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# Java EE 7 Web 練習五 Solution

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# DVDLibrary 應用程式分析設計



## DVD Library 網路應用程式

列出 DVD 清單

新增 DVD 加入清單

# Lab 1- 動態表單



Library User

新增 DVD 加入清單

<http://localhost:8080/DVDLibrary/index.html>

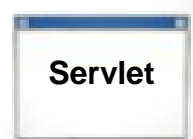


index.html

<http://localhost:8080/DVDLibrary/AddDVDForm>



Library User



AddDVDFormServlet



addDVD.jsp



web.xml

# Lab 1

- 使用NetBeans IDE，建立DVDLibrary 網路應用專案
- 編輯 index.html
  - 新增一個連結,連結至AddDVDForm
  - 畫面如下



# Lab 1

- 撰寫 `controller.AddDVDServlet.java`
  - Servlet URL 為 `AddDVDForm`
  - 宣告私有屬性 `String[ ] genres`
  - 覆寫 `init()` 方法
    - 取得Servlet初始參數 `genres-list`
    - 使用字串切割方法 `split()`, 將傳回之字串陣列存在 `genres` 屬性
  - `processRequest()` 方法
    - 將 `genres` 屬性, 加入請求屬性 `genreList`
    - 將請求轉送至 `add_dvd.jsp`

# Lab 1

- 撰寫add\_dvd.jsp
  - 建立一個Form表單如右
  - 送出Post方法至Add\_DVD
  - Text 輸入欄位 title, year,
  - Select 欄位 genre
    - 取得請求屬性genreList
    - 轉型為字串陣列
    - 陣列中字串作為Option
  - Text 輸入欄位otherGenre
  - Submit 按鈕 save
- 測試、執行

Add DVD Form

localhost:8080/DVDLibrary...

## 新增 DVD

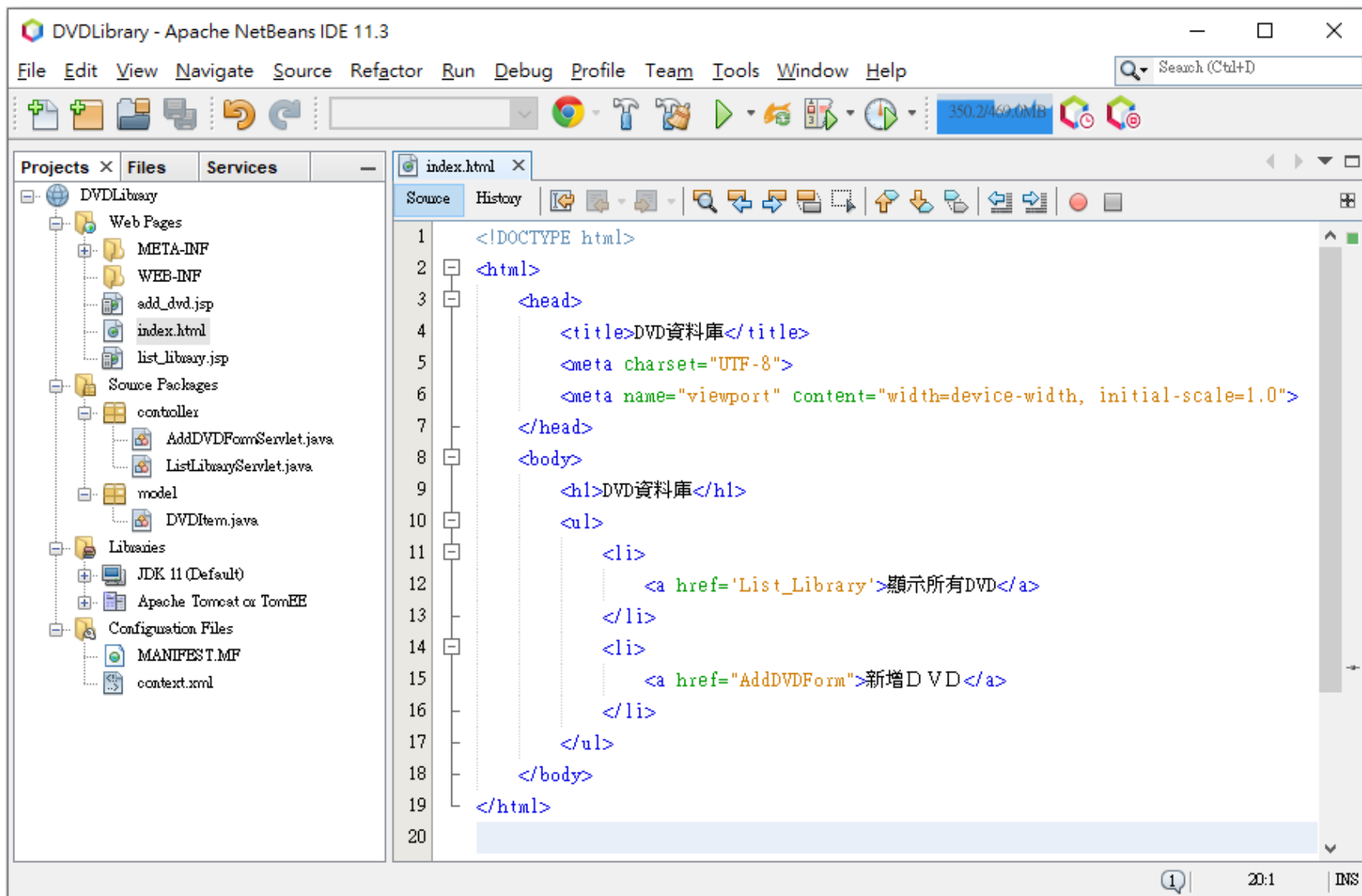
片名:

年份:

