

```

Calculator.html x CalculatorServlet.java
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="ISO-8859-1">
5 <title>Simple Calculator</title>
6 </head>
7 <body style="font-family:Arial; text-align:center; margin-top:50px;">
8 <h2 style="color:blue;">Simple Calculator</h2>
9 <form action="calculator" method="post">
10 Enter Number 1: <input type="text" name="num1"><br><br>
11 Enter Number 2: <input type="text" name="num2"><br><br>
12
13 Select Operation:
14 <select name="operation">
15 <option value="add">Addition (+)</option>
16 <option value="sub">Subtraction (-)</option>
17 <option value="mul">Multiplication (*)</option>
18 <option value="div">Division (/)</option>
19 </select><br><br>
20
21 <input type="submit" value="Calculate">
22 </form>
23
24 </body>
25 </html>

```

```

Calculator.html CalculatorServlet.java x
1 package sessionP;
2
3 import java.io.IOException;
4 import java.io.PrintWriter;
5 import javax.servlet.ServletException;
6 import javax.servlet.annotation.WebServlet;
7 import javax.servlet.http.HttpServlet;
8 import javax.servlet.http.HttpServletRequest;
9 import javax.servlet.http.HttpServletResponse;
10
11 @WebServlet("/calculator")
12 public class CalculatorServlet extends HttpServlet {
13     protected void doPost(HttpServletRequest request, HttpServletResponse response)
14         throws ServletException, IOException {
15         response.setContentType("text/html");
16         PrintWriter out = response.getWriter();
17         // Get inputs
18         String n1 = request.getParameter("num1");
19         String n2 = request.getParameter("num2");
20         String op = request.getParameter("operation");
21         double num1 = Double.parseDouble(n1);
22         double num2 = Double.parseDouble(n2);
23         double result = 0;
24         // Perform operation
25         if(op.equals("add")) {
26             result = num1 + num2;
27         } else if(op.equals("sub")) {
28             result = num1 - num2;
29         } else if(op.equals("mul")) {
30             result = num1 * num2;
31         } else if(op.equals("div")) {
32             result = num1 / num2;
33         }
34         // Show result
35         out.println("<html><body style='font-family:Arial; text-align:center; margin-top:50px;'>");
36         out.println("<h2 style='color:green;'>Result</h2>");
37         out.println("<h3>" + result + "</h3>");
38         out.println("<a href='Calculator.html'>Back</a>");
39         out.println("</body></html>");
40     }
41 }

```

Simple Calculator

Enter Number 1:

Enter Number 2:

Select Operation: Division (/)

Result

0.8333333333333334

[Back](#)

```
loginServlet.java logininvalid.html ×
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="ISO-8859-1">
5 <title>Insert title here</title>
6 </head>
7 <body>
8 <form action="login" method="get">
9 Enter User Name: <input type="text" name="unm" ><br>
10 Enter Password: <input type="password" name="pw" ><br>
11 <input type="submit">
12 </form>
13 </body>
14 </html>
```

```
loginServlet.java × logininvalid.html
1 package sessionP;
2
3 import java.io.IOException;
4
5
6
7
8
9
10 public class loginServlet extends HttpServlet{
11 public void service(HttpServletRequest req, HttpServletResponse res)
12 throws IOException
13 {
14 String uname = req.getParameter("unm");
15 String pwd = req.getParameter("pw");
16 PrintWriter out = res.getWriter();
17 if(uname.equals("raghav") && pwd.equals("admin"))
18 {
19 out.println("Login Done: " + "Hello " + uname); // Responding to the client
20 }
21 else
22 out.println("Login Failed");
23 //System.out.println("The result is: " + k); // Debug screen/testing
24
25 }
26 }
```

← → ↻ ⓘ localhost:8080/sessionP/logininvalid.html

☰

Enter User Name:

Enter Password:

