This documentation is for reference purpose only and is for those who have attended the classroom sessions at Thinking Machines.

- **During your classroom session appropriate theory needs to be written against each example.**

- **You are required to bring this book daily for your classroom sessions.**

- **If you try to understand the examples without attending theory sessions then may god help you.**

Configuring Tomcat 4

Download tomcats.zip, unzip it, then unzip tomcat4, copy the tomcat4 folder (the one which contains the bin folder) to c:\

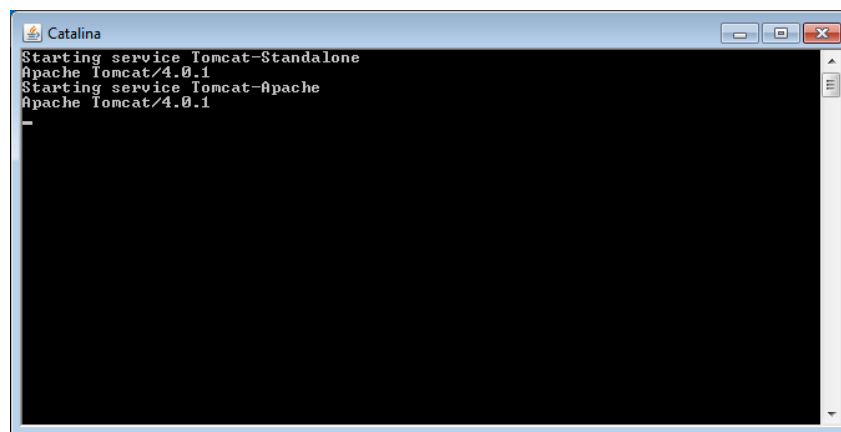Now I am assuming that the following path exists

c:\tomcat4\bin

Move to c:\tomcat4\bin folder. Edit startup.bat and see to it that the first two lines are are as follows.

set CATALINA_HOME=c:\tomcat4
set JAVA_HOME=c:\jdk1.8

Note : I am assuming that you have jdk 1.8 installed and the c:\jdk1.8\bin path exists.

Now create a shortcut to c:\tomcat4\bin\startup.bat named as Tomcat4.

Double click the shortcut to start the server, you should see the following

Note : If firewall prompts something, select (allow) option.
Now start browser and in the address bar type

http://localhost:8080   and you should see the following.

<div align="center">**one.com**</div>

Now close the server window and the browser window.

Now let us create our first website one.com

move to c:\tomcat4\webapps and create the following structure

one.com\WEB-INF\classes

Note : WEB-INF is upper case

Now in c:\tomcat4\webapps\one.com folder create the following files.

<div align="center">**index.html (location c:\tomcat4\webapps\one.com)**</div>

```
<!Doctype html>
<html lang='en'>
<head>
<meta charset='utf-8'>
<title>one.com</title>
</head>
<body>
<center>
<h1><i>Welcome to a cool site</i></h1>
<h3>Ujjain</h3>
<h6><u>Madhya Pradesh</u></h6>
<b>India</b>
<br>
<br/>
<a href='/one.com/abcd.html'>Begin</a>
</center>
</body>
</html>
```

<div align="center">**abcd.html (location c:\tomcat4\webapps\one.com)**</div>

```
<!Doctype html>
<html lang='en'>
<head>
<meta charset='utf-8'>
<title>one.com</title>
<script>
function ramu(f)
{
var nn=f.nm.value;
if(nn.length==0)
{
alert('Name required');   f.nm.focus();
return false;
}
```

```
var v='ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz .';
document.getElementById("nameErrorSection").innerHTML="";
var e=0;
while(e<nn.length)
{
if(v.indexOf(nn.charAt(e))==-1)
{
document.getElementById("nameErrorSection").innerHTML="Invalid data in name";
f.nm.focus();
return false;
}
e++;
}
if(f.sex[0].checked==false && f.sex[1].checked==false)
{
alert("Select gender");
return false;
}
if(f.ct.selectedIndex==0)
{
alert("Select a city");
f.ct.focus();
return false;
}
return true;
}
</script>
</head>
<body>
<center>
<h2>Personal Information</h2>
<form action='/one.com/servlet/aaa'  onsubmit='return ramu(this)'>
<table border='1'>
<tr><td>
Name</td><td>
<input type='text' name='nm' id='nm' >
<span id='nameErrorSection'></span>
</td></tr><tr><td>
Gender</td><td>
Male <input type='radio' name='sex' id='ml' value='M'>
   
Female <input type='radio' name='sex' id='fe' value='F'>
</td></tr><tr><td>
Select city</td><td>
<select name='ct' id='ct'>
<option value='-1'>&lt;Select&gt;</option>
<option value='101'>Pune</option>
```

```html
<option value='102'>Ujjain</option>
<option value='103'>Indore</option>
</select></td></tr></tr><tr>
<td colspan='2' align='center'>
<input type='submit' value='Save'></td></tr></table>
</form>
</center>
</body>
</html>
```

