1.Difference between GET and POST

HTML FILE

```html
<!DOCTYPE html>

<html>

<head>

<meta charset="UTF-8">

<title>GET vs POST Demo</title>

</head>

<body>


<a href="gethandler?name=John+Doe&address=145+Lake+Avenue">Do a Servlet GET</a><br><br>

<form name=frm method=post action="posthandler">

  Name <input name="name" id="name" maxlenght=50><br>

  Address <input name="address" id="address" maxlength=100><br>

  <button>Submit</button>

</form>


</body>

</html>
```

GET HANDLER

```java
import java.io.*;

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;
```

```java
/**
* Servlet implementation class GetHandler
*/
@WebServlet("/GetHandler")
public class GetHandler extends HttpServlet {
    private static final long serialVersionUID = 1L;

  /**
* @see HttpServlet#HttpServlet()
*/
    public GetHandler() {
        super();
        // TODO Auto-generated constructor stub
    }

    /**
     * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
            // TODO Auto-generated method stub
            PrintWriter out = response.getWriter();
            out.println("<html><body>");

            String name = request.getParameter("name");
            String address = request.getParameter("address");
            out.println("Name=" + name + "<br>Address=" + address);
            out.println("</body></html>");
    }

    /**
```

```java
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
        // TODO Auto-generated method stub
        doGet(request, response);
    }

}
```

POST HANDLER

```java
import java.io.*;

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;


/**

* Servlet implementation class PostHandler

*/

@WebServlet("/PostHandler")

public class PostHandler extends HttpServlet {
    private static final long serialVersionUID = 1L;


    /**

* @see HttpServlet#HttpServlet()
```

```java
*/
   public PostHandler() {
      super();
      // TODO Auto-generated constructor stub
   }


   /**
    * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
    */
   protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
         // TODO Auto-generated method stub


   }


   /**
    * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
    */
   protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
         // TODO Auto-generated method stub
         PrintWriter out = response.getWriter();
          out.println("<html><body>");

          String name = request.getParameter("name");
          String address = request.getParameter("address");
```

```
        out.println("Name=" + name + "<br>Address=" + address);

        out.println("</body></html>");

    }

}
```

2.Configuring a Servlet with Eclipse

1.2.1 Creating a Dynamic Web Project

1. Open Eclipse IDE.
2. Go to `File -> New -> Dynamic Web Project`.
3. Enter the project name (e.g., `ServletDemo`) and click "Next."
4. Choose the target runtime (Apache Tomcat) and configure the project as needed. Click "Finish."

1.2.2 Creating a Servlet

1. Right-click on the `src` folder in the newly created project.
2. Select `New -> Servlet`.
3. Enter the servlet name (e.g., `HelloServlet`) and package. Click "Next."
4. Choose the URL mapping (e.g., `/HelloServlet`) and click "Next."
5. Leave the default options and click "Finish."

1.2.3 Checking for servlet-api.jar

1. Right-click on the project and select `Properties`.
2. In the properties window, navigate to `Java Build Path -> Libraries`.
3. Ensure that `Apache Tomcat` is listed, and `Servlet API` is included. If not, add it by clicking "Add Library" and selecting "Server Runtime."

1.2.4 Building the Project

1.2.5 Publishing and Starting the Project

import java.io.IOException;

import javax.servlet.ServletException;

import javax.servlet.annotation.WebServlet;

```java
import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;


@WebServlet("/HelloServlet")

public class HelloServlet extends HttpServlet {

    private static final long serialVersionUID = 1L;


    protected void doGet(HttpServletRequest request, HttpServletResponse response)

        throws ServletException, IOException {

        response.getWriter().append("Hello, Servlet!");

    }

}
```

1. Right-click on the project and select `Run As -> Run on Server`.
2. Choose the configured Apache Tomcat server and click "Finish."

1.2.6 Running the Project

1. Open a web browser and navigate to `http://localhost:8080/ServletDemo/HelloServlet`.
2. You should see the "Hello, Servlet!" message.

