Day32; 20220812

⊙ 강의 번호	
🗂 유형	
🔗 자료	
≡ 속성	
☑ 복습	☐
⏱ 작성일자	@2022년 8월 12일 오전 9:31

Sevlet 서블렛 (Server Applet) 서버 애플렛

CGI의 단점을 보완하기 위해 썬 마이크로 시스템에서 개발한 Java 기반의 웹 프로그래밍 솔루션이다. 이 서블렛을 기반으로 JSP 개발되었다. (Spring - Spring Boot)

JSP는 내부적으로 서블렛으로 변환되어 실행된다. 따라서 서블렛의 구성이나 동작 방식 등을 이해하면 JSP 그리고 Spring, Spring Boot까지도 공부하는 데 많은 도움이 될 것이다.
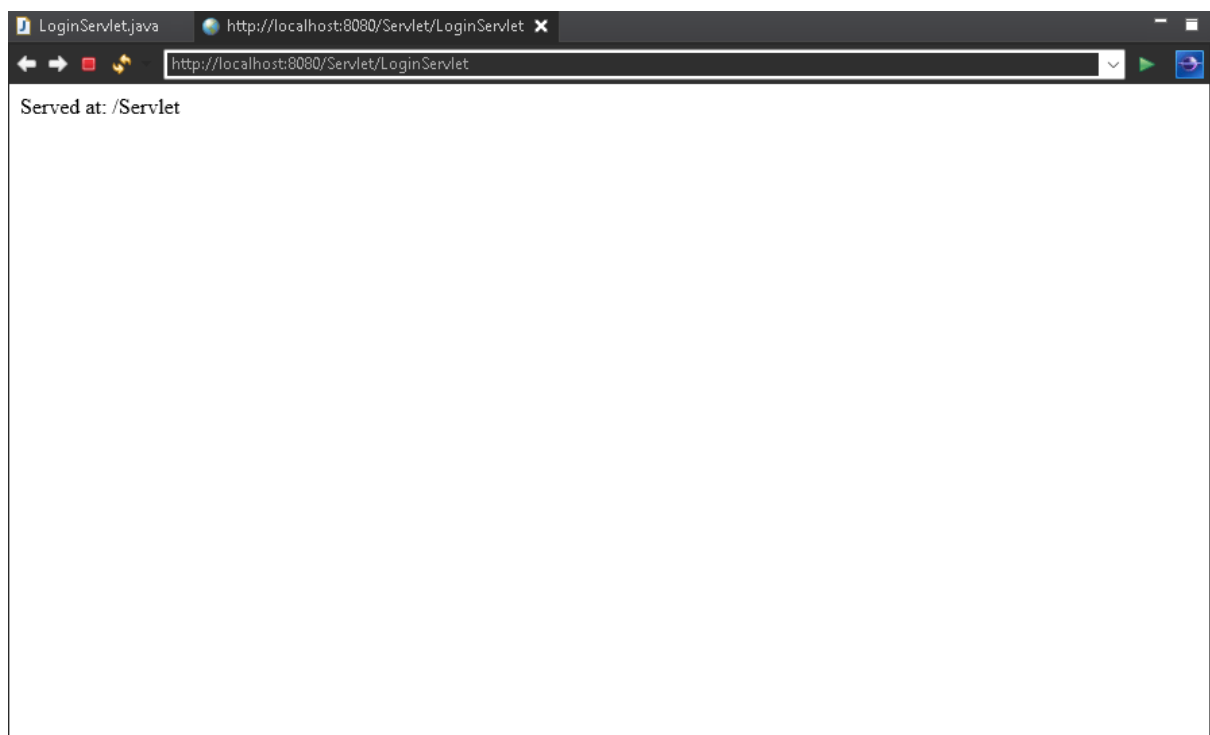

서블렛은 doGet과 doPost가 있음.

설정을 안 하면 기본이 GET 방식임.

주소로 보내지 않고 내용을 껴서 보냄. 보안이 좋음.

 get 방식이 있고 post 방식이 있는데 생략가능한 get 방식을 자주 사용함.

