

            RequestDispatcher rd =

                        req.getRequestDispatcher("Invalid.jsp");

            rd.forward(req, res);

        }else {

            HttpSession hs = req.getSession();//Creating Session

            hs.setAttribute("ubean",ub);

            RequestDispatcher rd =

                        req.getRequestDispatcher("Valid.jsp");

            rd.forward(req, res);

        }

  }

}
```

Invalid.jsp

```jsp
<%@ page language="java"
        contentType="text/html; charset=ISO-8859-1"
        pageEncoding="ISO-8859-1"
        %>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
```

```jsp
<title>Insert title here</title>
</head>
<body>
 <%
 String msg = (String)request.getAttribute("msg");
 out.println(msg+"<br>");
 %>
 <jsp:include page="home.html"/>
</body>
</html>
```

Valid.jsp

```jsp
<%@ page language="java"
        contentType="text/html; charset=ISO-8859-1"
        pageEncoding="ISO-8859-1"
        import="test.*"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
 <%
   UserBean ub = (UserBean)session.getAttribute("ubean");
   String s1 = (String)application.getAttribute("logintype");
   if(s1.equals("UserLogin")){
       out.println("Welcome User "+ub.getfName()+"<br>");
       %>
       <jsp:include page="link1.html"/>
       <%
   }else{
       out.println("Welcome Admin "+ub.getfName()+"<br>");
       %>
       <jsp:include page="link2.html"/>
       <%
   }
 %>
</body>
</html>
```

link1.html

```html
<!DOCTYPE html>
<html>
<head>
```

```html
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<a href="profile">ViewProfile</a>
<a href="view">ViewProducts</a>
<a href="logout">Logout</a>
</body>
</html>
```

link2.html

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
 <a href="">ViewProfile</a>
 <a href="">ViewProducts</a>
 <a href="">EditProduct</a>
 <a href="">DeleteProduct</a>
 <a href="logout">Logout</a>
</body>
</html>
```

UserLoginServlet.java

package test;

import java.io.*;

import javax.servlet.*;

import javax.servlet.http.*;

import javax.servlet.annotation.*;

@SuppressWarnings("serial")

@WebServlet("/log1")

public class UserLoginServlet extends HttpServlet{

  protected void doPost(HttpServletRequest req,

    HttpServletResponse res)throws ServletException,IOException{

```java
        UserBean ub = new LoginDAO().login(req);

        if(ub==null) {

                req.setAttribute("msg","Invalid Login Process...<br>");

                RequestDispatcher rd =

                                req.getRequestDispatcher("Invalid.jsp");

                rd.forward(req, res);

        }else {

                HttpSession hs = req.getSession();//Creating Session

                hs.setAttribute("ubean",ub);

                RequestDispatcher rd =

                                req.getRequestDispatcher("Valid.jsp");

                rd.forward(req, res);

        }

  }

}
```

web.xml

```xml
<?xml version="1.0" encoding="UTF-8"?>
<web-app>
  <welcome-file-list>
    <welcome-file>home.html</welcome-file>
  </welcome-file-list>
</web-app>
```

AdminLoginServlet.java

```java
package test;

import java.io.*;

import javax.servlet.*;

import javax.servlet.http.*;
```

```java
import javax.servlet.annotation.*;

@SuppressWarnings("serial")

@WebServlet("/log2")

public class AdminLoginServlet extends HttpServlet{

    protected void doPost(HttpServletRequest req,

        HttpServletResponse res)throws ServletException,IOException{

            UserBean ub = new LoginDAO().login(req);

            if(ub==null) {

                req.setAttribute("msg","Invalid Login Process...<br>");

                RequestDispatcher rd =

                            req.getRequestDispatcher("Invalid.jsp");

                rd.forward(req, res);

            }else {

                HttpSession hs = req.getSession();//Creating Session

                hs.setAttribute("ubean",ub);

                RequestDispatcher rd =

                                req.getRequestDispatcher("Valid.jsp");

                rd.forward(req, res);

            }

    }

}

 ViewProfileServlet.java

package test;

import java.io.*;
```

```java
import javax.servlet.*;

import javax.servlet.http.*;

import javax.servlet.annotation.*;

@SuppressWarnings("serial")

@WebServlet("/profile")

public class ViewProfileServlet extends HttpServlet{

  protected void doGet(HttpServletRequest req,

        HttpServletResponse res)throws ServletException,IOException{

        HttpSession hs = req.getSession(false);

                //Access existing Session

        if(hs==null) {

                req.setAttribute("msg","Session expired...<br>");

                RequestDispatcher rd=req.getRequestDispatcher("Invalid.jsp");

                rd.forward(req, res);

        }else {

                RequestDispatcher rd =

                        req.getRequestDispatcher("View.jsp");

                rd.forward(req, res);

        }

  }


}
```