3 Generic Servlets

HTML FILE

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Name Servlet</title>
</head>
<body>
    <center>
        <form name=frmName method="GET" action="name">
            <table width="50%" border="0">
                <tr valign="top">
                    <td width="40%">Enter your firstname</td>
                    <td><input name="fname" id="fname" maxlength=30></td>
                </tr>
                <tr valign="top">
                    <td width="40%">Enter your lastname</td>
                    <td><input name="lname" id="lname" maxlength=30></td>
                </tr>
                <tr valign="top">
                <td colspan=2 width="100%">
                    <button>Submit</button>
                </td>

                </tr>
```

```
            </table>
        </form>
    </center>
</body>
</html>
```

Name Servlet

```java
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;

/**
* Servlet implementation class NameServlet
*/
@WebServlet("/NameServlet")
public class NameServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;

    /**
* @see HttpServlet#HttpServlet()
*/
    public NameServlet() {
        super();
```

```java
        // TODO Auto-generated constructor stub

    }


    /**
     * @see HttpServlet#doGet(HttpServletRequest request,
HttpServletResponse response)
     */
    protected void doGet(HttpServletRequest request, HttpServletResponse
response) throws ServletException, IOException {
        // TODO Auto-generated method stub
        String fname = request.getParameter("fname");
        String lname = request.getParameter("lname");


        PrintWriter out = response.getWriter();
    out.println("<html><body>");
    out.println("Your full name is " + fname + " " + lname);
    out.println("</body></html>");
    }


    /**
     * @see HttpServlet#doPost(HttpServletRequest request,
HttpServletResponse response)
     */
    protected void doPost(HttpServletRequest request, HttpServletResponse
response) throws ServletException, IOException {
        // TODO Auto-generated method stub
        doGet(request, response);
    }
```

}

4 Servlet Classes and Interfaces

Html file

<!DOCTYPE html>

<html>

<head>

<meta charset="UTF-8">

<title>Servlet Interfaces</title>

</head>

<body>

Show Servlet Interface

</body>

</html>

InterfaceDemo

import java.io.*

import javax.servlet.*;

import javax.servlet.annotation.WebServlet;

/**

* Servlet implementation class InterfaceDemo

*/

@WebServlet("/InterfaceDemo")

```java
public class InterfaceDemo implements Servlet {

    ServletConfig config=null;
    public void init(ServletConfig config){
        this.config=config;
        System.out.println("Initialization complete");
    }

    public void service(ServletRequest req,ServletResponse res)
    throws IOException,ServletException{
        res.setContentType("text/html");
        PrintWriter pwriter=res.getWriter();
        pwriter.print("<html>");
        pwriter.print("<body>");
        pwriter.print("In the service() method<br>");
        pwriter.print("</body>");
        pwriter.print("</html>");
    }
    public void destroy(){
        System.out.println("In destroy() method");
    }
    public ServletConfig getServletConfig(){
        return config;
    }
    public String getServletInfo(){
        return "This is a sample servlet info";
    }
```

```
}
```

5 Servlet Filters

Html file

```html
<!DOCTYPE html>

<html>

<head>

<meta charset="UTF-8">

<title>Filter Demo</title>

</head>

<body>
    <a href="dashboard?userid=johndoe">Account Dashboard (allow filter)</a><br>

    <a href="profile?userid=johndoe">Account Profile (allow filter)</a><br>

    <a href="dashboard">Account Dashboard (block filter)</a><br>

    <a href="info">Info Page </a><br>

</body>

</html>
```

AccountProfile

```java
import java.io.IOException;

import javax.servlet.ServletException;

import javax.servlet.annotation.WebServlet;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;


/**
```

```java
 * Servlet implementation class AccountProfile
 */
@WebServlet("/AccountProfile")
public class AccountProfile extends HttpServlet {
    private static final long serialVersionUID = 1L;

    /**
     * @see HttpServlet#HttpServlet()
     */
    public AccountProfile() {
        super();
        // TODO Auto-generated constructor stub
    }

    /**
     * @see HttpServlet#doGet(HttpServletRequest request,
     HttpServletResponse response)
     */
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
        // TODO Auto-generated method stub
        response.getWriter().write("I am in Account Profile after passing through LoginFilter");
    }

    /**
     * @see HttpServlet#doPost(HttpServletRequest request,
     HttpServletResponse response)
```

```java
	 */
	protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
		// TODO Auto-generated method stub
		doGet(request, response);
	}


}
```

AccountDashboard

```java
import java.io.IOException;

import javax.servlet.ServletException;

import javax.servlet.annotation.WebServlet;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;


/**
* Servlet implementation class AccountDashboard
*/
@WebServlet("/AccountDashboard")
public class AccountDashboard extends HttpServlet {
	private static final long serialVersionUID = 1L;


	/**
* @see HttpServlet#HttpServlet()
*/
	public AccountDashboard() {
		super();
```

```java
        // TODO Auto-generated constructor stub

    }


    /**

     * @see HttpServlet#doGet(HttpServletRequest request,
HttpServletResponse response)

     */

    protected void doGet(HttpServletRequest request, HttpServletResponse
response) throws ServletException, IOException {

        // TODO Auto-generated method stub


        response.getWriter().write("I am in Account Dashboard after passing
through LoginFilter");