<이클립스 3버전에서만 작동함>

첫 출력 화면

로그인 id

login.html

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Insert title here</title>
</head>
<body>
<form action="LoginServlet">
id :

  <input name="id" class="form-control" type="text"
       placeholder="ID를 입력하세요.."><br><br>
  <input type="submit" value="전송">

</form>
</body>
</html>
```

LoginServlet.java

```java
package com.test;

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

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

  /**
   * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
   */
  protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
    String uid = request.getParameter("id");
    String res = "<html><h3>User ID: " + uid + "<h3></html>";
    response.getWriter().print(res);
  }

  /**
   * @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);
  }

}
```

로그인 ID, PW, Name

Quiz

아이디 패스워드 이름을 입력받는 signup.html 생성하고, 그 입력한 세개 값을 출력하는 SignupServlet을 작성하세요.

User ID : Hong

Password : 0000

Name : Hong gildong

singup.html

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Insert title here</title>
</head>
<body>
<form action="SignupServlet">
User ID :

  <input name="id" class="form-control" type="text"
      placeholder="ID를 입력하세요.."><br><br>


Password :

  <input name="pw" class="form-control" type="text"
      placeholder="Password를 입력하세요.."><br><br>

Name :

  <input name="name" class="form-control" type="text"
      placeholder="이름을 입력하세요.."><br><br>
  <input type="submit" value="전송">

</form>
</body>
</html>
```
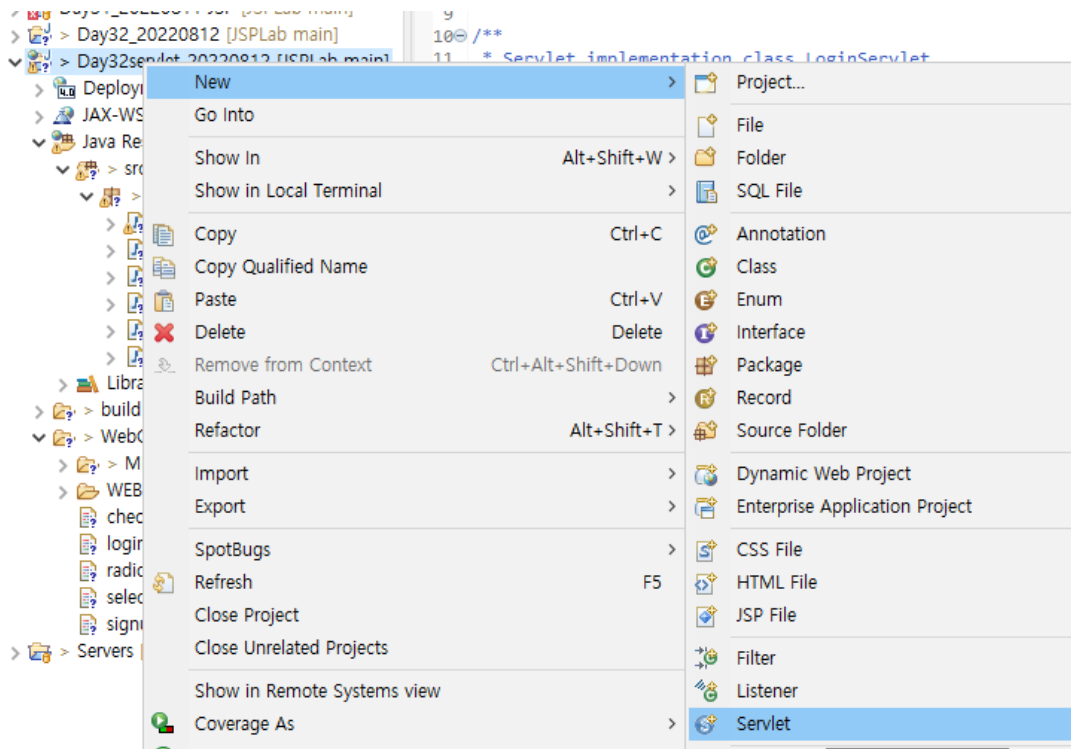
SignupServlet.java

```java
package com.test;

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

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

  /**
   * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
   */
  protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
    String uid = request.getParameter("id");
    String upass = request.getParameter("pw");
    String uname = request.getParameter("name");

    String res = "<html>";
    res += "<h3>User ID: " + uid + "</h3>";
    res += "<h3>Password: " + upass + "</h3>";
    res += "<h3>Name: " + uname + "</h3>";
    res += "</html>";

    response.getWriter().print(res);


  }

  /**
```

```
   * @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);
  }

}
```

User ID : ID를 입력하세요..

Password : Password를 입력하세요.

Name : 이름을 입력하세요..