View.jsp

```jsp
<%@ page language="java"
        contentType="text/html; charset=ISO-8859-1"
```

```jsp
            pageEncoding="ISO-8859-1"
            import="test.*"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<%
 UserBean ub = (UserBean)session.getAttribute("ubean");
 out.println(ub.getfName()+"&nbsp&nbsp"+ub.getlName()+
            "&nbsp&nbsp"+ub.getAddr()+"7nbsp&nbsp"+
            "&nbsp&nbsp"+ub.getmId()+"&nbsp&nbsp"+
            ub.getPhNo()+"<br>");
 String s1 = (String)application.getAttribute("logintype");
 if(s1.equals("UserBean")){
        %>
    <jsp:include page="link1.html"/>
        <%
 }else{
        %>
    <jsp:include page="link2.html"/>
        <%
 }
%>
</body>
</html>
```

RetrieveDAO.java

package test;

import java.sql.*;

import java.util.*;

public class RetrieveDAO {

    public ArrayList<ProductBean> al = new ArrayList<ProductBean>();

    public ArrayList<ProductBean> retrieve()

    {

        try {

```java
        Connection con = DBConnection.getCon();//Accessing Connection

        PreparedStatement ps = con.prepareStatement

                ("select * from Product44");

        ResultSet rs = ps.executeQuery();

        while(rs.next())

        {

                ProductBean pb = new ProductBean();//Bean Object

                pb.setCode(rs.getString(1));

                pb.setName(rs.getString(2));

                pb.setPrice(rs.getFloat(3));

                pb.setQty(rs.getInt(4));

                al.add(pb);//Adding bean object to ArrayList

        }//end of loop

    }catch(Exception e) {e.printStackTrace();}

    return al;

  }

}
```

ViewProductsServlet.java

```java
package test;

import java.util.*;

import java.io.*;

import javax.servlet.*;

import javax.servlet.http.*;

import javax.servlet.annotation.*;
```

```java
@SuppressWarnings("serial")

@WebServlet("/view")

public class ViewProductsServlet extends HttpServlet{

    protected void doGet(HttpServletRequest req,HttpServletResponse res)throws

    ServletException,IOException{

        HttpSession hs = req.getSession();

        if(hs==null) {

                req.setAttribute("msg","Session expired...<br>");

                RequestDispatcher rd = req.getRequestDispatcher("Invalid.jsp");

                rd.forward(req, res);

        }else {

        ArrayList<ProductBean> al = new RetrieveDAO().retrieve();

        hs.setAttribute("al", al);

        RequestDispatcher rd =

                req.getRequestDispatcher("ViewProducts.jsp");

    rd.forward(req, res);

        }

    }

}
```

ViewProducts.jsp

```jsp
<%@ page language="java"
        contentType="text/html; charset=ISO-8859-1"
        pageEncoding="ISO-8859-1"
        import="test.*,java.util.*"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
```

```jsp
<title>Insert title here</title>
</head>
<body>
<%
UserBean ub = (UserBean)session.getAttribute("ubean");
ArrayList<ProductBean> al =
        (ArrayList<ProductBean>)session.getAttribute("al");
out.println("Page of "+ub.getfName()+"<br>");
if(al.size()==0){
    out.println("Products Not Available....<br>");
}else{
    Iterator<ProductBean> it = al.iterator();
    while(it.hasNext())
    {
        ProductBean pb = (ProductBean)it.next();
        out.println(pb.getCode()+"&nbsp&nbsp"+pb.getName()+
                "&nbsp&nbsp"+pb.getPrice()+
                "&nbsp&nbsp"+pb.getQty()+"<br>");
    }//end of loop
}//end  of elese
String s1 = (String)application.getAttribute("logintype");
if(s1.equals("UserLogin")){
    %>
    <jsp:include page="link1.html"/>
    <%
}else{
    %>
    <jsp:include page="link2.html"/>
    <%
}
%>
</body>
</html>
```

product.html

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
  <form action="add" method="post">
  ProductCode:<input type="text" name="pcode"><br>
  ProductName:<input type="text" name="pname"><br>
  ProductPrice:<input type="text" name="pprice"><br>
```

