[ 14 ] 파일업로드

1. 파일 업로드 라이브러리 설치
   1. 파일 업로드 구현을 위해 파일 업로드와 관련된 라이브러리 다운로드 및 설치가 필요하다.
   2. <http://www.servlets.com> 접속 후 좌측의 COS File Upload Library(com.oreilly.servlet) 클릭 후, cos-22.05.zip 다운로드후 압축해제
   3. 다운로드 받은 라이브러리(cos.jar)를 WEB-INF>lib에 복사 ; 이렇게 이클립스 프로젝트 안에 라이브러리를 넣어야 파일업로드 기능을 구현할 수 있다
2. 파일 업로드 프로그래밍
   * 업로드 파일 저장 폴더 생성 webapp밑에 fileUpFolder 생성(업로드할 파일 위치)
3. 한 개 파일 업로드

**ex1\_fileupForm.html**

<body>

<form action=*"ex1\_fileupPro.jsp"* method=”post” **enctype=*"multipart/form-data"***>

<p>파일 : <input **type=*"file"*** name=*"file"*></p>

<input type=*"submit"* value=*"파일 업로드"*>

</form>

</body>

**ex1\_fileupPro.jsp**

<%@page import=*"java.io.\*"*%>

<%@page import=*"java.util.Enumeration"*%>

<%@page import=*"com.oreilly.servlet.multipart.DefaultFileRenamePolicy"*%>

<%@page import=*"com.oreilly.servlet.MultipartRequest"*%>

<%@ page language=*"java"* contentType=*"text/html; charset=UTF-8"*

pageEncoding=*"UTF-8"*%>

<% String conPath = request.getContextPath(); %>

<!DOCTYPE html>

<html>

<head>

<meta charset=*"UTF-8"*>

<title>Insert title here</title>

<link href=*"*<%=conPath%>*/css/style.css"* rel=*"stylesheet"*>

</head>

<body>

<%

String path = request.getRealPath("fileUpFolder");

//out.println(path);

**int** maxSize = 1024\*1024\*10; // 업로드 최대 용량을 10M

String filename = "";

String originalFilename = "";

**try**{

MultipartRequest mRequest = **new** MultipartRequest(request, path, maxSize, "utf-8", **new** DefaultFileRenamePolicy());

//new DefaultFileRenamePolicy():같은이름이 있을 경우 rename 1.jpg -> 11.jpg

Enumeration<String> paramNames = mRequest.getFileNames(); // 파라미터 이름들

**while**(paramNames.hasMoreElements()){

String param = paramNames.nextElement(); // param = "file"

filename = mRequest.getFilesystemName(param); // 파라미터로 올라온 파일이름

originalFilename = mRequest.getOriginalFileName(param); // 오리지널 파일이름

System.out.println("파라미터이름:"+param+", 서버에저장된파일이름:"+filename +"사용자가 첨부한 오리지널 이름:"+originalFilename);

}

}**catch**(IOException e){

System.out.println(e.getMessage());

}

// 서버에 업로드 하자마자 소스폴더로 file copy

InputStream is = **null**;

OutputStream os = **null**;

**try**{

File serverFile = **new** File(path+"/"+filename);

**if**(serverFile.exists()){

is = **new** FileInputStream(serverFile);

os = **new** FileOutputStream("D:/webPro/src\_home/06\_JSP/ch14\_fileUp/WebContent/fileUpFolder/"+filename);

**byte**[] bs = **new** **byte**[(**int**)serverFile.length()];

**while**(**true**){

**int** nReadCnt = is.read(bs);

**if**(nReadCnt==-1){

**break**;

}

os.write(bs, 0, nReadCnt);

}

}

}**catch**(IOException e){

System.out.println(e.getMessage());

}**finally**{

**try**{

**if**(os!=**null**) os.close();

**if**(is!=**null**) is.close();

}**catch**(IOException e){ System.out.println(e.getMessage()); }

}

**if**(filename!=**null**){

%>

<h3>첨부한 오리지널 파일이름 : <%=originalFilename %></h3>

<h3>서버에 저장된 파일이름 : <%=path %>/<%=filename %></h3>

<img src=*"*<%=conPath %>*/fileUpFolder/*<%=filename %>*"* alt=*"첨부안됨"*>

<%}**else**{

out.println("<h2>첨부안함</h2>");

}

%>

</body>

</html>

* + 1. 직접 생성한 폴더 경로

source/06\_jsp/ch14\_fileUp/WebContent/fileFolder

* + 1. 실제 업로드 파일이 저장된 서버측 경로

IDE/apache-tomcat/wtpwebapps/ch14\_fileUp/fileFolder

1. 여러 개 파일 업로드

**ex2\_fileupForm3.html**

<body>

<form action=*"ex2\_fileupPro3.jsp"* method=*"post"* enctype=*"multipart/form-data"*>

