



## THỰC HÀNH CHUYÊN ĐỀ CƠ SỞ 2 (JAVA NÂNG CAO)

TS. Võ Phương Bình – Email: [binhvp@dlu.edu.vn](mailto:binhvp@dlu.edu.vn)  
Khoa CNTT – Trường Đại học Đà Lạt  
Website: <http://sites.google.com/view/vophuongbinh>



## Lab 4: MVC and JSP Models

Program Code	Chuyên đề cơ sở 2 (Java nâng cao)
Issue/Revision	8/2018
Effective date	3/2011

**Yêu cầu: Viết ứng dụng web JSP theo mô hình MVC có các chức năng:**

1. Hiển thị danh sách các quyền sách theo cấu trúc sau Book(BookID, Name, ISBN, PublishedDate, Price)
2. Chọn quyền sách đưa vào giỏ hàng
3. Hiển thị giỏ hàng
4. Xóa một quyền sách trong giỏ hàng

**Code tham khảo:****Model**

```
package Models;
```

```
/**
```

```
*
```

```
* @author vophuongbinh
```

```
*/
```

```
public class Book {
```

```
    public String BookID, Name, ISBN, PublishedDate;
```

```
    public int Count, Price, Sum;
```

```
    public Book() {
```

```
    }
```

```
    public Book(String BookID, String Name, String ISBN, String PublishedDate, int Count, int Price, int Sum) {
```

```
        this.BookID = BookID;
```

```
        this.Name = Name;
```

```
        this.ISBN = ISBN;
```

```
        this.PublishedDate = PublishedDate;
```

```
        this.Count = Count;
```

```
        this.Price = Price;
```

```
        this.Sum = Sum;
```

```
    }
```

```
}
```

```
package Models;
```

```
import java.util.ArrayList;
```

```
import java.util.List;
```

```
/**
```

```
*
```

```
* @author vophuongbinh
```

```
*/
```

```
public class MBook {
```

```
    public static List<Book> items = new ArrayList<Book>();
```

```
    public void addItem(Book book){
```

```
        items.add(book);
```

```
    }
```

```
    public List<Book> getAll(){
```

```
        return this.items;
```

```
    }
```

```
}
```

**Controller**

```

package Controllers;

import Modles.Book;
import Modles.MBook;
import java.io.IOException;
import java.io.PrintWriter;
import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.util.List;

/**
 *
 * @author Vo
 */
@WebServlet(urlPatterns = {"/Controllers/CAddBook"})
public class CAddBook extends HttpServlet {

    protected void processRequest(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        String id = request.getParameter("id");
        String name = request.getParameter("name");
        String isbn = request.getParameter("isbn");
        String date = request.getParameter("date");
        String sprice = request.getParameter("price");
        int price = Integer.parseInt(sprice);
        if("".equals(id) || id == null){
            response.sendRedirect("../Views/addError.jsp");
            return;
        }
        PrintWriter out = response.getWriter();
        try {
            MBook books = new MBook();
            List<Book> list = books.getAll();
            boolean found = false;
            for(int i=0; i<list.size();i++){
                if(list.get(i).BookID.compareTo(id)==0){
                    list.get(i).Count += 1;
                    list.get(i).Sum = list.get(i).Count * list.get(i).Price;
                    found = true;
                    break;
                }
            }
            if(found == false)
                books.addItem(new Book(id, name, isbn, date, 1, price, price));

            response.sendRedirect("../Views/showCartBook.jsp");
        } finally {
            out.close();
        }
    }
}

```

// <editor-fold defaultstate="collapsed" desc="HttpServlet methods. Click on the + sign on the left to edit the code.">

```

/**
 * Handles the HTTP <code>GET</code> method.