← → ↻ ⓘ localhost:8080/sessionP/login?unm=raghav&pw=admin

☰

Login Done: Hello raghav

← → ↻ ⓘ localhost:8080/sessionP/login?unm=raghav&pw=admim

☰

Login Failed

```
VisitCounterServlet.java x
1 package sessionP;
2
3 import java.io.IOException;
4
5
6
7
8
9
10
11
12
13 @WebServlet("/visit")
14 public class VisitCounterServlet extends HttpServlet {
15     protected void doGet(HttpServletRequest request, HttpServletResponse response)
16         throws ServletException, IOException {
17         response.setContentType("text/html");
18         PrintWriter out = response.getWriter();
19         int visitCount = 0;
20         // Read cookies from request
21         Cookie[] cookies = request.getCookies();
22         if (cookies != null) {
23             for (Cookie c : cookies) {
24                 if (c.getName().equals("visitCount")) {
25                     visitCount = Integer.parseInt(c.getValue());
26                 }
27             }
28         }
29         // Increment visit count
30         visitCount++;
31         // Store updated value in cookie
32         Cookie visitCookie = new Cookie("visitCount", String.valueOf(visitCount));
33         visitCookie.setMaxAge(60 * 60 * 24); // 1 day
34         response.addCookie(visitCookie);
35         // Display message
36         out.println("<html><body style='font-family:Arial; text-align:center; margin-top:50px;'>");
37         out.println("<h1 style='color:blue;'>Servlet Cookie Example</h1>");
38         out.println("<h2>You have visited this page <span style='color:green;'>" + visitCount + "</span> times.</h2>");
39         out.println("</body></html>");
40     }
41 }
```

localhost:8080/sessionP/visit

Servlet Cookie Example

You have visited this page **16** times.

```

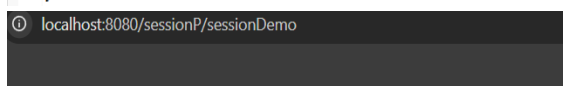
SessionDemoServlet.java x LogoutServlet.java x
1 package sessionP;
2
3 import java.io.IOException;
12
13 @WebServlet("/sessionDemo")
14 public class SessionDemoServlet extends HttpServlet {
15     protected void doGet(HttpServletRequest request, HttpServletResponse response)
16         throws ServletException, IOException {
17         response.setContentType("text/html");
18         PrintWriter out = response.getWriter();
19         // Get or create session
20         HttpSession session = request.getSession(true);
21         Integer visitCount = (Integer) session.getAttribute("visitCount");
22         String message;
23         if (visitCount == null) {
24             // First visit
25             visitCount = 1;
26             message = "Welcome! This is your <b>first visit</b>.";
27         } else {
28             // Returning visitor
29             visitCount++;
30             message = "Welcome back! You have visited <b>" + visitCount + "</b> times.";
31         }
32         // Save visitCount in session
33         session.setAttribute("visitCount", visitCount);
34         // HTML Output
35         out.println("<html><body style='font-family:Arial; text-align:center; margin-top:50px;'>");
36         out.println("<h2 style='color:blue;'>Session Demo Servlet</h2>");
37         out.println("<p>" + message + "</p>");
38         out.println("<p>Session ID: <b>" + session.getId() + "</b></p>");
39         out.println("<form action='logout' method='post'>");
40         out.println("<button type='submit'>Destroy Session</button>");
41         out.println("</form>");
42         out.println("</body></html>");
43     }
44 }

```

```

SessionDemoServlet.java LogoutServlet.java x
1 package sessionP;
2
3 import java.io.IOException;
11
12 @WebServlet("/logout")
13 public class LogoutServlet extends HttpServlet {
14     protected void doPost(HttpServletRequest request, HttpServletResponse response)
15         throws ServletException, IOException {
16
17         HttpSession session = request.getSession(false); // get session if exists
18         if (session != null) {
19             session.invalidate(); // destroy session
20         }
21         response.setContentType("text/html");
22         response.getWriter().println("<h2 style='color:red; text-align:center;'>Session destroyed. Please reload /sessionDemo to start again.</h2>");
23
24
25 }

```

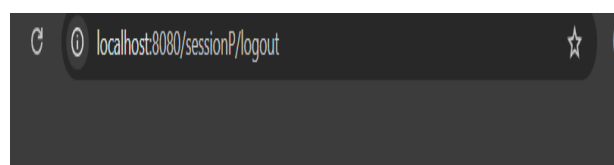


Session Demo Servlet

Welcome back! You have visited 6 times.