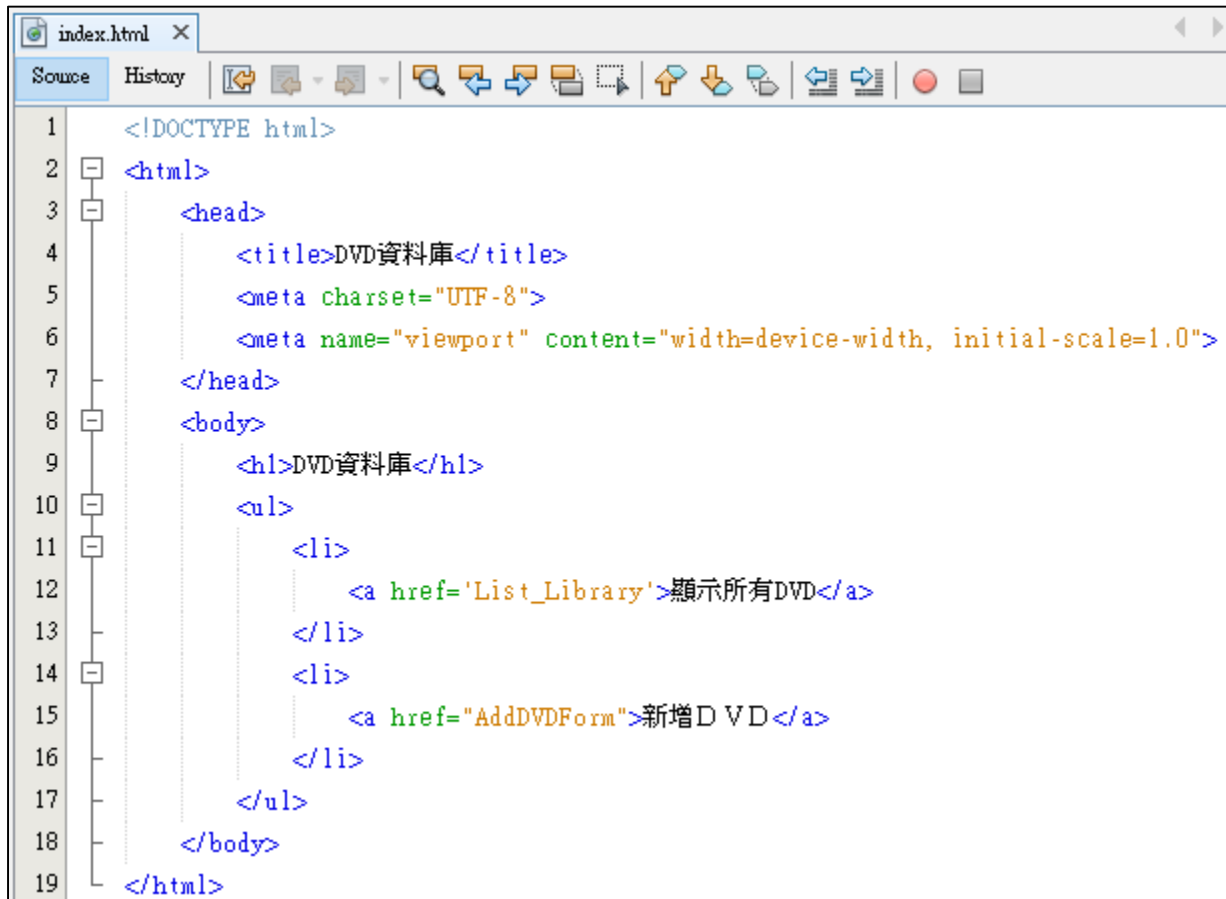
類型:  或其他種類:

- Animation
- Action
- Sci-Fi

# DVDLibrary專案



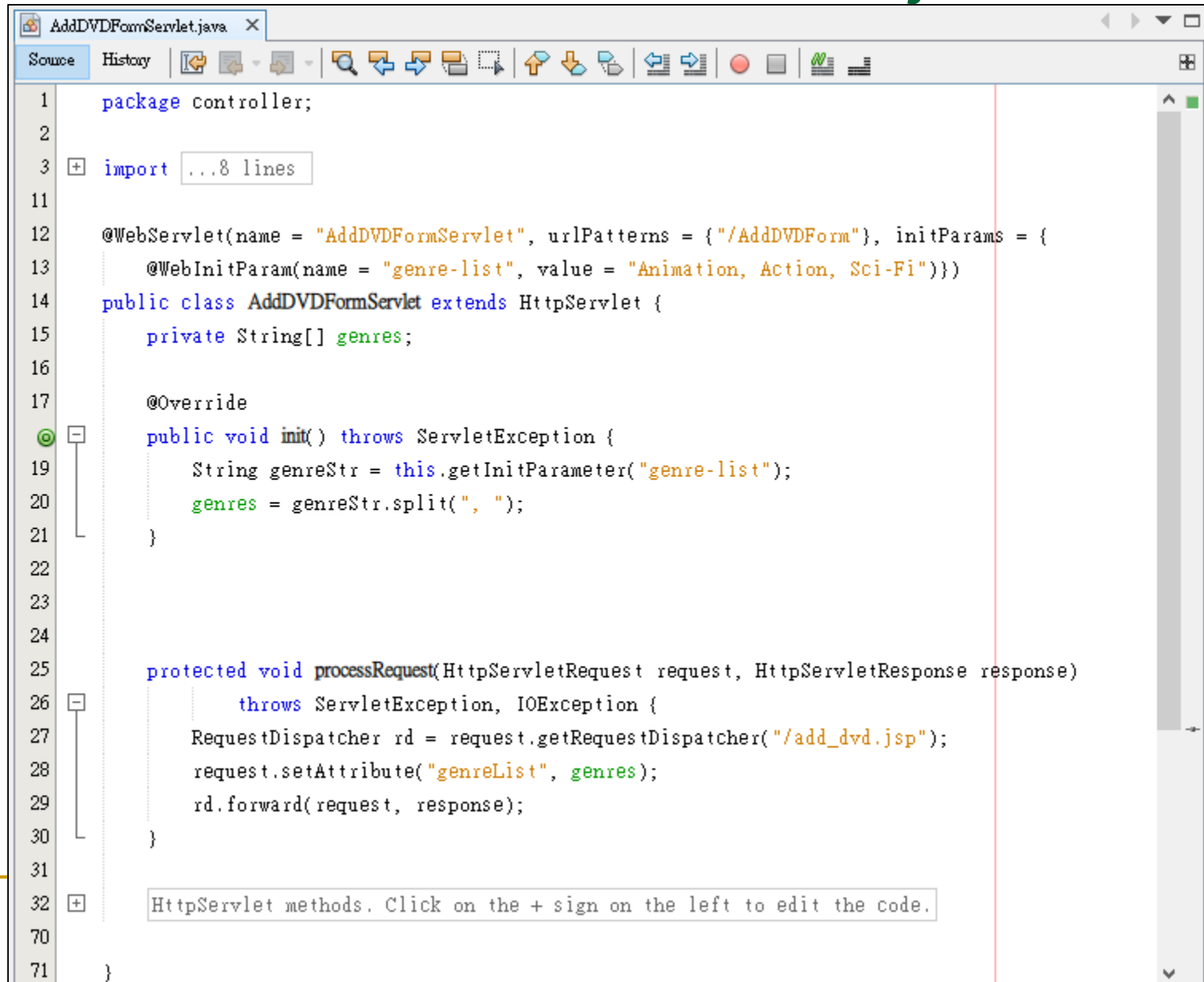
# index.html



```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>DVD資料庫</title>
5      <meta charset="UTF-8">
6      <meta name="viewport" content="width=device-width, initial-scale=1.0">
7  </head>
8  <body>
9      <h1>DVD資料庫</h1>
10     <ul>
11         <li>
12             <a href='List_Library'>顯示所有DVD</a>
13         </li>
14         <li>
15             <a href="AddDVDForm">新增DVD</a>
16         </li>
17     </ul>
18 </body>
19 </html>
```

