Practical No. 9

Objective: Session management using:

- HttpSession object
- URL rewriting
- Cookies
- Hidden Form fields

Theory:

Session is a conversional state between client and server and it can consists of multiple request and response between client and server. Since HTTP and Web Server both are stateless, the only way to maintain a session is when some unique information about the session (session id) is passed between server and client in every request and response. Session Management in Java Servlet Web Applications is a very interesting topic. Session in Java Servlet are managed through different ways, such as Cookies, HttpSession API, URL rewriting etc.

Source Code:

HttpSession Object:

SendRed.java package

```
SenRedirect;

import java.io.IOException; import
java.io.PrintWriter; import
javax.servlet.ServletException; import
javax.servlet.http.HttpServlet; import
javax.servlet.http.HttpServletRequest; import
javax.servlet.http.HttpServletResponse; import
javax.servlet.http.HttpSession;

public class SendRed extends HttpServlet {
    @Override
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {

        HttpSession session = request.getSession();
        String str2 = request.getParameter("t2");
String str1 = request.getParameter("t1");
session.setAttribute("Pass", str2);
session.setAttribute("User", str1);
        response.sendRedirect("secserv");
processRequest(request, response);
    }
} secserv.java
package SenRedirect;

import java.io.IOException; import
java.io.PrintWriter; import
javax.servlet.ServletException; import
javax.servlet.http.HttpServlet; import
```

```
javax.servlet.http.HttpServletRequest; import
javax.servlet.http.HttpServletResponse; import
javax.servlet.http.HttpSession;

public class secserv extends HttpServlet {
    @Override
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
PrintWriter pw=response.getWriter();
        HttpSession session = request.getSession();
        String str1 = session.getAttribute("User").toString(); String
str2 = session.getAttribute("Pass").toString(); if(str2.equals("Sana"))
    {
    pw.println("<h3> Welcome </h3>" + str1);
    }
Else
    {
        pw.println("<h3>Invalid User</h3>");
response.sendRedirect("index.html");
    }
        //processRequest(request, response);
    }
}
```

Output:

Welcome

URL Rewriting

FirstServlet.java import

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

public class FirstServlet extends HttpServlet {
public void doGet(HttpServletRequest request, HttpServletResponse response){ try{
                response.setContentType("text/html");
                PrintWriter out = response.getWriter();
                String n=request.getParameter("userName");
                //out.print("Welcome "+n);
                out.print("<a href='servlet2?uname="+n+"'>visit</a>");
                out.close();
        }catch(Exception e){System.out.println(e);}
    }
}
```

SecondSevlet.java import

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

public class SecondServlet extends HttpServlet {
public void doGet(HttpServletRequest request, HttpServletResponse response){ try{
                response.setContentType("text/html");
                PrintWriter out = response.getWriter();
        String n=request.getParameter("uname");
out.print("Hello "+n); out.close(); }catch(Exception e)
            {System.out.println(e);}
        }
}
```

Output:

Cookies:

FirstServlet.java import

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

public class FirstServlet extends HttpServlet {
  public void doPost(HttpServletRequest request, HttpServletResponse response){ try{

        response.setContentType("text/html"); PrintWriter
out = response.getWriter(); String
n=request.getParameter("userName"); out.print("Welcome
"+n);
Cookie ck=new Cookie("uname",n);//creating cookie object
response.addCookie(ck);//adding cookie in the response
out.print("<form action='servlet2' method='post'>");
out.print("<input type='submit' value='go'>");          out.print("</form>");

        out.close();
```

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

SecondServlet.java import

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

public class SecondServlet extends HttpServlet {
public void doPost(HttpServletRequest request, HttpServletResponse response){ try{
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();
    String str = null;
        Cookie ck[]=request.getCookies();
for(Cookie c : ck)
    {
      if( c.getName().equals("uname"))
          {
            str = c.getValue();
          }
    }
    out.println("Welcome" + str);
    }catch(Exception e){System.out.println(e);}
      }
}
```

Output:

Hidden Form Fields:

FirstServlet1.java import

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

public class FirstServlet1 extends HttpServlet {
public void doGet(HttpServletRequest request, HttpServletResponse response){ try{
                response.setContentType("text/html");
                PrintWriter out = response.getWriter();
```

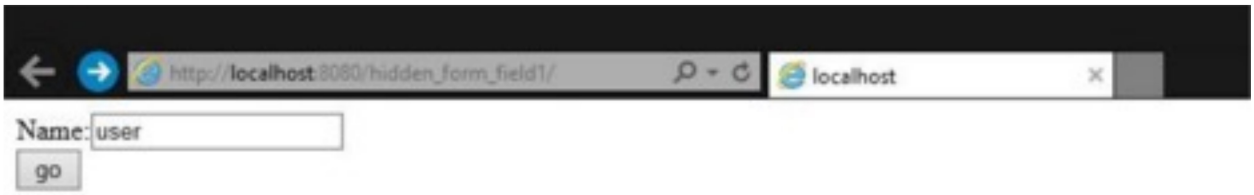
```
String n=request.getParameter("uname");
out.print("Welcome "+n);
                    out.print("<form action='welcome'>");
                    out.print("<input type='hidden' name='uname'
value='"+n+"'>");                    out.print("<input type='submit' value='go'>");
                                        out.print("</form>");  out.close();
                    }catch(Exception e){System.out.println(e);}
            }
}
```

SecondServlet.java import

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

public class SecondServlet extends HttpServlet {
public void doGet(HttpServletRequest request, HttpServletResponse response){ try{
                    response.setContentType("text/html");
                    PrintWriter out = response.getWriter();
                    String n=request.getParameter("uname");
                    out.print("Hello "+n);
out.close();
                }catch(Exception e){System.out.println(e);}
            }
}
```

Output:



Result: The given program has been compiled and executed successfully.