Dt : 16/11/2024(day-42)

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Web Application Architecture Models:

  =>In the process of constructing applications,the realtime market will use some

   development architecture known as 'Web Application Architecture Models'

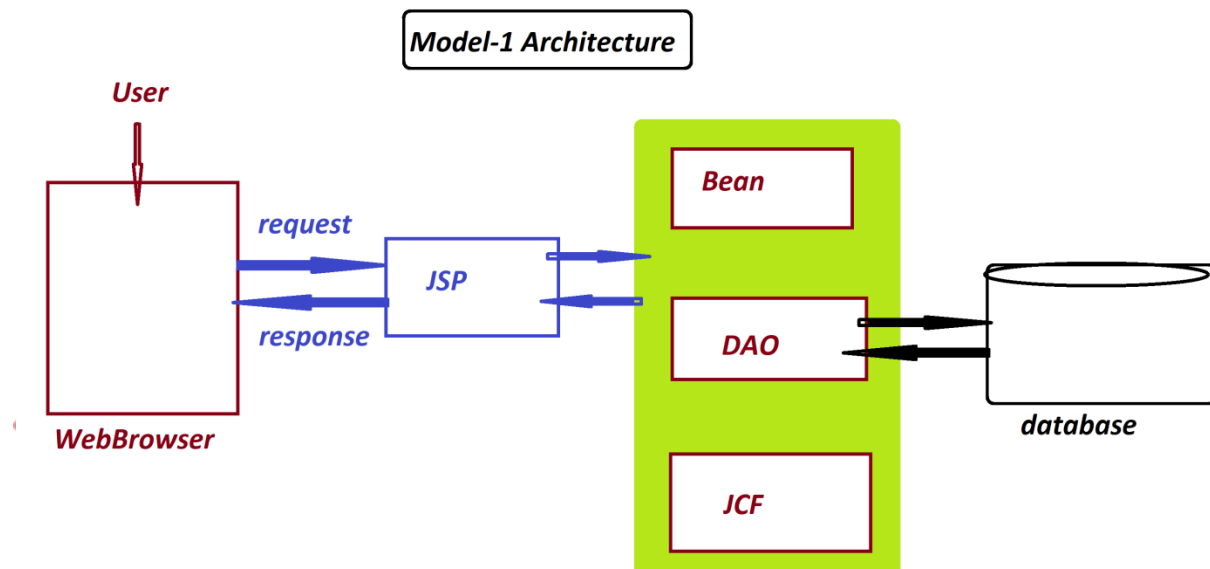 *=>These Web Application Architecture models are categorized into two types:*

    1.Model-1 Architecture

    2.Model-2 Architecture

1.Model-1 Architecture:

  =>In Model-1 Architecture JSP is the controller of application,which means

   JSP will control beans,DAO and JCFs.

  Diagram:

Model-1 Architecture

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2.Model-2 Architecture:

=>Model-2 Architecture introduced to overcome some dis-advantages of Model-1

Architecture.

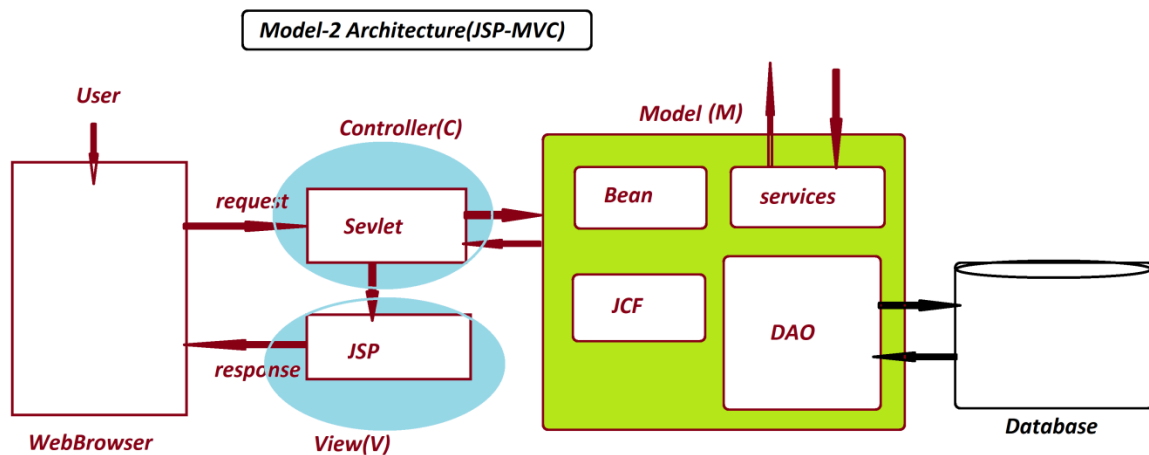=>This Model-2 Architecture depends on MVC structure.

M - Model

V - View

C - Controller

Diagram:

Model-2 Architecture(JSP-MVC)

M - Model

=>Model-layer represents beans where enterprise data is available.

=>Model-layer also includes JCF,DAO and services.

V - View

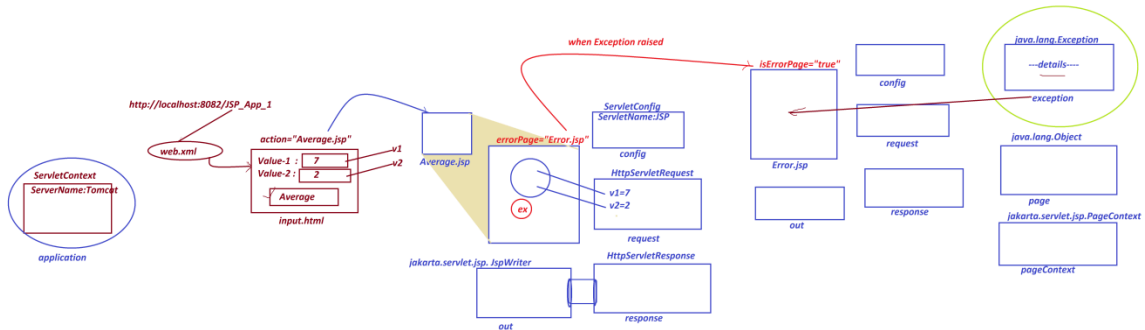=>View-layer represents JSP,which is presentation of WebApp(response of WebApp)

C - Controller

=>Control-Layer represent servlet,which accepts the request and provide the

 response.

=>Servlet will control JSP and Model layers

 ==

Examples Demonstrating Model-1 Architecture:

Ex-1:

Construct JSP Application to demonstratte 'declarative tag'

Layout:

input.jsp

```
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<form action="Average.jsp" method="post">
Enter the value-1:<input type="text" name="v1"><br>
Enter the value-2:<input type="text" name="v2"><br>
<input type="submit" value="Average">
</form>
</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>
```

Average.jsp

```jsp
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"
    errorPage="Error.jsp"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<%!
float avg(int x,int y)
{
    float z = (float)(x+y)/2;
    return z;
}
%>
<%
int v1 = Integer.parseInt(request.getParameter("v1"));
int v2 = Integer.parseInt(request.getParameter("v2"));
float res = avg(v1,v2);
out.println("Average:"+res+"<br>");
%>
<%@include file="input.html" %>
</body>
</html>
```

Error.jsp

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

```
<%
out.println("Enter only Integer values....<br>");
%>
<%=exception %>
<br>
<%@include file="input.html"%>
</body>
</html>
```

===