```html
ProductQty:<input type="text" name="pqty"><br>
<input type="submit" value="AddProduct">
</form>
</body>
</html>
```

InsertDAO.java

```java
package test;
import java.sql.*;
public class InsertDAO {
     public int k=0;
    public int insert(ProductBean pb)
    {
     try {
            Connection con = DBConnection.getCon();//Accessing
the Connection
            PreparedStatement ps = con.prepareStatement
                    ("insert into Product44 values(?,?,?,?)");
            ps.setString(1,pb.getCode());
            ps.setString(2,pb.getName());
            ps.setFloat(3,pb.getPrice());
            ps.setInt(4,pb.getQty());
            k = ps.executeUpdate();
     }catch(Exception e) {e.printStackTrace();}
    return k;
    }
}
```

AddProductServlet.java

```java
package test;

import java.io.*;

import javax.servlet.*;

import javax.servlet.http.*;

import javax.servlet.annotation.*;

@SuppressWarnings("serial")

@WebServlet("/add")

public class AddProductServlet extends HttpServlet{
```

```java
protected void doPost(HttpServletRequest req,HttpServletResponse res)throws
ServletException,IOException{

    HttpSession hs = req.getSession(false);

    if(hs==null) {

        req.setAttribute("msg","Session Expired...<br>");

        RequestDispatcher rd=req.getRequestDispatcher("Invalid.jsp");

        rd.forward(req, res);

    }else {

        ProductBean pb = new ProductBean();

        pb.setCode(req.getParameter("pcode"));

        pb.setName(req.getParameter("pname"));

        pb.setPrice(Float.parseFloat(req.getParameter("pprice")));

        pb.setQty(Integer.parseInt(req.getParameter("pqty")));

        int k = new InsertDAO().insert(pb);

        if(k>0) {

            RequestDispatcher rd =

                    req.getRequestDispatcher("AddProduct.jsp");

            rd.forward(req, res);

        }

    }

}
```

AddProduct.jsp

```jsp
<%@ page language="java"
        contentType="text/html; charset=ISO-8859-1"
```

```jsp
            pageEncoding="ISO-8859-1"
            import="test.*"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<%
UserBean ub = (UserBean)session.getAttribute("ubean");
out.println("page of "+ub.getfName()+"<br>");
out.println("Product Added Successfully...<br>");
%>
<jsp:include page="link2.html"/>
</body>
</html>
```

code1.html

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
  <form action="edit" method="post">
  Enter the ProductCode:<input type="text" name="pcode"><br>
  <input type="submit" value="EditProduct">
  </form>
</body>
</html>
```

code2.html

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
  <form action="delete" method="post">
  Enter the ProductCode:<input type="text" name="pcode"><br>
  <input type="submit" value="DeleteProduct">
  </form>
```

```
</body>
</html>

ProductRetrieveDAO.java

package test;

import java.sql.*;

import javax.servlet.http.*;

public class ProductRetrieveDAO {

    public ProductBean pb=null;

    public ProductBean retrieve(HttpServletRequest req)

    {

        try {

                Connection con = DBConnection.getCon();

                PreparedStatement ps = con.prepareStatement

                 ("select * from Product44 where pcode=?");

                ps.setString(1,req.getParameter("pcode"));

                ResultSet rs = ps.executeQuery();

                if(rs.next())

                {

                        pb = new ProductBean();//Bean Object

                        pb.setCode(rs.getString(1));

                        pb.setName(rs.getString(2));

                        pb.setPrice(rs.getFloat(3));

                        pb.setQty(rs.getInt(4));

                }

        }catch(Exception e) {e.printStackTrace();}
```

```java
        return pb;

    }

}

EditProductServlet.java

package test;

import java.io.*;

import javax.servlet.*;

import javax.servlet.http.*;

import javax.servlet.annotation.*;