Session ID: A1998DAC41CA04FA40FCD4923C7F4361

Destroy Session



Session destroyed. Please reload /sessionDemo to start again.

```

DateTimeServlet.java ×
1 package sessionP;
2
3 import java.io.IOException;
4
12 @WebServlet("/datetime")
13 public class DateTimeServlet extends HttpServlet {
14     protected void doGet(HttpServletRequest request, HttpServletResponse response)
15         throws ServletException, IOException {
16         // Set response type
17         response.setContentType("text/html");
18
19         // Writer to send output to client
20         PrintWriter out = response.getWriter();
21
22         // Get current date and time
23         Date currentDate = new Date();
24
25         // HTML output
26         out.println("<html>");
27         out.println("<head><title>Current Date & Time</title></head>");
28         out.println("<body style='font-family:Arial; text-align:center; margin-top:50px;'>");
29         out.println("<h1 style='color:green;'>Current Date and Time</h1>");
30         out.println("<h2>" + currentDate.toString() + "</h2>");
31         out.println("</body>");
32         out.println("</html>");
33     }
34 }
35 }

```

Current Date and Time

Sun Aug 24 19:00:27 IST 2025

```

hyperlink.html × HyperlinkServlet.java
1 sessionP/src/main/webapp/hyperlink.html
2 <html>
3 <head>
4 <meta charset="ISO-8859-1">
5 <title>Servlet Communication Demo</title>
6 </head>
7 <body style="font-family:Arial; text-align:center; margin-top:50px;">
8     <h2>Communication between HTML and Servlet</h2>
9     <p>Click the link below to call the servlet:</p>
10
11     <!-- Hyperlink with query string -->
12     <a href="helloServlet?name=Raghav">Go to Servlet</a>
13 </body>
14 </html>

```

```
hyperlink.html  HyperlinkServlet.java ×
1 package sessionP;
2
3 import java.io.IOException;
11
12 @WebServlet("/helloServlet")
13 public class HyperlinkServlet extends HttpServlet {
14     private static final long serialVersionUID = 1L;
15
16     protected void doGet(HttpServletRequest request, HttpServletResponse response)
17         throws ServletException, IOException {
18
19         response.setContentType("text/html");
20         PrintWriter out = response.getWriter();
21
22         // Get data from hyperlink (query string)
23         String name = request.getParameter("name");
24
25         out.println("<html><body style='font-family:Arial; text-align:center; margin-top:50px;'>");
26         out.println("<h2 style='color:green;'>Hello from Servlet!</h2>");
27         out.println("<p>You clicked the link from HTML.</p>");
28         out.println("<p>Received Name: <b>" + name + "</b></p>");
29         out.println("</body></html>");
30     }
31 }
```

Communication between HTML and Servlet

Click the link below to call the servlet:

[Go to Servlet](#)

Hello from Servlet!

You clicked the link from HTML.

Received Name: **Raghav**

```

AutoRefreshServlet.java ×
1 package sessionP;
2
3 import java.io.IOException;
12
13 @WebServlet("/autorefresh")
14 public class AutoRefreshServlet extends HttpServlet {
15     protected void doGet(HttpServletRequest request, HttpServletResponse response)
16         throws ServletException, IOException {
17
18         // Set content type
19         response.setContentType("text/html");
20         // Auto refresh after 5 seconds
21         response.setHeader("Refresh", "1");
22         // Output
23         PrintWriter out = response.getWriter();
24         Date currentTime = new Date();
25
26         out.println("<html><body style='font-family:Arial; text-align:center; margin-top:50px;'>");
27         out.println("<h2 style='color:blue;'>Auto Refresh Example</h2>");
28         out.println("<p>This page will refresh automatically every second.</p>");
29         out.println("<h3>Current Time: " + currentTime.toString() + "</h3>");
30         out.println("</body></html>");
31     }
32 }

```

Auto Refresh Example

This page will refresh automatically every second.