aaa.java (location c:\tomcat4\webapps\one.com\WEB-INF\classes)

```java
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class aaa extends HttpServlet
{
public void doGet(HttpServletRequest rq,HttpServletResponse rs)
{
try
{
String nn=rq.getParameter("nm");
String ss=rq.getParameter("sex");
String cc=rq.getParameter("ct");
System.out.println("Request arrived");
System.out.println("Data arrived");
System.out.println("Name : "+nn);
System.out.println("Gender : "+ss);
System.out.println("City : "+cc);
// some code to save data
rs.setContentType("text/html");
PrintWriter pw;
pw=rs.getWriter();
pw.println("<!Doctype html>");
pw.println("<html lang='en'>");
pw.println("<head>");
pw.println("<meta charset='utf-8'>");
pw.println("<title>one.com</title>");
pw.println("</head>");
pw.println("<body>");
pw.println("<h1>Data Saved</h1></body></html>");
}catch(Exception exception)
{
System.out.println(exception);
}
}
}
```
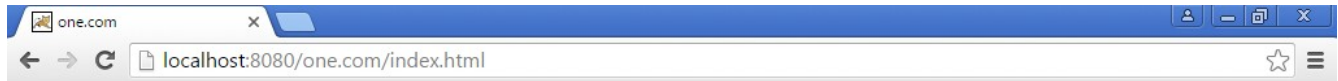
The above code won't get compiled using

javac   aaa.java
use
javac   -classpath   c:\tomcat4\common\lib\servlet.jar;.   aaa.java

Now start server, then browser as done earlier and type the following in the address bar

http://localhost:8080/one.com

you should see the following.

Now click the hyperlink with text Begin and you should see the following
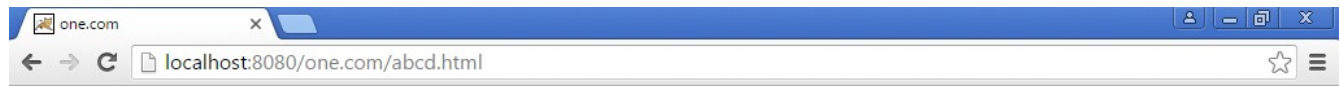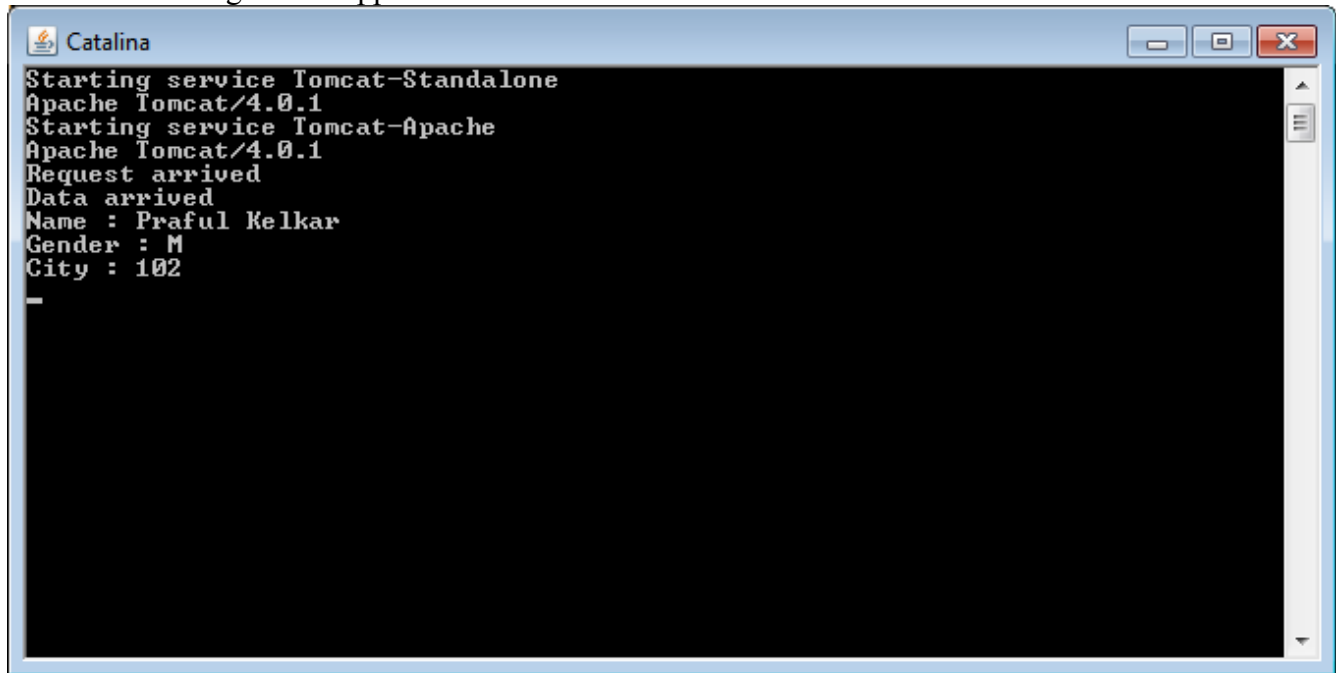