@SuppressWarnings("serial")

@WebServlet("/edit")

public class EditProductServlet extends HttpServlet{

    protected void doPost(HttpServletRequest req,

        HttpServletResponse res)throws ServletException,IOException{

            HttpSession hs = req.getSession(false);

            if(hs==null) {

                    req.setAttribute("msg","Session Expired...<br>");

                    RequestDispatcher rd =

                                    req.getRequestDispatcher("Invalid.jsp");

                    rd.forward(req, res);

            }else {

                    ProductBean pb = new ProductRetrieveDAO().retrieve(req);

                    if(pb==null) {

                            RequestDispatcher rd =
```

```
                        req.getRequestDispatcher("EditFail.jsp");

                rd.forward(req, res);

        }else {

                hs.setAttribute("pb",pb);

                RequestDispatcher rd =

                        req.getRequestDispatcher("Edit.jsp");

                rd.forward(req, res);

        }

    }

  }

}
```

Edit.jsp

```jsp
<%@ page language="java"
        contentType="text/html; charset=ISO-8859-1"
        pageEncoding="ISO-8859-1"
        import="test.*"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
  <%
ProductBean pb = (ProductBean)session.getAttribute("pb");
  %>
  <form action="update" method="post">
  ProductPrice:<input type="text" name="pprice"
value="<%=pb.getPrice()%>">
  ProductQty:<input type="text" name="pqty"
value="<%=pb.getQty()%>">
  <input type="submit" value="UpdateProduct">
  </form>
</body>
</html>
```

EditFail.jsp

```jsp
<%@ page language="java"
         contentType="text/html; charset=ISO-8859-1"
         pageEncoding="ISO-8859-1"
         import="test.*"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
  <%
  UserBean ub = (UserBean)session.getAttribute("ubean");
  out.println("page of "+ub.getfName()+"<br>");
  out.println("Invalid ProductCode....<br>");
  %>
  <jsp:include page="link2.html"/>
</body>
</html>
```

UpdateProductDAO.java

```java
package test;
import java.sql.*;
public class UpdateProductDAO {
    public int k=0;
    public int update(ProductBean pb)
    {
     try {
         Connection con = DBConnection.getCon();
         PreparedStatement ps = con.prepareStatement
         ("update Product44 set pprice=?,pqty=? where
pcode=?");
         ps.setFloat(1,pb.getPrice());
         ps.setInt(2,pb.getQty());
         ps.setString(3,pb.getCode());
         k = ps.executeUpdate();
     }catch(Exception e) {e.printStackTrace();}
     return k;
    }
}
```

UpdateProductServlet.java

```java
package test;

import java.io.*;

import javax.servlet.*;

import javax.servlet.http.*;

import javax.servlet.annotation.*;

@SuppressWarnings("serial")

@WebServlet("/update")

public class UpdateProductServlet extends HttpServlet{

  protected void doPost(HttpServletRequest req,

        HttpServletResponse res)throws ServletException,IOException{

        HttpSession hs = req.getSession(false);

      if(hs==null) {

            req.setAttribute("msg","Session Expired...<br>");

            RequestDispatcher rd=

                        req.getRequestDispatcher("Invalid.jsp");

            rd.forward(req, res);

      }else {

            ProductBean pb = (ProductBean)hs.getAttribute("pb");

            pb.setPrice(Float.parseFloat(req.getParameter("pprice")));

            pb.setQty(Integer.parseInt(req.getParameter("pqty")));

            int k = new UpdateProductDAO().update(pb);

            if(k>0)

            {

                    RequestDispatcher rd =
```

```
                    req.getRequestDispatcher("Update.jsp");

            rd.forward(req, res);

        }

    }

  }

}
```

Update.jsp

```jsp
<%@ page language="java"
    contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"
    import="test.*"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<%
UserBean ub = (UserBean)session.getAttribute("ubean");
out.println("Page of "+ub.getfName()+"<br>");
out.println("Product Updated Successfully...<br>");
%>
<jsp:include page="link2.html"/>
</body>
</html>
```

DeleteProductDAO.java

```java
package test;

import java.sql.*;

import javax.servlet.http.*;

public class DeleteProductDAO {

    public int k=0;

    public int delete(HttpServletRequest req)
```

```java
    {

        try {

        Connection con = DBConnection.getCon();