    }


    /**

     * @see HttpServlet#doPost(HttpServletRequest request,
HttpServletResponse response)

     */

    protected void doPost(HttpServletRequest request, HttpServletResponse
response) throws ServletException, IOException {

        // TODO Auto-generated method stub

        doGet(request, response);

    }


}
```

InfoPage

```java
import java.io.IOException;

import javax.servlet.ServletException;
```

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

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;


/**
 * Servlet implementation class InfoPage
 */
@WebServlet("/InfoPage")
public class InfoPage extends HttpServlet {
    private static final long serialVersionUID = 1L;


    /**
     * @see HttpServlet#HttpServlet()
     */
    public InfoPage() {
        super();
        // TODO Auto-generated constructor stub
    }


    /**
     * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
        // TODO Auto-generated method stub
        response.getWriter().write("I am in InfoPage");
    }


    /**
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
```

```
     */

     protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {

          // TODO Auto-generated method stub

          doGet(request, response);

     }


}
```

LoginFilter

```
import java.io.IOException;

import javax.servlet.Filter;

import javax.servlet.FilterChain;

import javax.servlet.FilterConfig;

import javax.servlet.ServletException;

import javax.servlet.ServletRequest;

import javax.servlet.ServletResponse;

import javax.servlet.annotation.WebFilter;


/**
* Servlet Filter implementation class LoginFilter
*/
@WebFilter("/LoginFilter")
public class LoginFilter implements Filter {

   /**
* Default constructor.
*/
   public LoginFilter() {
     // TODO Auto-generated constructor stub
   }
```

```java
/**
 * @see Filter#destroy()
 */
public void destroy() {
    // TODO Auto-generated method stub
}


/**
 * @see Filter#doFilter(ServletRequest, ServletResponse, FilterChain)
 */
public void doFilter(ServletRequest request, ServletResponse response, FilterChain chain) throws IOException, ServletException {
    // TODO Auto-generated method stub
    // place your code here

    String userId = request.getParameter("userid");

    if( userId != null){
        chain.doFilter(request, response);
    }


}

/**
 * @see Filter#init(FilterConfig)
 */
public void init(FilterConfig fConfig) throws ServletException {
    // TODO Auto-generated method stub
}
```

}

6 Session Tracking Using Cookies

<!DOCTYPE html>

<html>

<head>

<meta charset="UTF-8">

<title>Insert title here</title>

</head>

<body>

    Dashboard with cookie login

    Dashboard without cookie login

</body>

</html>

LoginServlet

import java.io.*;

import javax.servlet.*;

import javax.servlet.annotation.*;

import javax.servlet.http.*;

/**

* Servlet implementation class LoginServlet

*/

@WebServlet("/LoginServlet")

public class LoginServlet extends HttpServlet {

    private static final long serialVersionUID = 1L;

  /**

* @see HttpServlet#HttpServlet()

```java
*/
    public LoginServlet() {

        super();

        // TODO Auto-generated constructor stub

    }


    /**
     * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {

        // TODO Auto-generated method stub


        Cookie userId = new Cookie("userid", request.getParameter("userid"));

        response.addCookie(userId);

    response.sendRedirect("dashboard");


    }


    /**
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {

        // TODO Auto-generated method stub

        doGet(request, response);

    }


}
```

Dashboard

```java
import java.io.*;

import javax.servlet.*;
```

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

import javax.servlet.http.*;




/**

* Servlet implementation class Dashboard

*/

@WebServlet("/Dashboard")

public class Dashboard extends HttpServlet {

    private static final long serialVersionUID = 1L;


  /**

* @see HttpServlet#HttpServlet()

*/

   public Dashboard() {

     super();

     // TODO Auto-generated constructor stub

   }


    /**

     * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)

     */

    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {

        // TODO Auto-generated method stub


        Cookie cookie = null;

       Cookie[] cookies = null;

       boolean found = false;

       PrintWriter out = response.getWriter();
```

```java
        out.println("<html><body>");


        cookies = request.getCookies();
        if (cookies != null) {
            for (int i = 0; i < cookies.length; i++) {
                cookie = cookies[i];
                if (cookie.getName().contentEquals("userid") && cookie.getValue() != null) {
                    out.println("UserId read from cookie:" + cookie.getValue() + "<br>");
                    found = true;
                }
            }
        }
        if (!found) {
            out.println("No UserId was found in cookie.<br>");
        }
        out.println("</body></html>");


    }


    /**
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
        // TODO Auto-generated method stub
        doGet(request, response);
    }