Test the following scenarios

Click the save button without feeding anything, you should see the message box that says Name required. Then Feed name, but type digits and click the save button and see what happens, you should see a message appear that says invalid data, then correct it but don't select gender or city and click the save button, now you should see a message that says, select gender, now select gender but don't select city and click the save button, now you should see the message, select city. Now select city and click the Save button, now the following should appear

Data Saved
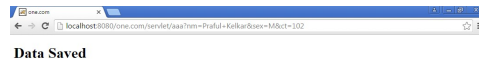
And the following should appear on server window.


```
Catalina
Starting service Tomcat-Standalone
Apache Tomcat/4.0.1
Starting service Tomcat-Apache
Apache Tomcat/4.0.1
Request arrived
Data arrived
Name : Praful Kelkar
Gender : M
City : 102
```

two.com
index.html

```html
<!Doctype html>
<html lang='en'>
<head>
<meta charset='utf-8'>
<title>two.com</title>
</head>
<body>
<center>
<h1><i>Welcome to a cool site</i></h1>
<h3>Ujjain</h3>
<h6><u>Madhya Pradesh</u></h6>
<b>India</b>
```

```
<br>
<br/>
<a href='/two.com/abcd.html'>Begin</a>
</center>
</body>
</html>
```

---

abcd.html

```
<!Doctype html>
<html lang='en'>
<head>
<meta charset='utf-8'>
<title>one.com</title>
<script>
function ramu(f)
{
var nn=f.nm.value;
if(nn.length==0)
{
alert('Name required');   f.nm.focus();
return false;
}
var v='ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz .';
document.getElementById("nameErrorSection").innerHTML="";
var e=0;
while(e<nn.length)
{
if(v.indexOf(nn.charAt(e))==-1)
{
document.getElementById("nameErrorSection").innerHTML="Invalid data in name";
f.nm.focus();
return false;
}
e++;
}
if(f.sex[0].checked==false && f.sex[1].checked==false)
{
alert("Select gender");
return false;
}
if(f.ct.selectedIndex==0)
{
alert("Select a city");
f.ct.focus();
return false;
}
return true;
```

```
}
</script>
</head>
<body>
<center>
<h1>Session Tracking Example</h1>
<h4><u>Using Hidden Form Field</u></h4>
<h2>Personal Information - Page 1</h2>
<form action='/two.com/servlet/aaa'  onsubmit='return ramu(this)'>
<table border='0'>
<tr><td>
Name</td><td>
<input type='text' name='nm' id='nm' >
<span id='nameErrorSection'></span>
</td></tr><tr>
<td colspan='2' align='center'>
<input type='submit' value='Next'></td></tr></table>
</form>
</center>
</body>
</html>
```