        PreparedStatement ps = con.prepareStatement

          ("delete from Product44 where pcode=?");

        ps.setString(1,req.getParameter("pcode"));

        k = ps.executeUpdate();

        }catch(Exception e) {e.printStackTrace();}

        return k;

    }

}
```

DeleteProductServlet.java

```java
package test;

import java.io.*;

import javax.servlet.*;

import javax.servlet.http.*;

import javax.servlet.annotation.*;

@SuppressWarnings("serial")

@WebServlet("/delete")

public class DeleteProductServlet extends HttpServlet{

  protected void doPost(HttpServletRequest req,

    HttpServletResponse res)throws ServletException,IOException

  {

        HttpSession hs = req.getSession(false);
```

```java
        if(hs==null) {

                req.setAttribute("msg","Session Expired...<br>");

                RequestDispatcher rd=

                            req.getRequestDispatcher("Invalid.jsp");

                rd.forward(req, res);

        }else {

                int k = new DeleteProductDAO().delete(req);

                if(k>0) {

                        RequestDispatcher rd=

                                    req.getRequestDispatcher("Delete.jsp");

                        rd.forward(req, res);

                }

        }

    }

}
```

Delete.jsp

```jsp
<%@ page language="java"
        contentType="text/html; charset=ISO-8859-1"
        pageEncoding="ISO-8859-1"
        import="test.*"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<%
UserBean ub = (UserBean)session.getAttribute("ubean");
out.println("page of "+ub.getfName()+"<br>");
out.println("Product deleted Successfully...<br>");
%>
```