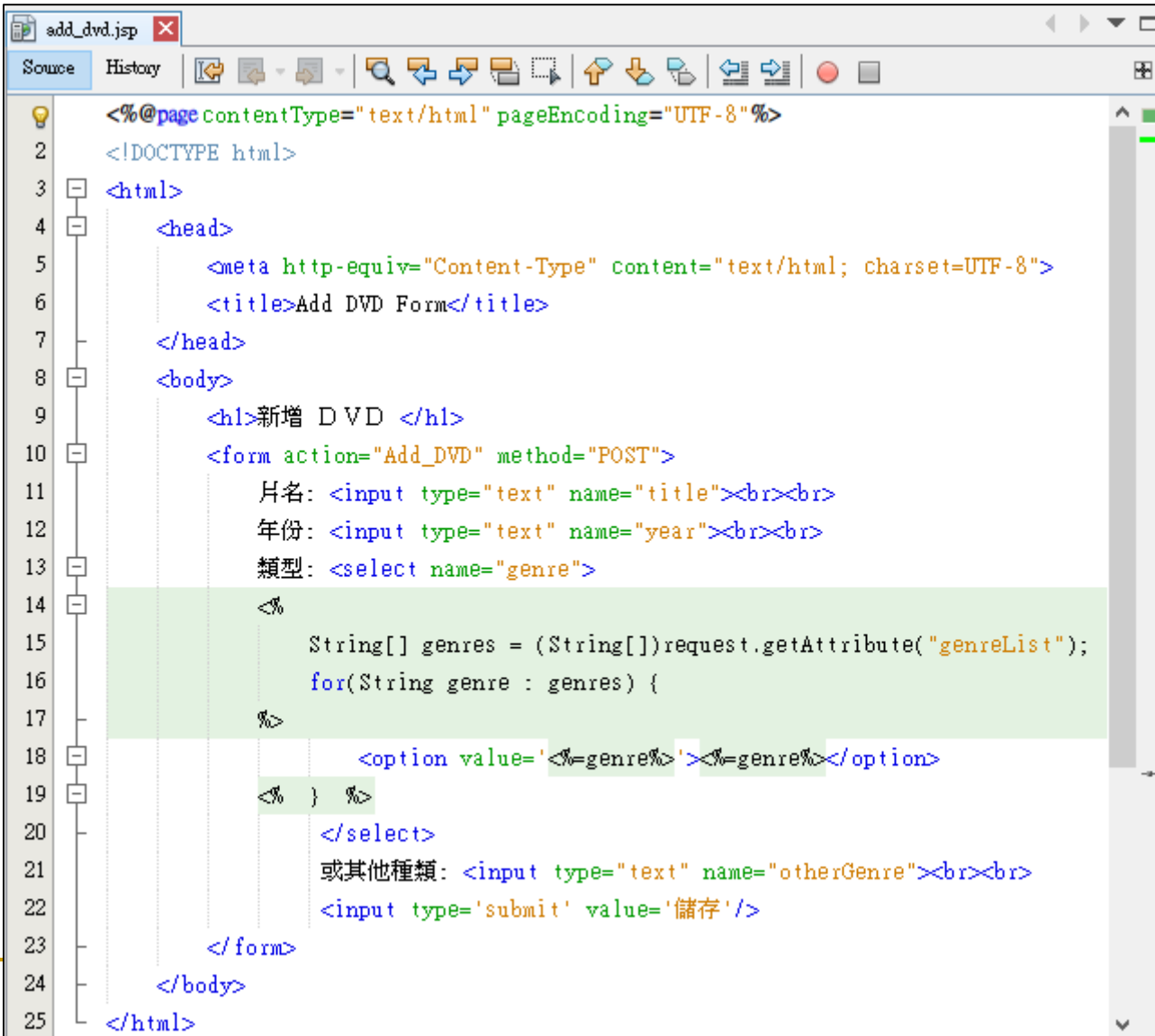


# controller.AddDVDForm.java



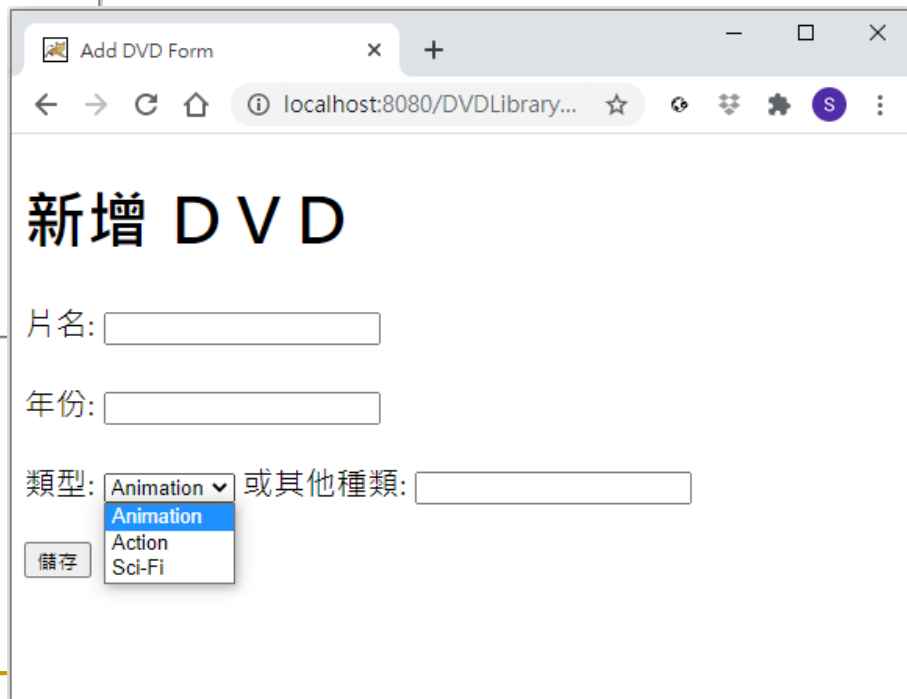
```
1 package controller;
2
3 import ...8 lines
4
11
12 @WebServlet(name = "AddDVDFormServlet", urlPatterns = {"/AddDVDForm"}, initParams = {
13     @WebInitParam(name = "genre-list", value = "Animation, Action, Sci-Fi")})
14 public class AddDVDFormServlet extends HttpServlet {
15     private String[] genres;
16
17     @Override
18     public void init() throws ServletException {
19         String genreStr = this.getInitParameter("genre-list");
20         genres = genreStr.split(", ");
21     }
22
23
24
25     protected void processRequest(HttpServletRequest request, HttpServletResponse response)
26         throws ServletException, IOException {
27         RequestDispatcher rd = request.getRequestDispatcher("/add_dvd.jsp");
28         request.setAttribute("genreList", genres);
29         rd.forward(request, response);
30     }
31
32     HttpServlet methods. Click on the + sign on the left to edit the code.
33
70
71 }
```

# 建立add\_dvd.jsp



```
1  <%@page contentType="text/html" pageEncoding="UTF-8"%>
2  <!DOCTYPE html>
3  <html>
4  <head>
5      <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
6      <title>Add DVD Form</title>
7  </head>
8  <body>
9      <h1>新增 DVD </h1>
10     <form action="Add_DVD" method="POST">
11         片名: <input type="text" name="title"><br><br>
12         年份: <input type="text" name="year"><br><br>
13         類型: <select name="genre">
14             <%
15                 String[] genres = (String[])request.getAttribute("genreList");
16                 for(String genre : genres) {
17                     <%
18                         <option value='<%=genre%>'><%=genre%></option>
19                     <% } %>
20                 </select>
21                 或其他種類: <input type="text" name="otherGenre"><br><br>
22                 <input type='submit' value='儲存' />
23             </form>
24     </body>
25 </html>
```

# 測試、執行



# Lab 2 – 表單驗證



Library User

新增 DVD 加入清單



Library User

<http://localhost:8080/DVDLibrary/AddDVDForm>



addDVD.jsp

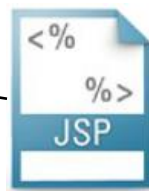
[http://localhost:8080/DVDLibrary/Add\\_DVD](http://localhost:8080/DVDLibrary/Add_DVD)



AddDVDServlet



DVD



error.jsp



success.jsp

# Lab 2

- 撰寫 `controller.AddDVDServlet.java`
  - Servlet URL 為 `Add_DVD`
  - 取得表單中請求參數 `title`, `year`, `genre`, `otherGenre`
    - 若使用者輸入 `otherGenre`, `genre=otherGenre`
    - 若使用者未輸入 `otherGenre`, `genre` 使用下拉選單值
  - 表單驗證
    - 宣告一個集合來儲存錯誤訊息
    - `title` 不可為空值(`null`或長度為0)
      - 否則在錯誤訊息集合中加入"請輸入DVD標題" 字串
    - `year` 不可為空值(`null`或長度為0)
      - 否則在錯誤訊息集合中加入"請輸入DVD發行年度" 字串
    - `year` 不可為無效數字值 (使用字串的`matches("\\d\\d\\d\\d")`方法)
      - 否則在錯誤訊息集合中加入"DVD發行年度請輸入有效數字" 字串