<div align="center">

aaa.java

</div>

```java
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class aaa extends HttpServlet
{
public void doGet(HttpServletRequest rq,HttpServletResponse rs)
{
try
{
String nn=rq.getParameter("nm");
PrintWriter pw=rs.getWriter();
rs.setContentType("text/html");
pw.println("<!Doctype html>");
pw.println("<html lang='en'>");
pw.println("<head>");
pw.println("<meta charset='utf-8'>");
pw.println("<title>two.com</title>");
pw.println("<script>");
pw.println("function ramu(f)");
pw.println("{");
pw.println("if(f.sex[0].checked==false && f.sex[1].checked==false)");
pw.println("{");
pw.println("alert(\"Select gender\");");
pw.println("return false;");
```

```
pw.println("}");
pw.println("return true;");
pw.println("}");
pw.println("</script>");
pw.println("</head>");
pw.println("<body>");
pw.println("<center>");
pw.println("<h1>Session Tracking Example</h1>");
pw.println("<h4><u>Using Hidden Form Field</u></h4>");
pw.println("<h2>Personal Information - Page 2</h2>");
pw.println("Name : <b>"+nn+"</b></br>");
pw.println("<form action='/two.com/servlet/bbb'  onsubmit='return ramu(this)'>");
pw.println("<input type='hidden' name='nm' id='nm' value='"+nn+"'>");
pw.println("<table border='0'>");
pw.println("<tr><td>");
pw.println("Gender</td><td>");
pw.println("Male <input type='radio' name='sex' id='ml' value='M'>");
pw.println("   ");
pw.println("Female <input type='radio' name='sex' id='fe' value='F'>");
pw.println("</td></tr>");
pw.println("</tr><tr>");
pw.println("<td colspan='2' align='center'>");
pw.println("<input type='submit' value='Next'></td></tr></table>");
pw.println("</form>");
pw.println("</center>");
pw.println("</body>");
pw.println("</html>");

}catch(Exception e)
{
System.out.println(e);
}
}
}
```

bbb.java

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class bbb extends HttpServlet
{
public void doGet(HttpServletRequest rq,HttpServletResponse rs)
{
try
{
String nn=rq.getParameter("nm");
String ss=rq.getParameter("sex");
```

```
PrintWriter pw=rs.getWriter();
rs.setContentType("text/html");
pw.println("<!Doctype html>");
pw.println("<html lang='en'>");
pw.println("<head>");
pw.println("<meta charset='utf-8'>");
pw.println("<title>two.com</title>");
pw.println("<script>");
pw.println("function ramu(f)");
pw.println("{");
pw.println("if(f.ct.selectedIndex==0)");
pw.println("{");
pw.println("alert('Select a city');");
pw.println("f.ct.focus();");
pw.println("return false;");
pw.println("}");
pw.println("return true;");
pw.println("}");
pw.println("</script>");
pw.println("</head>");
pw.println("<body>");
pw.println("<center>");
pw.println("<h1>Session Tracking Example</h1>");
pw.println("<h4><u>Using Hidden Form Field</u></h4>");
pw.println("<h2>Personal Information - Page 3</h2>");
pw.println("Name : <b>"+nn+"</b></br>");
pw.println("Sex : <b>"+ss+"</b></br>");
pw.println("<form action='/two.com/servlet/ccc'  onsubmit='return ramu(this)'>");
pw.println("<input type='hidden' name='nm' id='nm' value='"+nn+"'>");
pw.println("<input type='hidden' name='sex' id='sex' value='"+ss+"'>");
pw.println("<table>");
pw.println("<tr><td>");
pw.println("Select city</td><td>");
pw.println("<select name='ct' id='ct'>");
pw.println("<option value='-1'>&lt;Select&gt;</option>");
pw.println("<option value='101'>Pune</option>");
pw.println("<option value='102'>Ujjain</option>");
pw.println("<option value='103'>Indore</option>");
pw.println("</select></td></tr></tr><tr>");
pw.println("<td colspan='2' align='center'>");
pw.println("<input type='submit' value='Save'></td></tr></table>");
pw.println("</form>");
pw.println("</center>");
pw.println("</body>");
pw.println("</html>");
```

```
}catch(Exception e)
{
System.out.println(e);
}
}
}
```

ccc.java

```java
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class ccc extends HttpServlet
{
public void doGet(HttpServletRequest rq,HttpServletResponse rs)
{
try
{
String nn=rq.getParameter("nm");
String ss=rq.getParameter("sex");
String cc=rq.getParameter("ct");
System.out.println("Request arrived");
System.out.println("Data arrived");
System.out.println("Name : "+nn);
System.out.println("Gender : "+ss);
System.out.println("City : "+cc);
rs.setContentType("text/html");
PrintWriter pw;
pw=rs.getWriter();
// some code to save data
pw.println("<!Doctype html>");
pw.println("<html lang='en'>");
pw.println("<head>");
pw.println("<meta charset='utf-8'>");
pw.println("<title>two.com</title>");
pw.println("</head>");
pw.println("<body>");
pw.println("<center>");
pw.println("<h1>Session Tracking Example</h1>");
pw.println("<h4><u>Using Hidden Form Field</u></h4>");
pw.println("<h1>Data Saved</h1></body></html>");
pw.println("Name : "+nn+"</br>");
pw.println("Gender : "+ss+"</br>");
pw.println("City : "+cc+"</br>");
pw.println("</center>");
}catch(Exception exception)
{
```