전송

User ID: u8yes

Password: u8yes

Name: u8yes

라디오 폼

Radio.html

Select a favorite fruit
◉ Apple
◯ Banana
◯ Cherry

전송

http://localhost:8080/Da

Selected fruit : cherry

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Insert title here</title>
</head>
<body>
<form action="RadioServlet">
  Select a favorite fruit<br>
  <input type="radio" name="fruit" value="apple" checked>Apple<br>
```

```
    <input type="radio" name="fruit" value="banana" >Banana<br>
    <input type="radio" name="fruit" value="cherry" >Cherry<br>
    <br>
    <input type="submit" value="전송">

</form>
</body>
</html>
```

RadioServlet.java

```java
package com.test;

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

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

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

    String fruit = request.getParameter("fruit");

    String  res  = "<html>";
        res += "<h3>";
        res += "Selected fruit : ";
        if(fruit != null){
          res += fruit;
          res += "</h3>";
          res += "</html>";

          response.getWriter().print(res);
        }else{
          res += fruit;
          res += "</h3>";
          res += "</html>";

          response.getWriter().print("Selected fruit : NULL");
        };


  }

  /**
   * @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);
  }

}
```
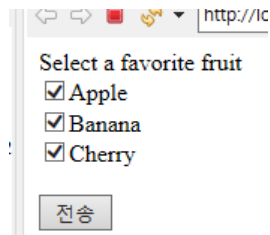
체크박스

checkbox.html

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Insert title here</title>
</head>
<body>
<form action="CheckboxServlet">
  Select a favorite fruit<br>
  <input type="checkbox" name="fruit" value="apple" checked>Apple<br>
  <input type="checkbox" name="fruit" value="banana" >Banana<br>
  <input type="checkbox" name="fruit" value="cherry" >Cherry<br>
  <br>
  <input type="submit" value="전송">

</form>
</body>
</html>
```

CheckboxServlet.java

```java
package com.test;

import java.io.IOException;
import java.util.Arrays;

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

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

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

      String[] fruit = request.getParameterValues("fruit");

      String res = "<html>";

      for(String f : fruit) {
        res += "<h3>";
        res += f;
        res += "</h3>";
        }

      res += "</html>";


      response.getWriter().print(res);

   }

   /**
    * @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);
   }

}
```
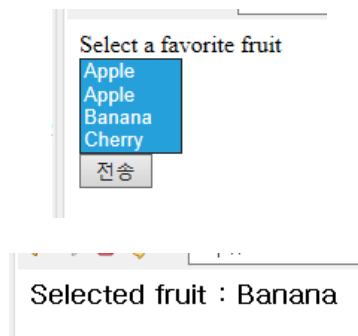
선택: 선택한 경우

Selected fruit : Banana

select.html

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
```

```html
<title>Insert title here</title>
</head>
<body>
<form action="SelectServlet">
  Select a favorite fruit<br>
  <select name="fruit" multiple="multiple">
    <option value="apple">Apple</option>
      <option value="apple">Apple</option>
      <option value="Banana">Banana</option>
      <option value="Cherry">Cherry</option>

  </select>


  <br>
  <input type="submit" value="전송">

</form>
</body>
</html>
```

SelectServlet.java

```java
package com.test;

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

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

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

    String fruit = request.getParameter("fruit");

    String  res  = "<html>";
        res += "<h3>";
        res += "Selected fruit : ";
        try{
          res += fruit;
          res += "</h3>";
          res += "</html>";

          response.getWriter().print(res);
        }catch(Exception e){
          res += fruit;
          res += "</h3>";
          res += "</html>";

          response.getWriter().print("Selected fruit : error");
        };


  }
```

```
  /**
   * @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);
  }

}
```

선택: 아무것도 선택 안 한 경우


```
String fruit = request.getParameter("fruit");

String  res  = "<html>";
       res += "<h3>";
       res += "Selected fruit : ";
       try{
            res += fruit;
            res += "</h3>";
            res += "</html>";

            response.getWriter().print(res);
       }catch(Exception e){
            res += fruit;
            res += "</h3>";
            res += "</html>";

            response.getWriter().print("Selected fruit : error");
       };
```

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

    String fruit = request.getParameter("fruit");

    String  res  = "<html>";
        res += "<h3>";
        res += "Selected fruit : ";
        try{
           res += fruit;
           res += "</h3>";
           res += "</html>";

           response.getWriter().print(res);
        }catch(Exception e){
           res += fruit;
```

```
        res += "</h3>";
        res += "</html>";

        response.getWriter().print("Selected fruit : error");
    };


}
```