Current Time: Sun Aug 24 19:24:37 IST 2025

```

EmailRegistration.html × EmailRegistrationServlet.java
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="ISO-8859-1">
5 <title>Email Registration</title>
6 </head>
7 <body style="font-family:Arial; margin:50px;">
8 <h2 style="color:blue;">Email Service Registration</h2>
9 <form action="register" method="post">
10     First Name*: <input type="text" name="fname"><br><br>
11     Middle Name: <input type="text" name="mname"><br><br>
12     Last Name*: <input type="text" name="lname"><br><br>
13     Desired Login*: <input type="text" name="login"><br><br>
14     Password*: <input type="password" name="pwd"><br><br>
15     Confirm Password*: <input type="password" name="cpwd"><br><br>
16     Location: <input type="text" name="location"><br><br>
17     Education: <input type="text" name="edu"><br><br>
18     Phone Number: <input type="text" name="phone"><br><br>
19
20     <input type="submit" value="Register">
21 </form>
22 </body>
23 </html>

```

```

EmailRegistration.html  EmailRegistrationServlet.java ×
1 package sessionP;
2
3 import java.io.IOException;
4 import java.io.PrintWriter;
5 import javax.servlet.ServletException;
6 import javax.servlet.annotation.WebServlet;
7 import javax.servlet.http.HttpServlet;
8 import javax.servlet.http.HttpServletRequest;
9 import javax.servlet.http.HttpServletResponse;
10
11 @WebServlet("/register")
12 public class EmailRegistrationServlet extends HttpServlet {
13     protected void doPost(HttpServletRequest request, HttpServletResponse response)
14         throws ServletException, IOException {
15         response.setContentType("text/html");
16         PrintWriter out = response.getWriter();
17         // Get form values
18         String fname = request.getParameter("fname");
19         String mname = request.getParameter("mname");
20         String lname = request.getParameter("lname");
21         String login = request.getParameter("login");
22         String pwd = request.getParameter("pwd");
23         String cpwd = request.getParameter("cpwd");
24         String location = request.getParameter("location");
25         String edu = request.getParameter("edu");
26         String phone = request.getParameter("phone");
27         // Validation
28         if(fname == null || fname.equals("") || lname == null || lname.equals("") ||
29             login == null || login.equals("") || pwd == null || pwd.equals("") ||
30             cpwd == null || cpwd.equals("")) {
31             out.println("<h3 style='color:red;'>* Required fields cannot be empty!</h3>");
32             return;
33         }
34         if(!fname.matches("[a-zA-Z]+") || (!lname.equals("") && !lname.matches("[a-zA-Z]+"))
35             || !mname.matches("[a-zA-Z]+")) {
36             out.println("<h3 style='color:red;'>Name fields should contain only alphabets!</h3>");
37             return;
38         }
39         if(!pwd.equals(cpwd)) {
40             out.println("<h3 style='color:red;'>Passwords do not match!</h3>");
41             return;
42         }
43         if(pwd.length() < 6 || !pwd.matches(".*[0-9].*") || !pwd.matches(".*[!@#%&^&*.]*") || !pwd.matches(".*[a-zA-Z].*")) {
44             out.println("<h3 style='color:red;'>Password must be at least 6 characters long, contain alphabets, one number, and one special character.</h3>");
45             return;
46         }
47         // If everything is valid
48         out.println("<html><body style='font-family:Arial; text-align:center; margin-top:50px;'>");
49         out.println("<h2 style='color:green;'>Registration Successful!</h2>");
50         out.println("<p>Welcome, " + fname + " " + lname + " (" + login + ")</p>");
51         if(location != null && !location.equals("")) out.println("<p>Location: " + location + "</p>");
52         if(edu != null && !edu.equals("")) out.println("<p>Education: " + edu + "</p>");
53         if(phone != null && !phone.equals("")) out.println("<p>Phone: " + phone + "</p>");
54         out.println("</body></html>");
55     }
56 }
57

```


Email Service Registration

First Name*:

Middle Name:

Last Name*:

Desired Login*:

Password*:

Confirm Password*:

Location:

Education:

Phone Number:

Registration Successful!

Welcome, Raghav Jha (raghavjha63@gmail.com)

Location: Siliguri

Education: BCA

Phone: 6294782199