```
System.out.println(exception);
}
}
}
```

Now configure tomcat7 as we configured tomcat4. Finally you should have a shortcut to c:\tomcat7\bin\startup.bat on your desktop.

Note : in case of tomcat4 the servlet.jar is located in c:\tomcat4\common\lib
In case of tomcat7, the name of the jar file is servlet-api.jar and is located in tomcat7\lib folder.

Now move to c:\tomcat7\webapps\ and create the folder structure.

three.com
three.com\WEB-INF
three.com\WEB-INF\classes\tm

index.html (Location – three.com)

```html
<!Doctype html>
<html lang='en'>
<head>
<meta charset='utf-8'>
<title>three.com</title>
</head>
<body>
<center>
<h1><i>Welcome to a cool site</i></h1>
<h3>Ujjain</h3>
<h6><u>Madhya Pradesh</u></h6>
<b>India</b>
<br>
<br/>
<a href='/three.com/abcd.html'>Begin</a>
</center>
</body>
</html>
```

abcd.html

```html
<!Doctype html>
<html lang='en'>
<head>
<meta charset='utf-8'>
<title>three.com</title>
<script>
function ramu(f)
{
var nn=f.nm.value;
if(nn.length==0)
```

```
{
alert('Name required');   f.nm.focus();
return false;
}
var v='ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz .';
document.getElementById("nameErrorSection").innerHTML="";
var e=0;
while(e<nn.length)
{
if(v.indexOf(nn.charAt(e))==-1)
{
document.getElementById("nameErrorSection").innerHTML="Invalid data in name";
f.nm.focus();
return false;
}
e++;
}
if(f.sex[0].checked==false && f.sex[1].checked==false)
{
alert("Select gender");
return false;
}
if(f.ct.selectedIndex==0)
{
alert("Select a city");
f.ct.focus();
return false;
}
return true;
}
</script>
</head>
<body>
<center>
<h2>Personal Information</h2>
<form action='/three.com/ProcessForm'  onsubmit='return ramu(this)'>
<table border='1'>
<tr><td>
Name</td><td>
<input type='text' name='nm' id='nm' >
<span id='nameErrorSection'></span>
</td></tr><tr><td>
Gender</td><td>
Male <input type='radio' name='sex' id='ml' value='M'>
   
Female <input type='radio' name='sex' id='fe' value='F'>
</td></tr><tr><td>
```

Select city</td><td>
<select name='ct' id='ct'>
<option value='-1'><Select></option>
<option value='101'>Pune</option>
<option value='102'>Ujjain</option>
<option value='103'>Indore</option>
</select></td></tr></tr><tr>
<td colspan='2' align='center'>
<input type='submit' value='Save'></td></tr></table>
</form>
</center>
</body>
</html>

---

aaa.java (Location three.com\WEB-INF\classes\tm)

To comple the following code, you will have to type
javac   -classpath   c:\tomcat7\lib\servlet-api.jar;.   *.java


```
package tm;
import java.io.*;
import java.net.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class aaa extends HttpServlet
{
public void doGet(HttpServletRequest rq,HttpServletResponse rs)
{
try
{
String nn=rq.getParameter("nm");
String ss=rq.getParameter("sex");
String cc=rq.getParameter("ct");
System.out.println("Request arrived");
System.out.println("Data arrived");
System.out.println("Name : "+nn);
System.out.println("Gender : "+ss);
System.out.println("City : "+cc);
rs.setContentType("text/html");
PrintWriter pw;
pw=rs.getWriter();
pw.println("<!Doctype html>");
pw.println("<html lang='en'>");
pw.println("<head>");
pw.println("<meta charset='utf-8'>");
pw.println("<title>three.com</title>");
```

```
pw.println("</head>");
pw.println("<body>");
pw.println("<center>");
pw.println("<h1>Session Tracking Example</h1>");
pw.println("<h4><u>Using URL Rewriting</u></h4>");
pw.println("<a href='/three.com/SaveData?nm="+URLEncoder.encode(nn)
+"&ct="+URLEncoder.encode(cc)+"&sex="+URLEncoder.encode(ss)+"'>Save</a>");
pw.println("</center>");
pw.println("</body>");
pw.println("</html>");
}catch(Exception exception)
{
System.out.println(exception);
}
}
}
```

bbb.java **(Location three.com\WEB-INF\classes\tm)**

To comple the following code, you will have to type
javac   -classpath   c:\tomcat7\lib\servlet-api.jar;.   *.java