# Lab 2

## ■ controller.AddDVDServlet.java

### □ 表單驗證失敗

- 錯誤訊息集合不是空的
- 將錯誤訊息集合加入請求屬性 `errorMsgs`
- 將請求轉送至`error.jsp`

### □ 表單驗證成功

- 以`title, year, genre`建立`DVDItem`物件
- 將`DVDItem`物件加入請求屬性`dvdItem`
- 將請求轉送至`success.jsp`

# Lab 2

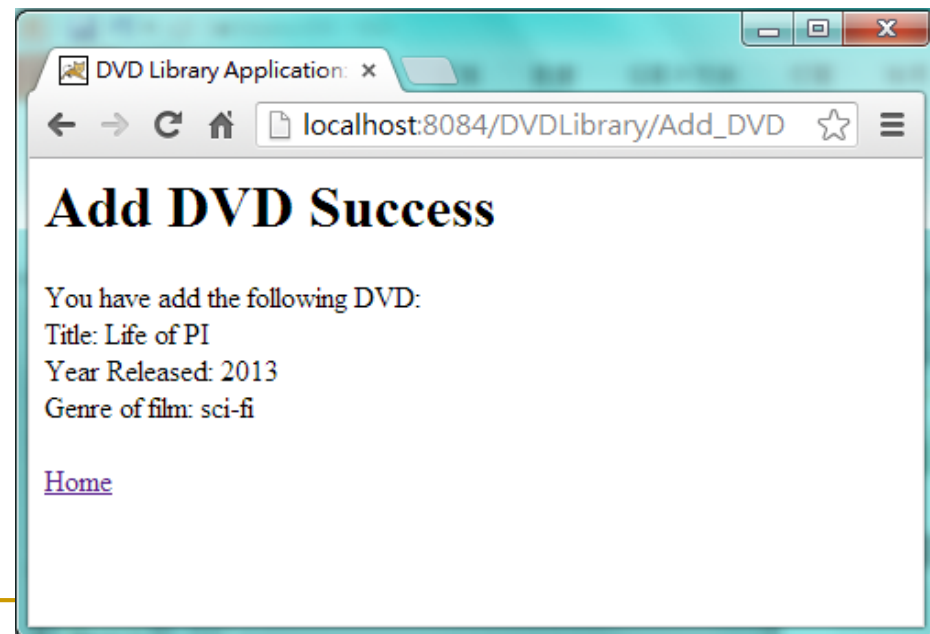
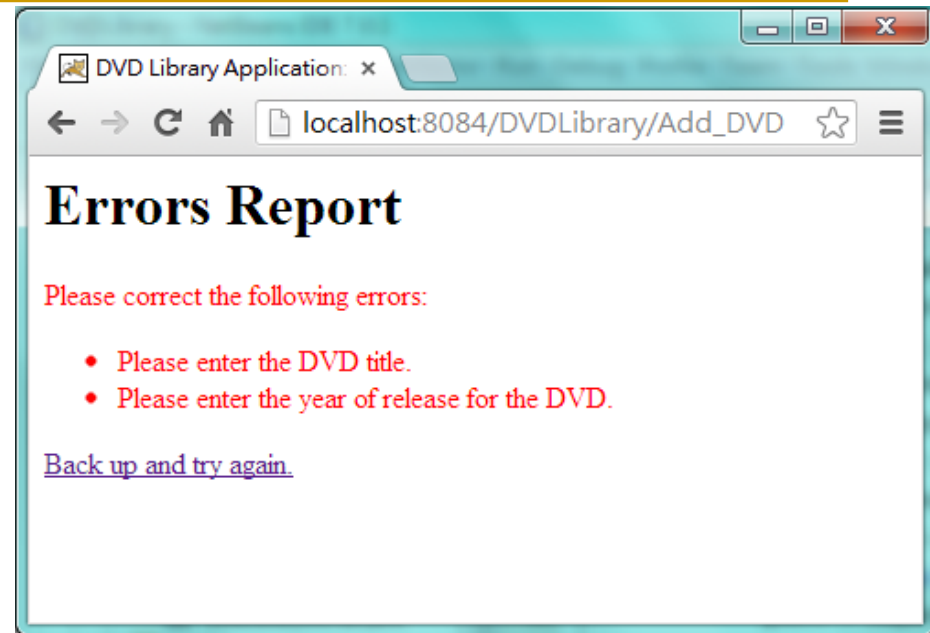
## ■ 撰寫error.jsp

