

# SERVLETS PART-10

## 3) Http Sessions:

In this session tracking method client state information stored at server side.

In this session tracking method, session id created by web container and passed to client system.

Session id created by web container and passed client system with login response.

Session id passed to server system by client with second request onwards up to logout request.

Session id used by server to identify the client.

## To maintain session id, there are two ways:

1) By using cookies => default

2) By using URL Rewriting

## There are two ways to implement this session tracking method:

1) Http Sessions with Cookies

2) Http Sessions with URL Rewriting

Http Sessions with Cookies	Http Sessions
<ul style="list-style-type: none"><li>1) In this session tracking method session id created by web container, passed to client system and stored in cookie variable.</li><li>2) This session tracking method fails if the cookies are disabled in a browser.</li></ul>	<ul style="list-style-type: none"><li>1) In this session tracking method session id created by web container and appended to the url.</li><li>2) This session tracking method always works.</li></ul>

## 1) Http Sessions with Cookies:

In this session tracking method client state information stored at server side.

In this session tracking method session id created by web container, passed to client system and stored in cookie variable.

### Example:

#### SetSession.java

```
package session2;
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.Cookie;
import javax.servlet.http.HttpServlet;
```

```
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
@WebServlet("/set")
public class SetSession extends HttpServlet {
    protected void doGet(HttpServletRequest request,
        HttpServletResponse response) throws ServletException, IOException {
        String s1=request.getParameter("book1");
        String s2=request.getParameter("book2");
        String s3=request.getParameter("book3");
        HttpSession hs=request.getSession();
        hs.setAttribute("b1", s1);
        hs.setAttribute("b2", s2);
        hs.setAttribute("b3", s3);
        PrintWriter pw=response.getWriter();
        pw.println("<html><body bgcolor=cyan text=red>");
        pw.println("<h1>Your Books Are Added To Cart</h1>");
        pw.println("<a href=get>Next</a>");
        pw.println("</body></html>");    } }
```

### **GetSession.java**

```
package session2;
import java.io.IOException;
```

```
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
@WebServlet("/get")
public class GetSession extends HttpServlet {
    protected void doGet(HttpServletRequest request,
        HttpServletResponse response) throws ServletException, IOException {
        HttpSession hs=request.getSession();
        String s1=(String)hs.getAttribute("b1");
        String s2=(String)hs.getAttribute("b2");
        String s3=(String)hs.getAttribute("b3");
        PrintWriter pw=response.getWriter();
        pw.println("<html><body bgcolor=red text=yellow>");
        pw.println("<h1><u>Selected Books</u></h1>");
        if(s1!=null)
        {
            pw.println(s1+"<br>");
        }
    }
}
```

```
        if(s2!=null)
        {
            pw.println(s2+"<br>");
        }
        if(s3!=null)
        {
            pw.println(s3+"<br>");
        }
        pw.println("</body></html>");
    }
}
```

## **2) Http Sessions with URL Rewriting:**

In this session tracking method client state information stored at server side.

In this session tracking method session id created by web container and appended to url.

### **Example:**

#### **SetSession.java**

```
package session3;

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;
```

```
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.Cookie;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
@WebServlet("/set")
public class SetSession extends HttpServlet {
    protected void doGet(HttpServletRequest request,
        HttpServletResponse response) throws ServletException, IOException {
        String s1=request.getParameter("book1");
        String s2=request.getParameter("book2");
        String s3=request.getParameter("book3");
        HttpSession hs=request.getSession();
        hs.setAttribute("b1", s1);
        hs.setAttribute("b2", s2);
        hs.setAttribute("b3", s3);
        String s=response.encodeURL("get");
        PrintWriter pw=response.getWriter();
        pw.println("<html><body bgcolor=cyan text=red>");
        pw.println("<h1>Your Books Are Added To Cart</h1>");
        pw.println("<a href="+s+">Next</a>");
    }
}
```

```
        pw.println("</body></html>");  
    }  
}
```

Cookies	Sessions
<ul style="list-style-type: none"><li>1) A cookie is a piece of information stored at client side to maintain client state information.</li><li>2) It supports string type data only.</li><li>3) By default cookies are vanished whenever browser window is closed.</li><li>4) Here, it is possible to set the time interval by using <code>setMaxAge()</code></li></ul>	<ul style="list-style-type: none"><li>1) A session is stored at server side to maintain state information.</li><li>2) It supports any type of data.</li><li>3) By default after 30 mins session is terminated.</li><li>4) Here also it is possible to set the time interval by using <code>setMaxInactiveInterval()</code></li></ul>

#### 4) Hidden Form Fields:

In this session tracking method, client state information stored in hidden fields.

It is very easy to implement because it requires html code only.

In this session tracking method, it is not possible to set the time interval.

It supports text only.

#### Example:

**SetFields.java**

```
package hff;

import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
@WebServlet("/set")
public class SetFields extends HttpServlet {
    protected void doGet(HttpServletRequest request,
        HttpServletResponse response) throws ServletException, IOException {
        String s1=request.getParameter("book1");
        String s2=request.getParameter("book2");
        String s3=request.getParameter("book3");
        PrintWriter pw=response.getWriter();
        pw.println("<html><body bgcolor=cyan text=red>");
        pw.println("<h1>Your Books Are Added To Cart</h1>");
        pw.println("<form action=get>");
        pw.println("<input type=hidden name=b1 value="+s1+">");
        pw.println("<input type=hidden name=b2 value="+s2+">");
    }
}
```



```
        pw.println("<input type=hidden name=b3 value="+s3+">");  
        pw.println("<input type=submit value=Next>");  
        pw.println("</form></body></html>");  
    }  
}
```

### **GetFields.java**

```
package hff;  
  
import java.io.IOException;  
import java.io.PrintWriter;  
import javax.servlet.ServletException;  
import javax.servlet.annotation.WebServlet;  
import javax.servlet.http.Cookie;  
import javax.servlet.http.HttpServlet;  
import javax.servlet.http.HttpServletRequest;  
import javax.servlet.http.HttpServletResponse;  
  
@WebServlet("/get")  
public class GetFields extends HttpServlet {  
    protected void doGet(HttpServletRequest request,  
        HttpServletResponse response) throws ServletException, IOException {  
        PrintWriter pw=response.getWriter();  
        String s1=request.getParameter("b1");  
        String s2=request.getParameter("b2");  
    }  
}
```

```
String s3=request.getParameter("b3");  
pw.println("<html><body bgcolor=yellow text=blue>");  
pw.println("<h1>Selected Books:</h1>");  
if(!(s1.equals("null")))  
{  
    pw.println(s1);  
}  
if(!(s2.equals("null")))  
{  
    pw.println(s2);  
}  
if(!(s3.equals("null")))  
{  
    pw.println(s3);  
}  
pw.println("</body></html>");  
}  
}
```

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