```
package tm;
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class bbb extends HttpServlet
{
public void doGet(HttpServletRequest rq,HttpServletResponse rs)
{
try
{
String nn=rq.getParameter("nm");
String ss=rq.getParameter("sex");
String cc=rq.getParameter("ct");
System.out.println("Request arrived");
System.out.println("Data arrived");
System.out.println("Name : "+nn);
System.out.println("Gender : "+ss);
System.out.println("City : "+cc);
rs.setContentType("text/html");
PrintWriter pw;
pw=rs.getWriter();
// some code to save data
pw.println("<!Doctype html>");
pw.println("<html lang='en'>");
pw.println("<head>");
```

```
pw.println("<meta charset='utf-8'>");
pw.println("<title>three.com</title>");
pw.println("</head>");
pw.println("<body>");
pw.println("<center>");
pw.println("<h1>Session Tracking Example</h1>");
pw.println("<h4><u>Using URL Rewriting</u></h4>");
pw.println("<h1>Data Saved</h1></body></html>");
pw.println("Name : "+nn+"</br>");
pw.println("Gender : "+ss+"</br>");
pw.println("City : "+cc+"</br>");
pw.println("</center>");
}catch(Exception exception)
{
System.out.println(exception);
}
}
}
```

Note : copy paste the following in a file named as web.xml

web.xml (Location : three.com\WEB-INF)

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app version="2.5" xmlns="http://java.sun.com/xml/ns/javaee"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://java.sun.com/xml/ns/javaee http://java.sun.com/xml/ns/javaee/web-
app_2_5.xsd">
   <servlet>
   <servlet-name>FormProcessor</servlet-name>
   <servlet-class>tm.aaa</servlet-class>
   </servlet>
   <servlet>
   <servlet-name>DataSaver</servlet-name>
   <servlet-class>tm.bbb</servlet-class>
   </servlet>
   <servlet-mapping>
   <servlet-name>FormProcessor</servlet-name>
   <url-pattern>/ProcessForm</url-pattern>
   </servlet-mapping>
   <servlet-mapping>
   <servlet-name>DataSaver</servlet-name>
   <url-pattern>/SaveData</url-pattern>
   </servlet-mapping>
   </web-app>
```

four.com (tomcat7\webapps)

Comple everything as done in three.com

index.html

```
<!Doctype html>
<html lang='en'>
<head>
<meta charset='utf-8'>
<title>four.com</title>
</head>
<body>
<center>
<h1><i>Welcome to a cool site</i></h1>
<h3>Ujjain</h3>
<h6><u>Madhya Pradesh</u></h6>
<b>India</b>
<br>
<br/>
<a href='/four.com/abcd.html'>Begin</a>
</center>
</body>
</html>
```

abcd.html

```
<!Doctype html>
<html lang='en'>
<head>
<meta charset='utf-8'>
<title>four.com</title>
<script>
function ramu(f)
{
var nn=f.nm.value;
if(nn.length==0)
{
alert('Name required');   f.nm.focus();
return false;
}
var v='ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz .';
document.getElementById("nameErrorSection").innerHTML="";
var e=0;
while(e<nn.length)
{
if(v.indexOf(nn.charAt(e))==-1)
{
document.getElementById("nameErrorSection").innerHTML="Invalid data in name";
f.nm.focus();
return false;
}
```

```
e++;
}
if(f.sex[0].checked==false && f.sex[1].checked==false)
{
alert("Select gender");
return false;
}
if(f.ct.selectedIndex==0)
{
alert("Select a city");
f.ct.focus();
return false;
}
return true;
}
</script>
</head>
<body>
<center>
<h2>Personal Information</h2>
<form action='/four.com/ProcessForm'  onsubmit='return ramu(this)'>
<table border='1'>
<tr><td>
Name</td><td>
<input type='text' name='nm' id='nm' >
<span id='nameErrorSection'></span>
</td></tr><tr><td>
Gender</td><td>
Male <input type='radio' name='sex' id='ml' value='M'>
   
Female <input type='radio' name='sex' id='fe' value='F'>
</td></tr><tr><td>
Select city</td><td>
<select name='ct' id='ct'>
<option value='-1'>&lt;Select&gt;</option>
<option value='101'>Pune</option>
<option value='102'>Ujjain</option>
<option value='103'>Indore</option>
</select></td></tr></tr><tr>
<td colspan='2' align='center'>
<input type='submit' value='Save'></td></tr></table>
</form>
</center>
</body>
</html>
```