}
```

7 Session Tracking Using URL Rewrite

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>URL Rewriting Demo</title>
</head>
<body>
    <a href="login?userid=admin">Dashboard with URL Rewriting based login</a><br>
    <a href="dashboard">Dashboard without URL Rewriting based login</a>
</body>
</html>
```

LoginServlet

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




/**
* Servlet implementation class LoginServlet
*/
@WebServlet("/LoginServlet")
public class LoginServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;


   /**
* @see HttpServlet#HttpServlet()
*/
   public LoginServlet() {
     super();
```

```java
        // TODO Auto-generated constructor stub

    }


    /**
     * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {

        // TODO Auto-generated method stub


        String userId = request.getParameter("userid");

        response.sendRedirect("dashboard?userid=" + userId);


    }


    /**
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {

        // TODO Auto-generated method stub

        doGet(request, response);

    }


}
```
Dashboard
```java
import java.io.*;

import javax.servlet.*;

import javax.servlet.annotation.*;

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

```java
/**
* Servlet implementation class Dashboard
*/
@WebServlet("/Dashboard")
public class Dashboard extends HttpServlet {
    private static final long serialVersionUID = 1L;

    /**
* @see HttpServlet#HttpServlet()
*/
    public Dashboard() {
        super();
        // TODO Auto-generated constructor stub
    }

    /**
     * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
        // TODO Auto-generated method stub

        PrintWriter out = response.getWriter();
        out.println("<html><body>");

        String userId = request.getParameter("userid");
        if (userId == null ) {
            out.println("No UserId was found in the URL.<br>");
        } else {
            out.println("UserId obtained from URL Rewriting:" + userId + "<br>");
```

```
        }

        out.println("</body></html>");


    }


    /**
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
        // TODO Auto-generated method stub
        doGet(request, response);
    }


}
```

8 Session Tracking Using Hidden Form Fields

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Insert title here</title>
</head>
<body>
    <form action="login" method="post">
        <input type=hidden name="userid" id="userid" value="admin">
      <button>Dashboard with hidden form fields login</button>
    </form>
    <br><br>
    <a href="dashboard">Dashboard without hidden form fields login</a>
</body>
</html>
```

LoginServlet

```java
import java.io.*;

import java.io.PrintWriter;


import javax.servlet.*;

import javax.servlet.annotation.*;

import javax.servlet.http.*;




/**

* Servlet implementation class LoginServlet

*/

@WebServlet("/LoginServlet")

public class LoginServlet extends HttpServlet {

    private static final long serialVersionUID = 1L;


  /**

* @see HttpServlet#HttpServlet()

*/

   public LoginServlet() {

     super();

     // TODO Auto-generated constructor stub

   }


    /**

     * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)

     */

    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {

        // TODO Auto-generated method stub
```

```java
        PrintWriter out = response.getWriter();

        out.println("<html><body>");


        String userId = request.getParameter("userid");
        //creating a new hidden form field
        out.println("<form action='dashboard' method='post'>");

        out.println("<input type='hidden' name='userid' id='userid' value='"+userId+"'>");

        out.println("<input type='submit' value='submit' >");

        out.println("</form>");

        out.println("<script>document.forms[0].submit();</script>");



    }


    /**
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {

        // TODO Auto-generated method stub

        doGet(request, response);

    }


}
```

Dashboard

```java
import java.io.*;

import javax.servlet.*;

import javax.servlet.annotation.*;

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

```java
/**
 * Servlet implementation class Dashboard
 */
@WebServlet("/Dashboard")
public class Dashboard extends HttpServlet {
    private static final long serialVersionUID = 1L;

    /**
     * @see HttpServlet#HttpServlet()
     */
    public Dashboard() {
        super();
        // TODO Auto-generated constructor stub
    }

    /**
     * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
        // TODO Auto-generated method stub

        PrintWriter out = response.getWriter();
        out.println("<html><body>");
        String userId = request.getParameter("userid");
        if (userId == null) {
            out.println("No UserId was found in hidden form field.<br>");
        } else {
            out.println("UserId found in hidden form field: " + userId + "<br>");
```

```
        }

        out.println("</body></html>");


    }


    /**
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
        // TODO Auto-generated method stub
        doGet(request, response);
    }


}
```

9 Session Tracking Using HTTP Session

```
<!DOCTYPE html>

<html>

<head>

<meta charset="UTF-8">

<title>HTTPSession Demo</title>

</head>

<body>

    <a href="login?userid=admin">Dashboard with Session based login</a><br>

    <a href="dashboard">Dashboard without Session based login</a>

</body>

</html>
```