- ❑ 使用JSP scripting 元素
- ❑ 取得errorMsgs屬性
- ❑ 將錯誤訊息顯示於網頁如右圖

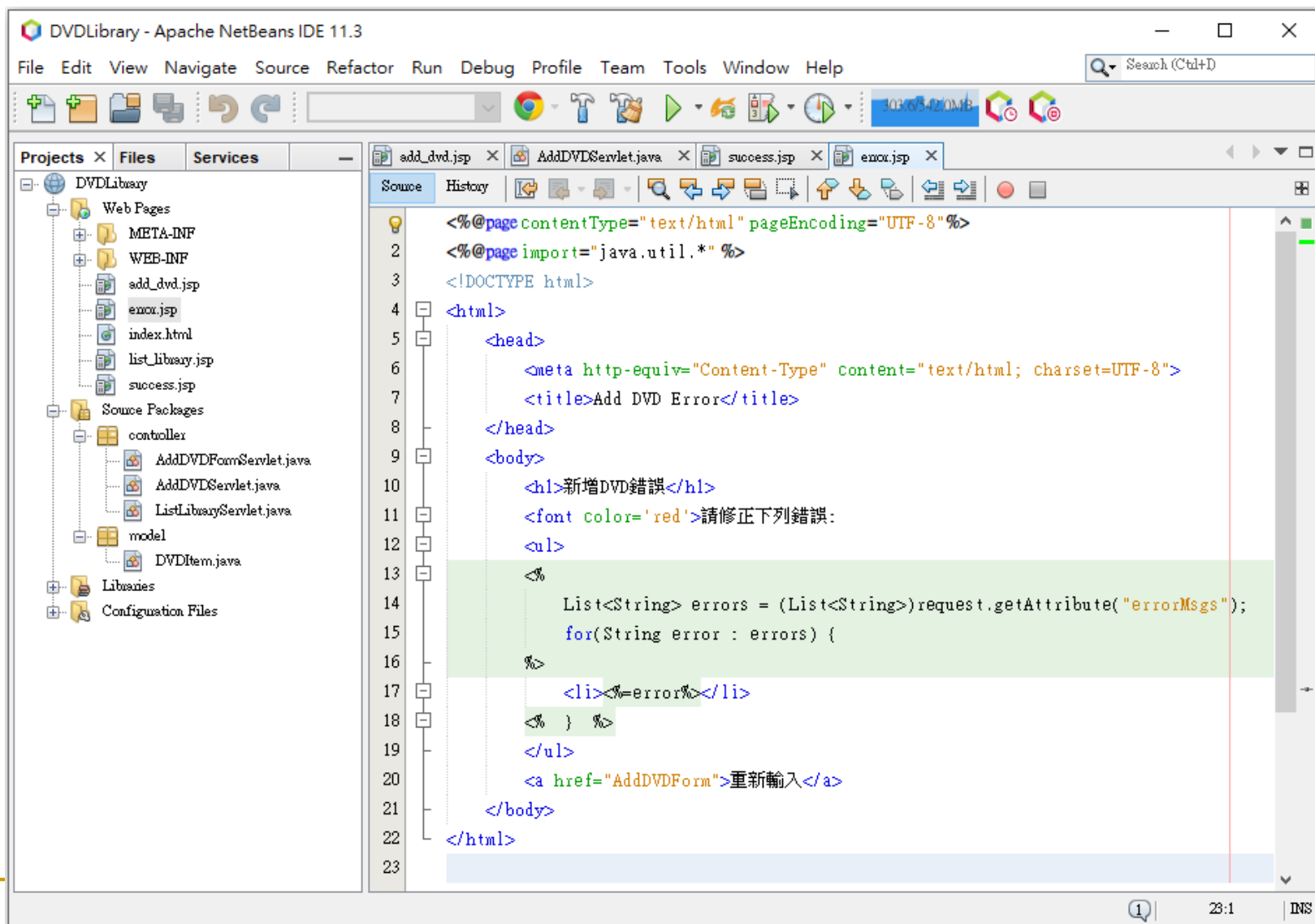
## ■ 撰寫success.jsp

- ❑ 使用JSP scripting 元素
- ❑ 取得dvdItem屬性
- ❑ 將DVD資訊顯示於網頁如右圖

## ■ 測試、執行

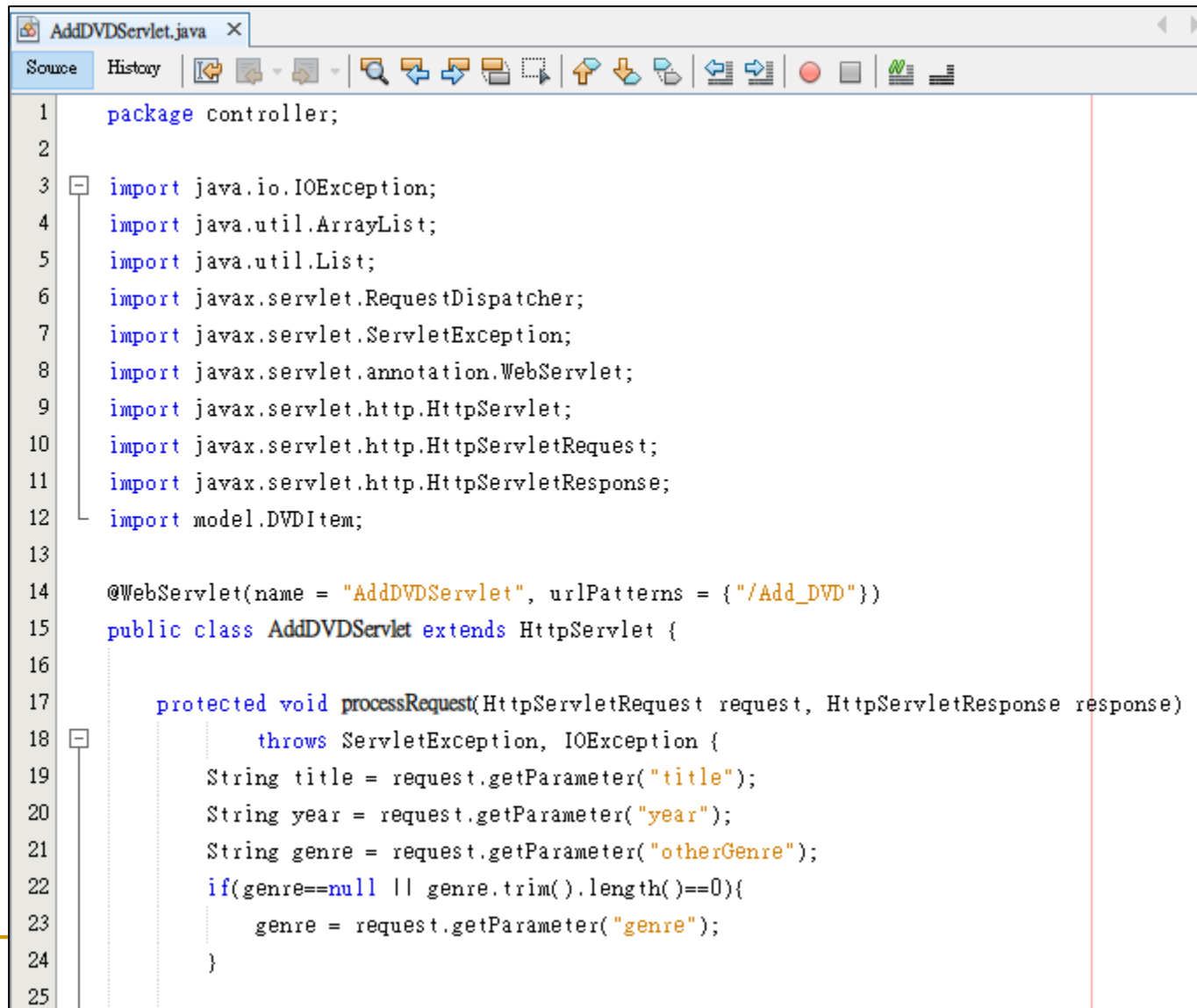


# DVDLibrary專案





# controller.AddDVDServlet.java

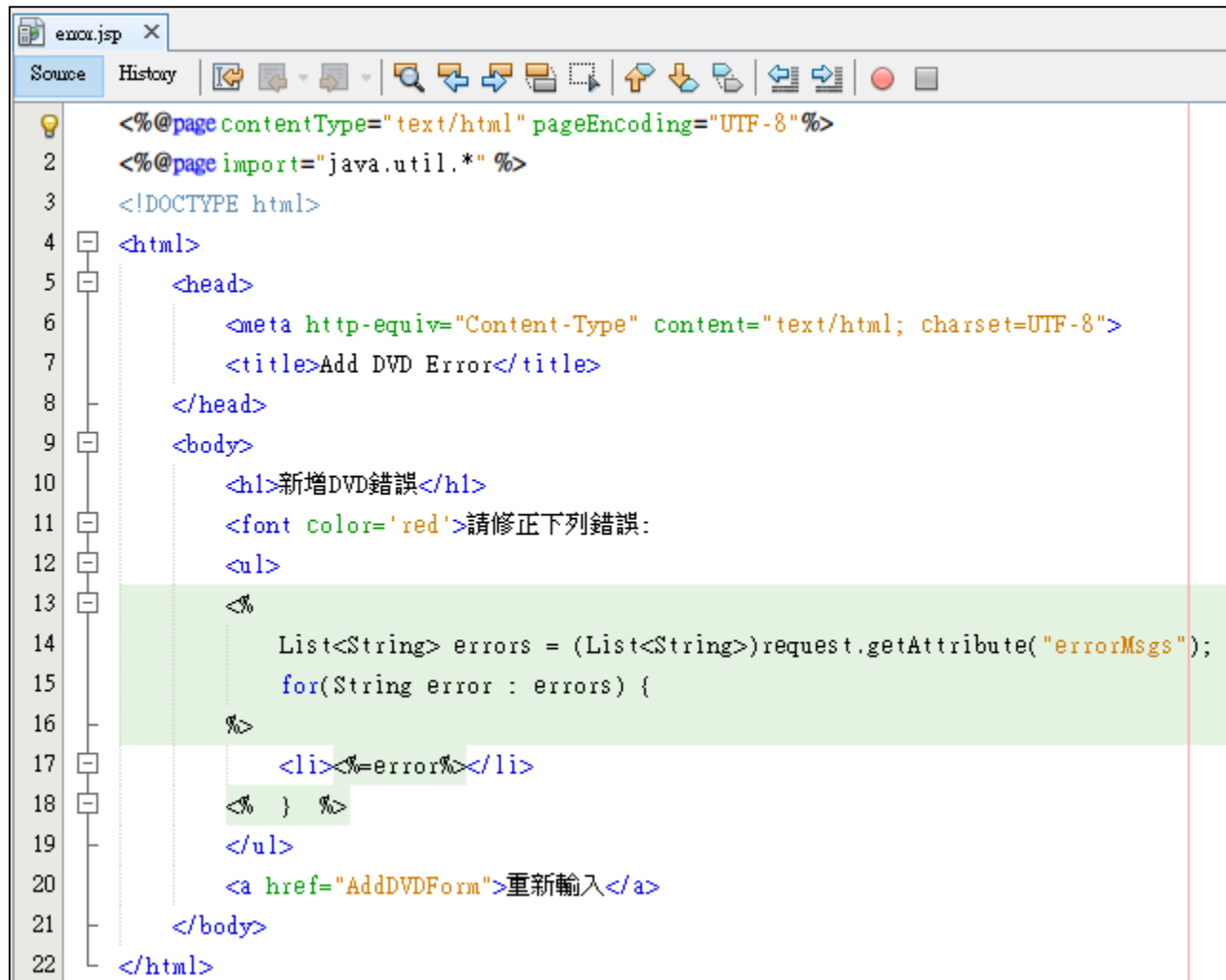


```
1 package controller;
2
3 import java.io.IOException;
4 import java.util.ArrayList;
5 import java.util.List;
6 import javax.servlet.RequestDispatcher;
7 import javax.servlet.ServletException;
8 import javax.servlet.annotation.WebServlet;
9 import javax.servlet.http.HttpServlet;
10 import javax.servlet.http.HttpServletRequest;
11 import javax.servlet.http.HttpServletResponse;
12 import model.DVDItem;
13
14 @WebServlet(name = "AddDVDServlet", urlPatterns = {"/Add_DVD"})
15 public class AddDVDServlet extends HttpServlet {
16
17     protected void processRequest(HttpServletRequest request, HttpServletResponse response)
18         throws ServletException, IOException {
19         String title = request.getParameter("title");
20         String year = request.getParameter("year");
21         String genre = request.getParameter("otherGenre");
22         if(genre==null || genre.trim().length()==0){
23             genre = request.getParameter("genre");
24         }
25     }
```