aaa.java

```java
package tm;
import java.io.*;
import java.net.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class aaa extends HttpServlet
{
public void doGet(HttpServletRequest rq,HttpServletResponse rs)
{
try
{
String nn=rq.getParameter("nm");
String ss=rq.getParameter("sex");
String cc=rq.getParameter("ct");
Cookie c1=new Cookie("nm",nn);
Cookie c2=new Cookie("ct",cc);
Cookie c3=new Cookie("sex",ss);
rs.addCookie(c1);
rs.addCookie(c2);
rs.addCookie(c3);
System.out.println("Request arrived");
System.out.println("Data arrived");
System.out.println("Name : "+nn);
System.out.println("Gender : "+ss);
System.out.println("City : "+cc);
rs.setContentType("text/html");
PrintWriter pw;
pw=rs.getWriter();
pw.println("<!Doctype html>");
pw.println("<html lang='en'>");
pw.println("<head>");
pw.println("<meta charset='utf-8'>");
pw.println("<title>four.com</title>");
pw.println("</head>");
pw.println("<body>");
pw.println("<center>");
pw.println("<h1>Session Tracking Example</h1>");
pw.println("<h4><u>Using Cookies</u></h4>");
pw.println("<a href='/four.com/SaveData'>Save</a>");
pw.println("</center>");
pw.println("</body>");
pw.println("</html>");
}catch(Exception exception)
{
System.out.println(exception);
}
```

```
}
}
```

---

bbb.java

```java
package tm;
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class bbb extends HttpServlet
{
public void doGet(HttpServletRequest rq,HttpServletResponse rs)
{
try
{
Cookie c[]=rq.getCookies();
String nn="";
String ss="";
String cc="";
if(c!=null)
{
for(Cookie r:c)
{
if(r.getName().equals("nm"))
{
nn=r.getValue();
} else if(r.getName().equals("ct"))
{
cc=r.getValue();
} else if(r.getName().equals("sex"))
{
ss=r.getValue();
}
}
}
System.out.println("Request arrived");
System.out.println("Data arrived");
System.out.println("Name : "+nn);
System.out.println("Gender : "+ss);
System.out.println("City : "+cc);
rs.setContentType("text/html");
PrintWriter pw;
pw=rs.getWriter();
pw.println("<!Doctype html>");
pw.println("<html lang='en'>");
pw.println("<head>");
pw.println("<meta charset='utf-8'>");
pw.println("<title>four.com</title>");
```

```
pw.println("</head>");
pw.println("<body>");
pw.println("<center>");
pw.println("<h1>Session Tracking Example</h1>");
pw.println("<h4><u>Using Cookies</u></h4>");
pw.println("<h1>Data Saved</h1></body></html>");
pw.println("Name : "+nn+"</br>");
pw.println("Gender : "+ss+"</br>");
pw.println("City : "+cc+"</br>");
pw.println("</center>");
}catch(Exception exception)
{
System.out.println(exception);
}
}
}
```

web.xml (Location four.com\WEB-INF)

```xml
<?xml version="1.0" encoding="UTF-8"?>
<web-app version="2.5" xmlns="http://java.sun.com/xml/ns/javaee"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://java.sun.com/xml/ns/javaee http://java.sun.com/xml/ns/javaee/web-
app_2_5.xsd">
   <servlet>
   <servlet-name>FormProcessor</servlet-name>
   <servlet-class>tm.aaa</servlet-class>
   </servlet>
   <servlet>
   <servlet-name>DataSaver</servlet-name>
   <servlet-class>tm.bbb</servlet-class>
   </servlet>
   <servlet-mapping>
   <servlet-name>FormProcessor</servlet-name>
   <url-pattern>/ProcessForm</url-pattern>
   </servlet-mapping>
   <servlet-mapping>
   <servlet-name>DataSaver</servlet-name>
   <url-pattern>/SaveData</url-pattern>
   </servlet-mapping>
   </web-app>
```

five.com
Compile everything as done in four.com
index.html

```html
<!Doctype html>
<html lang='en'>
<head>
<meta charset='utf-8'>
```

```
<title>five.com</title>
</head>
<body>
<center>
<h1><i>Welcome to a cool site</i></h1>
<h3>Ujjain</h3>
<h6><u>Madhya Pradesh</u></h6>
<b>India</b>
<br>
<br/>
<a href='/five.com/abcd.html'>Begin</a>
</center>
</body>
</html>
```

