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Experiment 2

Student Name: Rahul Saxena **UID:** 24MCI10204
Branch: MCA AI & ML **Section/Group:** 3-B
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Subject Name: Advanced Internet Programming Lab **Subject Code:** 24CAP-652

Aim/Overview of the practical: Create a servlet that describes how to use the HttpSession object to find out the creation time and the last-accessed time for a session. We would associate a new session with the request if one does not already exist

Task to be done:

The goal of this task is to create a servlet that utilizes the HttpSession object to:

1. Check if a session exists for the incoming request; if not, create a new session.
2. Retrieve and display the session creation time.
3. Retrieve and display the last accessed time of the session.
4. Respond with relevant session details to the client.

Code for experiment/practical:

Index.html

```
<!DOCTYPE html>

<html>
  <head>
    <title>Form</title>
    <link rel="stylesheet" href="style.css">
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
     <form id="userForm" method="GET" action="index">
       <label for="FName">First Name:</label>
       <input type="text" name="FName" id="FName" placeholder="Enter First Name" required />

       <label for="LName">Last Name:</label>
       <input type="text" name="LName" id="LName" placeholder="Enter Last Name" required />

       <!-- Submit buttons for GET and POST -->
       <button class="get" type="submit" formmethod="GET">Submit via GET</button>
       <button class="post" type="submit" formmethod="POST">Submit via POST</button>
     </form>
  </body>
</html>
```

NewServelet.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;

@WebServlet("/index")
public class NewServlet extends HttpServlet {

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

        // Set response type
        response.setContentType("text/html;charset=UTF-8");

        // Retrieve parameters
        String firstname1 = request.getParameter("FName");
        String lastname1 = request.getParameter("LName");

        // Logging for debugging
        System.out.println("First Name: " + firstname1);
        System.out.println("Last Name: " + lastname1);

        try (PrintWriter out = response.getWriter()) {
            out.println("<!DOCTYPE html>");
            out.println("<html>");
            out.println("<head>");
            out.println("<style>");
            out.println("body { font-family: Arial, sans-serif; background-color: #f4f4f9; color: #333; "
                    + "margin: 0; padding: 0; text-align: center; display: flex; justify-content: center; "
                    + "align-items: center; flex-direction: column; height: 100vh; }");
            out.println("h1 { color: #5c6bc0; font-size: 2em; margin: 20px 0; }");
            out.println(".container { width: 80%; margin: 0 auto; padding: 20px; background-color: #fff; "
                    + "border-radius: 8px; box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1); }");
            out.println(".details { font-size: 1.2em; margin-bottom: 15px; }");
            out.println("</style>");
            out.println("<title>User Details</title>");
            out.println("</head>");
            out.println("<body>");
            out.println("<div class='container'>");
            out.println("<h1>Here are the user details</h1>");
            out.println("<div class='details'>First Name: " + firstname1 + "</div>");
            out.println("<div class='details'>Last Name: " + lastname1 + "</div>");
            out.println("</div>");
            out.println("</body>");
            out.println("</html>");
        }
    }
    @Override
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        processRequest(request, response);
    }
    @Override
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        processRequest(request, response);
    }
    @Override
    public String getServletInfo() {
        return "Servlet handling GET and POST methods";
    }
}
```

Output:

Output

User Details

Field	Values
First Name	Rahul
Last Name	Saxena
Session ID	0ADB2B6BE4524973CA7F8EA9F5045875
Creation Time	Thu Jan 30 15:02:21 IST 2025
Last Access Time	Thu Jan 30 15:39:28 IST 2025

Learning outcomes:

- Understand how to create and manage sessions using the HttpSession object in a Java servlet.
- Learn how to retrieve session metadata such as creation time and last accessed time.
- Gain practical experience in handling HTTP session persistence across multiple requests.
- Improve your understanding of session management concepts in Java web applications.

Evaluation Grid:

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.	Demonstration and Performance		5
2.	Worksheet		10
3.	Post Lab Quiz		5