LoginServlet

```
import java.io.*;

import javax.servlet.*;

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

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


/**
* Servlet implementation class LoginServlet
*/
@WebServlet("/LoginServlet")
public class LoginServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;

  /**
* @see HttpServlet#HttpServlet()
*/
   public LoginServlet() {
      super();
      // TODO Auto-generated constructor stub
   }

   /**
    * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
    */
   protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
       // TODO Auto-generated method stub

       String userId = request.getParameter("userid");
       HttpSession session=request.getSession();
      session.setAttribute("userid",  userId);


      response.sendRedirect("dashboard");
```

```
    }


    /**
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
        // TODO Auto-generated method stub
        doGet(request, response);
    }


}
```

Dashboard

```
import java.io.*;

import javax.servlet.*;

import javax.servlet.annotation.*;

import javax.servlet.http.*;




/**
* Servlet implementation class Dashboard
*/
@WebServlet("/Dashboard")
public class Dashboard extends HttpServlet {
    private static final long serialVersionUID = 1L;


    /**
* @see HttpServlet#HttpServlet()
*/
```

```java
    public Dashboard() {
        super();
        // TODO Auto-generated constructor stub
    }

    /**
     * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
        // TODO Auto-generated method stub

        PrintWriter out = response.getWriter();
        out.println("<html><body>");

        HttpSession session=request.getSession(false);
        String userId = null;
        if (session.getAttribute("userid") != null)
            userId =(String)session.getAttribute("userid");
        if (userId == null ) {
            out.println("No UserId was found in session.<br>");
        } else {
            out.println("UserId obtained from session :" + userId + "<br>");
        }
        out.println("</body></html>");

    }

    /**
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
     */
```

```java
        protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {

                // TODO Auto-generated method stub

                doGet(request, response);

        }


}
```

10 Session Login and Logout

```html
<!DOCTYPE html>

<html>

<head>

<meta charset="UTF-8">

<title>Login Logout</title>

</head>

<body>

        <a href="login?userid=admin">Dashboard with Login</a><br>


</body>

</html>
```

LoginServlet

```java
import java.io.*;

import javax.servlet.*;

import javax.servlet.annotation.*;

import javax.servlet.http.*;




/**

* Servlet implementation class LoginServlet

*/

@WebServlet("/LoginServlet")
```

```java
public class LoginServlet extends HttpServlet {

    private static final long serialVersionUID = 1L;


    /**
     * @see HttpServlet#HttpServlet()
     */
    public LoginServlet() {
        super();
        // TODO Auto-generated constructor stub
    }


    /**
     * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
        // TODO Auto-generated method stub


        String userId = request.getParameter("userid");
        HttpSession session=request.getSession();
        session.setAttribute("userid",  userId);


        response.sendRedirect("dashboard");


    }


    /**
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
        // TODO Auto-generated method stub
```

```java
        doGet(request, response);

    }


}
```

Dashboard

```java
import java.io.*;

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;


/**

* Servlet implementation class Dashboard

*/

@WebServlet("/Dashboard")

public class Dashboard extends HttpServlet {

    private static final long serialVersionUID = 1L;


  /**

* @see HttpServlet#HttpServlet()

*/

  public Dashboard() {

    super();

    // TODO Auto-generated constructor stub

  }


    /**
```

```java
 * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
 */
protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
    // TODO Auto-generated method stub
    PrintWriter out = response.getWriter();
    out.println("<html><body>");


    HttpSession session=request.getSession(false);
    String userId = null;
    if (session.getAttribute("userid") != null)
        userId =(String)session.getAttribute("userid");
    if (userId == null ) {
        out.println("No UserId was found in session.<br>");
    } else {
        out.println("UserId obtained from session :" + userId + "<br>");
        out.println("<a href='logout'>Logout of session</a><br>");
    }
    out.println("</body></html>");
}


/**
 * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
 */
protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
    // TODO Auto-generated method stub
    doGet(request, response);
}

}
```

Logout

```java
import java.io.*;

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;


/**
 * Servlet implementation class Logout
 */
@WebServlet("/Logout")
public class Logout extends HttpServlet {
    private static final long serialVersionUID = 1L;


    /**
     * @see HttpServlet#HttpServlet()
     */
    public Logout() {
        super();
        // TODO Auto-generated constructor stub
    }


    /**
     * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
```

```java
        // TODO Auto-generated method stub

        HttpSession session=request.getSession();

        session.invalidate();

        PrintWriter out = response.getWriter();

        out.println("<html><body>");

    out.println("Logged out of session.<br>");

    out.println("</body></html>");

    }


    /**

     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)

     */

    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {

        // TODO Auto-generated method stub

        doGet(request, response);

    }


}
```