abcd.html

```
<!Doctype html>
<html lang='en'>
<head>
<meta charset='utf-8'>
<title>five.com</title>
<script>
function ramu(f)
{
var nn=f.nm.value;
if(nn.length==0)
{
alert('Name required');   f.nm.focus();
return false;
}
var v='ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz .';
document.getElementById("nameErrorSection").innerHTML="";
var e=0;
while(e<nn.length)
{
if(v.indexOf(nn.charAt(e))==-1)
{
document.getElementById("nameErrorSection").innerHTML="Invalid data in name";
f.nm.focus();
return false;
}
e++;
}
if(f.sex[0].checked==false && f.sex[1].checked==false)
{
alert("Select gender");
return false;
```

```
}
if(f.ct.selectedIndex==0)
{
alert("Select a city");
f.ct.focus();
return false;
}
return true;
}
</script>
</head>
<body>
<center>
<h2>Personal Information</h2>
<form action='/five.com/ProcessForm'  onsubmit='return ramu(this)'>
<table border='1'>
<tr><td>
Name</td><td>
<input type='text' name='nm' id='nm' >
<span id='nameErrorSection'></span>
</td></tr><tr><td>
Gender</td><td>
Male <input type='radio' name='sex' id='ml' value='M'>
   
Female <input type='radio' name='sex' id='fe' value='F'>
</td></tr><tr><td>
Select city</td><td>
<select name='ct' id='ct'>
<option value='-1'>&lt;Select&gt;</option>
<option value='101'>Pune</option>
<option value='102'>Ujjain</option>
<option value='103'>Indore</option>
</select></td></tr></tr><tr>
<td colspan='2' align='center'>
<input type='submit' value='Save'></td></tr></table>
</form>
</center>
</body>
</html>
```

---

aaa.java

```
package tm;
import java.io.*;
import java.net.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class aaa extends HttpServlet
```

```
{
public void doGet(HttpServletRequest rq,HttpServletResponse rs)
{
try
{
String nn=rq.getParameter("nm");
String ss=rq.getParameter("sex");
String cc=rq.getParameter("ct");
HttpSession sess=rq.getSession(true);
sess.setAttribute("nm",nn);
sess.setAttribute("ct",cc);
sess.setAttribute("sex",ss);
System.out.println("Request arrived");
System.out.println("Data arrived");
System.out.println("Name : "+nn);
System.out.println("Gender : "+ss);
System.out.println("City : "+cc);
rs.setContentType("text/html");
PrintWriter pw;
pw=rs.getWriter();
pw.println("<!Doctype html>");
pw.println("<html lang='en'>");
pw.println("<head>");
pw.println("<meta charset='utf-8'>");
pw.println("<title>five.com</title>");
pw.println("</head>");
pw.println("<body>");
pw.println("<center>");
pw.println("<h1>Session Tracking Example</h1>");
pw.println("<h4><u>Using Session Object</u></h4>");
pw.println("<a href='/five.com/SaveData'>Save</a>");
pw.println("</center>");
pw.println("</body>");
pw.println("</html>");
}catch(Exception exception)
{
System.out.println(exception);
}
}
}
```

bbb.java

```
package tm;
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class bbb extends HttpServlet
```

```
{
public void doGet(HttpServletRequest rq,HttpServletResponse rs)
{
try
{
String nn="";
String ss="";
String cc="";
HttpSession sess;
sess=rq.getSession(false);
if(sess!=null)
{
nn=(String)sess.getAttribute("nm");
cc=(String)sess.getAttribute("ct");
ss=(String)sess.getAttribute("sex");
}
System.out.println("Request arrived");
System.out.println("Data arrived");
System.out.println("Name : "+nn);
System.out.println("Gender : "+ss);
System.out.println("City : "+cc);
rs.setContentType("text/html");
PrintWriter pw;
pw=rs.getWriter();
pw.println("<!Doctype html>");
pw.println("<html lang='en'>");
pw.println("<head>");
pw.println("<meta charset='utf-8'>");
pw.println("<title>five.com</title>");
pw.println("</head>");
pw.println("<body>");
pw.println("<center>");
pw.println("<h1>Session Tracking Example</h1>");
pw.println("<h4><u>Using Session Object</u></h4>");
pw.println("<h1>Data Saved</h1></body></html>");
pw.println("Name : "+nn+"</br>");
pw.println("Gender : "+ss+"</br>");
pw.println("City : "+cc+"</br>");
pw.println("</center>");
}catch(Exception exception)
{
System.out.println(exception);
}
}
}
```