```
<jsp:include page="link2.html"/>
</body>
</html>
```


----
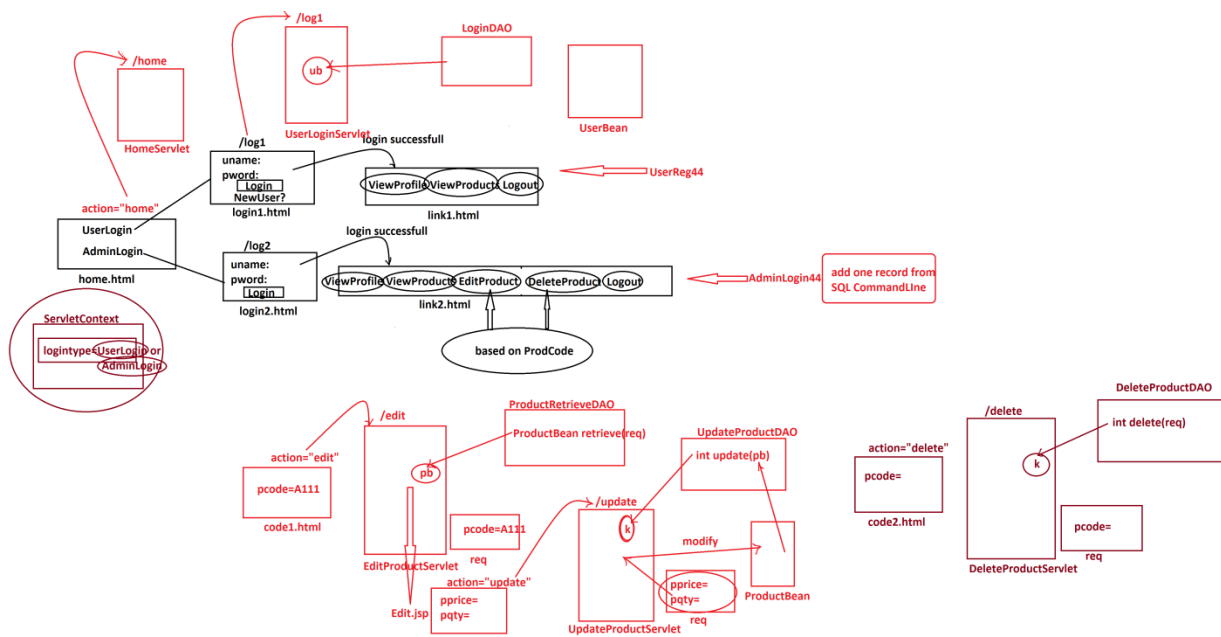
faq:

wt it the diff b/w

(i)JAR

(ii)WAR

(iii)EAR

(i)JAR:

=>JAR means 'Java Archeive' and which is compressed format of

class files.

(ii)WAR:

=>WAR means 'Web Archeive' and which is compressed format of

HTML files,XML file,UI-Files,Servlets,JSP and Jars.

=>WebApplications are converted into WAR files.

(iii)EAR:

=>EAR means 'Enterprise Archeive' and which is compressed format

of Enterprise Java Beans,WARs and JARs.

=>Enterprise Applications are converted into EAR files.

===

*imp

Generating WAR file and executing from Tomcat Server:

step-1 : Generating WAR file using IDE Eclipse

RightClick on WebApplication->Export->WAR file->Browse the

destination folder to store WAR file->name the file and

click 'save'->click 'finish'

step-2 : start the Tomcat server

step-3 : Open WebBrowser and access the Server(Tomcat)

step-4 : Deploy the WAR file into Tomcat

Click on Manager App->perform login process->

From 'WAR file to deploy' click 'choose file'->

browse and select the file->click 'deploy'

step-5 : Execute the application as follows

 http://localhost:8082/JSP_MVC_App1_UserApp/

Note:

 =>The WebApplications are deployed into 'webapps' folder of

'Tomcat' server.
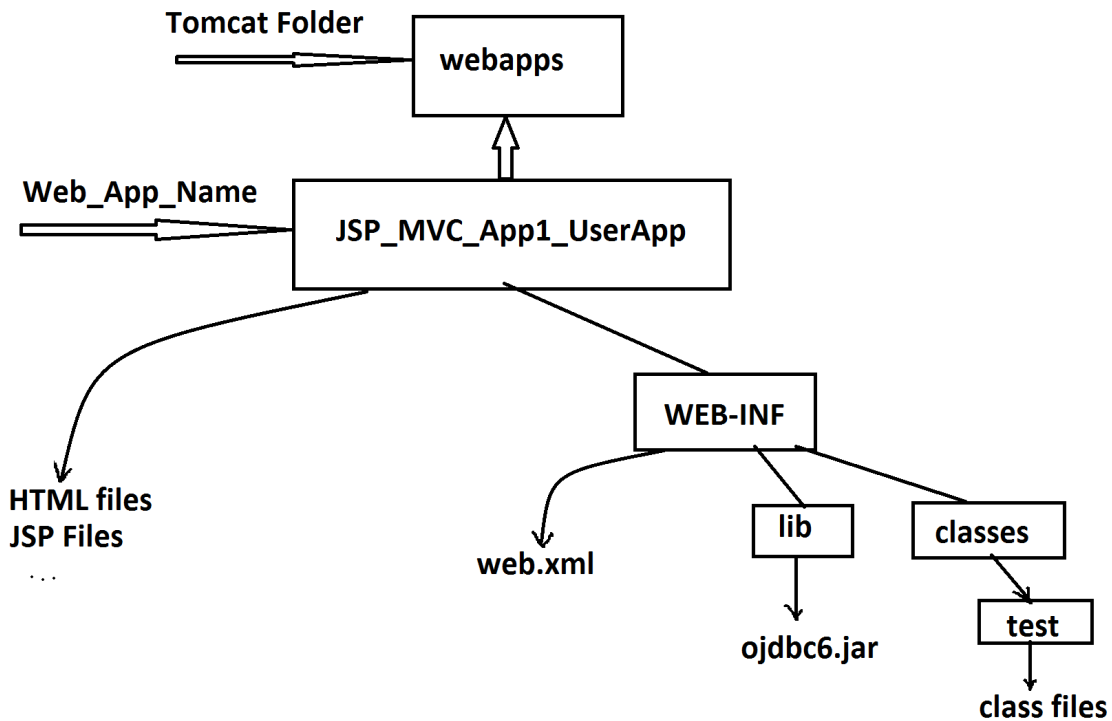
 =>The following is the Deployment directory Structure of

Tomcat:

```
                          Tomcat Folder ──────▷ ┌──────────────┐
                                                │   webapps    │
                                                └──────────────┘
                                                       △
                                                       │
                          Web_App_Name ──────▷ ┌─────────────────────┐
                                               │ JSP_MVC_App1_UserApp │
                                               └─────────────────────┘
                                                  │              │
                                                  ▽              ▽
                                          HTML files        ┌──────────┐
                                          JSP Files         │ WEB-INF  │
                                             . .            └──────────┘
                                                          │      │       │
                                                          ▽      ▽       ▽
                                                    web.xml   ┌─────┐  ┌─────────┐
                                                              │ lib │  │ classes │
                                                              └─────┘  └─────────┘
                                                                 │          │
                                                                 ▽          ▽
                                                            ojdbc6.jar   ┌──────┐
                                                                         │ test │
                                                                         └──────┘
                                                                            │
                                                                            ▽
                                                                        class files
```

==

Example Propgrams on EL-JSTL:

Exp_Program-1:(CoreTags)

input.html

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<form method="post" action="CoreTags.jsp">
    Enter the String:<input type="text" name="str"><br>
    <input type="submit" value="Display">
 </form>
</body>
</html>
```

CoreTags.jsp

```jsp
<%@ page language="java"
    contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>
    <%@taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"
%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<c:set var="n" value="${param.str}" />
<c:forEach var="j" begin="1" end="5">
    <c:out value="${n}"/><p>
</c:forEach>

<c:forTokens items="${param.str}" delims=" " var="name">
    <c:out value="${name}"/><p>
</c:forTokens>
</body>
</html>
```

web.xml

```xml
<?xml version="1.0" encoding="UTF-8"?>
<web-app>
  <welcome-file-list>
      <welcome-file>input.html</welcome-file>
  </welcome-file-list>
</web-app>
```

===

Ex_Program-2 :(CoreTags)

input.html

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
    <form action="dis" method="post">
    Enter the name:<input type="text" name="name"><br>
```

```html
        <input type="submit" value="Display">
    </form>
</body>
</html>
```

Display.jsp

```jsp
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>
    <%@taglib prefix="c"
    uri="http://java.sun.com/jsp/jstl/core" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<%
pageContext.setAttribute("fName","Raju");
%>
<c:set var="name" value="${param.name} "/>
WELCOME : <c:out value="${name}"/><br>
<c:set var="a" value="${applicationScope.a}" />
<c:set var="b" value="${sessionScope.b}" />
<c:set var="c" value="${requestScope.c}" />
<c:set var="d" value="${pageScope.fName}" />

    ContextVal:<c:out value="${a}"/><br>
    SessionVal:<c:out value="${b}"/><br>
    RequestVal:<c:out value="${c}"/><br>
    PageVal:<c:out value="${d}"/><br>
</body>
</html>
```

ControllerServlet.java

```java
package test;

import java.io.*;

import javax.servlet.*;

import javax.servlet.http.*;

import javax.servlet.annotation.*;
```

```java
@SuppressWarnings("serial")

@WebServlet("/dis")

public class ControllerServlet extends HttpServlet{

    @ Override

    public void doPost(HttpServletRequest req,

                        HttpServletResponse res)

    throws ServletException,IOException{

    ServletContext sct = this.getServletContext();

    HttpSession hs = req.getSession();

    sct.setAttribute("a",100);

    hs.setAttribute("b",200);

    req.setAttribute("c", 300);

    RequestDispatcher rd = req.getRequestDispatcher("Display.jsp");

    rd.forward(req,res);

      }


}
```

web.xml

```xml
<?xml version="1.0" encoding="UTF-8"?>
<web-app>
   <welcome-file-list>
      <welcome-file>input.html</welcome-file>
   </welcome-file-list>
</web-app>
```

===

Ex_Program-3:(Function Tags)

input.html

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<form method="post" action="FunctionTag.jsp">
    Enter the String:<input type="text" name="str"><br>
    <input type="submit" value="Submit">
</form>
</body>
</html>
```