# controller.AddDVDServlet.java

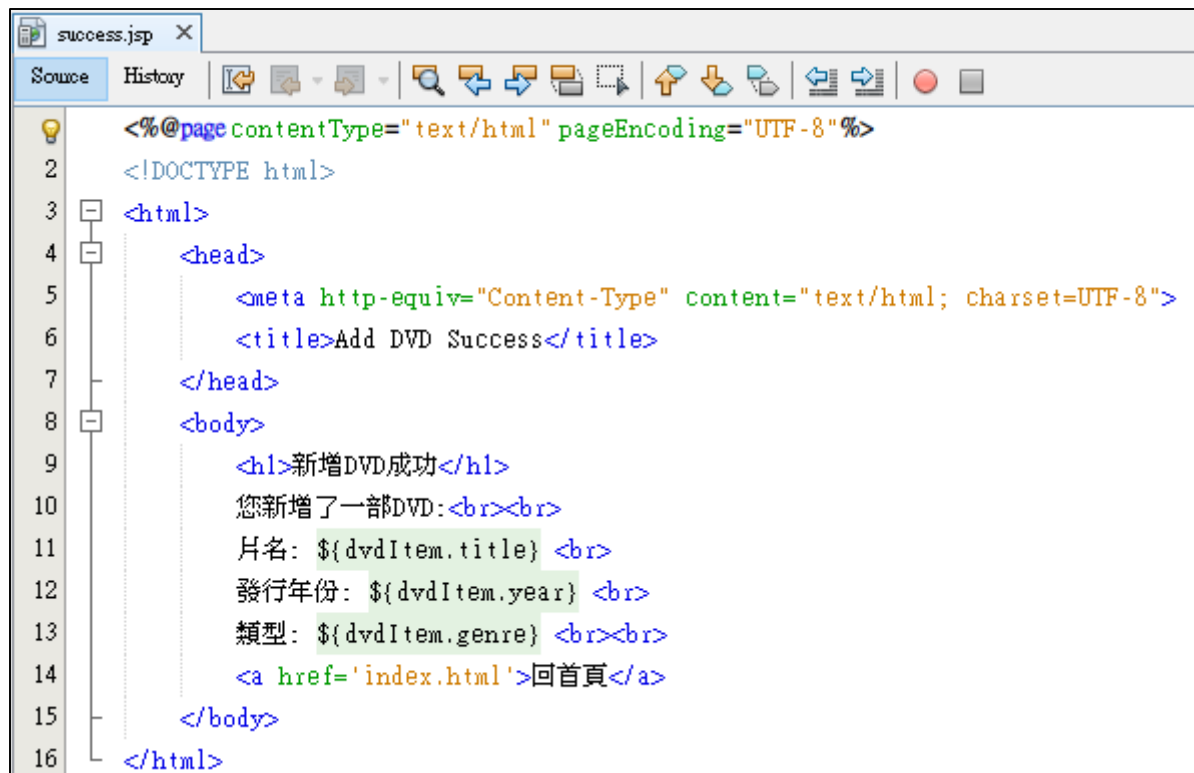
```
26      List<String> errorMsgs = new ArrayList<>();
27      if(title==null||title.trim().length()==0)
28          errorMsgs.add("請輸入DVD片名");
29      if(year==null||year.trim().length()==0)
30          errorMsgs.add("請輸入DVD發行年度");
31      else if(!year.trim().matches("\\d\\d\\d\\d"))
32          errorMsgs.add("請輸入有效DVD發行年度");
33
34      if(!errorMsgs.isEmpty()){
35          RequestDispatcher rd = request.getRequestDispatcher("error.jsp");
36          request.setAttribute("errorMsgs", errorMsgs);
37          rd.forward(request, response);
38      } else {
39          DVDItem dvd = new DVDItem(title, year, genre);
40          RequestDispatcher rd = request.getRequestDispatcher("success.jsp");
41          request.setAttribute("dvdItem", dvd);
42          rd.forward(request, response);
43      }
44
45  }
46
47  + HttpServlet methods. Click on the + sign on the left to edit the code.
85
86  }
```

# error.jsp



```
1 <%@page contentType="text/html" pageEncoding="UTF-8"%>
2 <%@page import="java.util.*"%>
3 <!DOCTYPE html>
4 <html>
5     <head>
6         <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
7         <title>Add DVD Error</title>
8     </head>
9     <body>
10        <h1>新增DVD錯誤</h1>
11        <font color='red'>請修正下列錯誤:
12        <ul>
13            <%
14                List<String> errors = (List<String>)request.getAttribute("errorMsgs");
15                for(String error : errors) {
16            <li><%=error%></li>
17            <% } %>
18        </ul>
19        <a href="AddDVDForm">重新輸入</a>
20    </body>
21 </html>
```

# success.jsp



```
1 <%@page contentType="text/html" pageEncoding="UTF-8"%>
2 <!DOCTYPE html>
3 <html>
4 <head>
5     <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
6     <title>Add DVD Success</title>
7 </head>
8 <body>
9     <h1>新增DVD成功</h1>
10    您新增了一部DVD:<br><br>
11    片名: ${dvdItem.title} <br>
12    發行年份: ${dvdItem.year} <br>
13    類型: ${dvdItem.genre} <br><br>
14    <a href='index.html'>回首頁</a>
15 </body>
16 </html>
```

# 測試、執行

Add DVD Form

localhost:8080/DVD...

## 新增 DVD

片名:

年份:

類型:  或其他種類:

Add DVD Error

localhost:8080/DVD...

## 新增DVD錯誤

請修正下列錯誤:

- 請輸入DVD片名
- 請輸入DVD發行年度

[重新輸入](#)

Add DVD Success

localhost:8080/DVD...

## 新增DVD成功

您新增了一部DVD:

片名: Life of PI  
發行年份: 2012  
類型: Sci-Fi

[回首頁](#)