```

```
*
* @param request servlet request
* @param response servlet response
* @throws ServletException if a servlet-specific error occurs
* @throws IOException if an I/O error occurs
*/
@Override
protected void doGet(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {
    processRequest(request, response);
}

/**
 * Handles the HTTP <code>POST</code> method.
 *
 * @param request servlet request
 * @param response servlet response
 * @throws ServletException if a servlet-specific error occurs
 * @throws IOException if an I/O error occurs
 */
@Override
protected void doPost(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {
    processRequest(request, response);
}

/**
 * Returns a short description of the servlet.
 *
 * @return a String containing servlet description
 */
@Override
public String getServletInfo() {
    return "Short description";
} // </editor-fold>
}

/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package Controllers;

import Modles.Book;
import Modles.MBook;
import java.io.IOException;
import java.io.PrintWriter;
import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.util.List;

/**
 *
 * @author Vo
 */
```

```

@WebServlet(urlPatterns = {"/Controllers/CRemoveBook"})
public class CRemoveBook extends HttpServlet {

    protected void processRequest(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        String id = request.getParameter("id");
        if("").equals(id) || id == null){
            response.sendRedirect("../Views/addError.jsp");
            return;
        }
        PrintWriter out = response.getWriter();
        try {
            MBook books = new MBook();
            List<Book> list = books.getAll();
            for(int i=0; i<list.size();i++){
                if(list.get(i).BookID.compareTo(id)==0){
                    list.remove(i);
                    break;
                }
            }

            response.sendRedirect("../Views/showCartBook.jsp");
        } finally {
            out.close();
        }
    }

    // <editor-fold defaultstate="collapsed" desc="HttpServlet methods. Click on the + sign on the left to
    edit the code.">
    /**
     * Handles the HTTP <code>GET</code> method.
     *
     * @param request servlet request
     * @param response servlet response
     * @throws ServletException if a servlet-specific error occurs
     * @throws IOException if an I/O error occurs
     */
    @Override
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        processRequest(request, response);
    }

    /**
     * Handles the HTTP <code>POST</code> method.
     *
     * @param request servlet request
     * @param response servlet response
     * @throws ServletException if a servlet-specific error occurs
     * @throws IOException if an I/O error occurs
     */
    @Override
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        processRequest(request, response);
    }

    /**
     * Returns a short description of the servlet.

```

```

*
* @return a String containing servlet description
*/
@Override
public String getServletInfo() {
    return "Short description";
} // </editor-fold>
}

```

### View

```

<%--
    Document : AddItems
    Created on : Sep 28, 2018, 2:01:10 PM
    Author : Vo
--%>

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
        <title>JSP Page</title>
    </head>
    <body>
        <table>
            <tr>
                <td>Book ID</td>
                <td>Book Name</td>
                <td>ISBN</td>
                <td>Publish Date</td>
                <td>Price</td>
                <td>Add to Cart</td>
            </tr>
            <%
                int id;
                String name, isbn, date;
                int price;
                for(int i=1;i<=10;i++){
                    id = i;
                    name = "Book " + i;
                    isbn = "1234567890";
                    date = "2/2/2022";
                    price = 100*i;
                    out.print("<tr>");
                    out.print("<td>"+id+"</td>");
                    out.print("<td>"+name+"</td>");
                    out.print("<td>"+isbn+"</td>");
                    out.print("<td>"+date+"</td>");
                    out.print("<td>"+price+"</td>");
                    out.print("<td><a
href='/WebApplication1/Controllers/CAddBook?id="+id+"&name="+name+"&isbn="+isbn+"&date="+d
ate+"&price="+price+">Add</a></td>");
                    out.print("</tr>");
                }
            %>
        </table>
    </body>
</html>

```

```
<%--
    Document : showCards
    Created on : Sep 28, 2018, 2:10:49 PM
    Author : Vo
--%>

<%@page import="java.util.List"%>
<%@page import="Models.MBook"%>
<%@page import="Models.Book"%>

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
        <title>JSP Page</title>
    </head>
    <body>
        <%
            MBook items = new MBook();
            List<Book> list = items.getAll();
        %>
        <h1>Giỏ hàng</h1>
        <a href="ListBooks.jsp">Tiếp tục mua hàng</a>
        <table border="1">
            <tr>
                <td>STT</td>
                <td>Mã sách</td>
                <td>Tên sách</td>
                <td>Mã ISBN</td>
                <td>Ngày Xuất Bản</td>
                <td>Số lượng</td>
                <td>Đơn giá</td>
                <td>Thành tiền</td>
                <td>Cập nhật</td>
            </tr>
            <%
                for(int i = 0; i < list.size(); i++){
                    Book book = list.get(i);
            %>
            <tr>
                <td><%= (i+1) %></td>
                <td><%= book.BookID %></td>
                <td><%= book.Name %></td>
                <td><%= book.ISBN %></td>
                <td><%= book.PublishedDate %></td>
                <td><%= book.Count %></td>
                <td><%= book.Price %></td>
                <td><%= book.Sum %></td>
                <td><a href="/WebApplication1/Controllers/CRemoveBook?id=<%= book.BookID
%>">Xóa</a></td>
            </tr>
            <%}%>
        </table>
    </body>
</html>
```