FunctionTag.html

```jsp
<%@ page language="java"
        contentType="text/html; charset=ISO-8859-1"
        pageEncoding="ISO-8859-1"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core"
                                            prefix="c" %>
<%@ taglib uri="http://java.sun.com/jsp/jstl/functions"
                                            prefix="fn" %>

<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<c:set var="s1" value="${param.str}"/>
<c:choose>
  <c:when test="${fn:contains(s1, 'java')}">
   <p>String Founded<p>
  </c:when>
  <c:otherwise>
   <p>String Not Founded<p>
  </c:otherwise>
</c:choose>

<c:if test="${fn:containsIgnoreCase(s1, 'JAVA')}">
   <p>String Founded<p>
</c:if>
</body>
</html>
```

web.xml

```xml
<?xml version="1.0" encoding="UTF-8"?>
<web-app>
  <welcome-file-list>
      <welcome-file>input.html</welcome-file>
  </welcome-file-list>
</web-app>
```

===

Ex_Program-4:(formatting Tags)

FormatTag.jsp

```jsp
<%@ page language="java"
    contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"%>
<%@ taglib prefix="fmt" uri="http://java.sun.com/jsp/jstl/fmt"%>

<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<h2>Different Formats of the Date</h2>
<c:set var="Date" value="<%=new java.util.Date()%>" />
<p>
Formatted Time :
<fmt:formatDate type="time" value="${Date}" />
</p>
<p>
Formatted Date :
<fmt:formatDate type="date" value="${Date}" />
</p>
<p>
Formatted Date and Time :
<fmt:formatDate type="both" value="${Date}" />
</p>
<p>
Formatted Date and Time in short style :
<fmt:formatDate type="both" dateStyle="short" timeStyle="short"
value="${Date}" />
</p>
<p>
Formatted Date and Time in medium style :
```

```
<fmt:formatDate type="both" dateStyle="medium"
timeStyle="medium"
value="${Date}" />
</p>
<p>
Formatted Date and Time in long style :
<fmt:formatDate type="both"  dateStyle="long" timeStyle="long"
value="${Date}" />
</p>
</body>
</html>
```

web.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app>
  <welcome-file-list>
      <welcome-file>FormatTag.jsp</welcome-file>
  </welcome-file-list>
</web-app>
```

==

define pageContext?

  =>pageContext is an implicit object generated for

javax.servlet.jsp.PageContext class and which is extended from

javax.servlet.jsp.JspContext class.

  =>using pageContext object we can access remaining implicit

objects of JSP.

The following are some important methods:

public abstract javax.servlet.jsp.JspWriter getOut();

public abstract javax.servlet.http.HttpSession getSession();

public abstract javax.servlet.ServletRequest getRequest();

public abstract javax.servlet.ServletResponse getResponse();

public abstract java.lang.Object getPage();

public abstract java.lang.Exception getException();

public abstract javax.servlet.ServletConfig getServletConfig();

public abstract javax.servlet.ServletContext

                 getServletContext();

Note:

  =>we can also add "attribute" to the "pageContext" object.

  =>'pageScope' implicit object of EL-JSTL will access the

attribute of "pageContext" object of JSP.

  =>"pageContext" implicit object of EL-JSTL will access the

remaining objects of EL-JSTL.

===

define "page"?

  =>"page" is an implicit object of java.lang.Object

class,this "page" object is used when we want the methods of

java.lang.Object class.

Note:

  =>page implicit object is used part of JSP,when we want to

perform Cloning process or Thread communication process.

==

faq:

wt is the dif b/w

  (i)static Web Project

  (ii)Dynamic Web Project

  (iii)Web Fragments Project

(i)Static Web Project is written entirely using HTML.

  Each web page is a separate document and there are no databases or external files

depending on HTML pages.

(ii)Dynamic Web Project depends on more complex code like PHP, ASP, JSP, Servlet java file

etc., and this project is for server side coding.

(iii)Essentially, Web Fragments (introduced in Servlet 3.x) allows you to create a reusable

portion (or fragment) of the deployment descriptor, web.xml.

  =>we use Web Fragments project to work with Web Fragments.

==

create table UserReg44(uname varchar2(15),pword varchar2(15),

fname varchar2(15),lname varchar2(15),addr varchar2(15),mid varchar2(25),

phno number(15),primary key(uname,pword));

create table AdminReg44(uname varchar2(15),pword varchar2(15),

fname varchar2(15),lname varchar2(15),addr varchar2(15),mid varchar2(25),

phno number(15),primary key(uname,pword));

create table Product44(pcode varchar2(10),pname varchar2(15),

pprice number(10,2),pqty number(10),primary key(pcode));

===