<p>파일0 : <input type=*"file"* name=*"file1"*></p>

<p>파일1 : <input type=*"file"* name=*"file2"*></p>

<p>파일2 : <input type=*"file"* name=*"file3"*></p>

<input type=*"submit"* value=*"파일업로드"*>

</form>

</body>

**ex2\_fileupPro3.jsp**

<%@page import=*"java.util.Arrays"*%>

<%@page import=*"java.io.\*"*%>

<%@page import=*"java.io.InputStream"*%>

<%@page import=*"java.util.Enumeration"*%>

<%@page import=*"com.oreilly.servlet.multipart.DefaultFileRenamePolicy"*%>

<%@page import=*"com.oreilly.servlet.MultipartRequest"*%>

<%@ page language=*"java"* contentType=*"text/html; charset=UTF-8"*

pageEncoding=*"UTF-8"*%>

<% String conPath = request.getContextPath(); %>

<!DOCTYPE html>

<html>

<head>

<meta charset=*"UTF-8"*>

<title>Insert title here</title>

<link href=*"*<%=conPath%>*/css/style.css"* rel=*"stylesheet"*>

</head>

<body>

<%

String path = request.getRealPath("fileUpFolder");

//out.println(path);

**int** maxSize = 1024\*1024\*10; // 업로드 최대 용량을 10M

String[] filename = {"","",""};

String[] oriFilename = {"","",""};

**try**{

MultipartRequest multiRequest = **new** MultipartRequest(request, path, maxSize,

"utf-8", **new** DefaultFileRenamePolicy());

Enumeration<String> paramNames = multiRequest.getFileNames();

**int** idx= 0;

**while**(paramNames.hasMoreElements()){

String param = paramNames.nextElement(); //파라미터 이름

filename[idx] = multiRequest.getFilesystemName(param); // 서버에 저장된 파일이름

oriFilename[idx] = multiRequest.getOriginalFileName(param); //오리지널 이름

System.out.println("파라미터이름:"+param+", 서버에 저장된 파일이름:"+filename[idx] +", 사용자가 첨부한 오리지널 이름:"+oriFilename[idx]);

idx++;

}

}**catch**(IOException e){

System.out.print(e.getMessage());

}

// 파일 카피

**for**(String f : filename){

**if**(f!=**null**){

InputStream is = **null**;

OutputStream os = **null**;

**try**{

File serverFile = **new** File(path+"/"+f);

**if**(serverFile.exists()){

is = **new** FileInputStream(serverFile);

os = **new** FileOutputStream("D:/webPro/src\_home/06\_JSP/ch14\_fileUp/WebContent/fileUpFolder/"+f);

**byte**[] bs = **new** **byte**[(**int**)serverFile.length()];

**while**(**true**){

**int** nReadCnt = is.read(bs);

**if**(nReadCnt==-1){

**break**;

}

os.write(bs, 0, nReadCnt);

}

}

}**catch**(IOException e){

System.out.println(e.getMessage());

}**finally**{

**try**{

**if**(os!=**null**) os.close();

**if**(is!=**null**) is.close();

}**catch**(IOException e){ System.out.println(e.getMessage()); }

}//try

}//if

}//for

%>

<h2>0번째 첨부</h2>

<h2><%=path %>/<%=filename[2] %></h2>

<img src=*"*<%=conPath %>*/fileUpFolder/*<%=filename[2] %>*"* alt=*"첨부안함"*>

<h2>1번째 첨부</h2>

<h2><%=path %>/<%=filename[1] %></h2>

<img src=*"*<%=conPath %>*/fileUpFolder/*<%=filename[1] %>*"* alt=*"첨부안함"*>

<h2>2번째 첨부</h2>

<h2><%=path %>/<%=filename[0] %></h2>

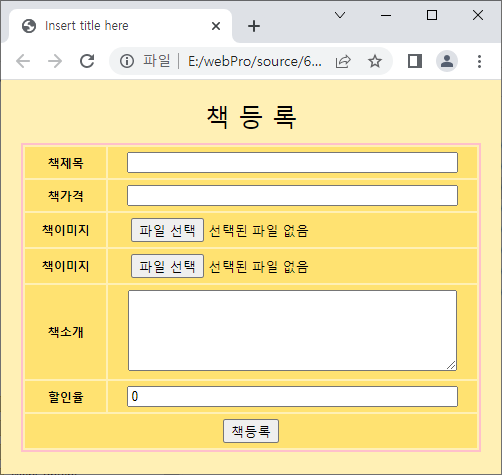
<img src=*"../fileUpFolder/*<%=filename[0] %>*"* alt=*"첨부안함"*>

<h2><%=Arrays.toString(filename) %></h2>

</body>

</html>

1. 예제



CREATE TABLE book (

book\_id NUMBER(5) PRIMARY KEY, -- 책ID(자동증가)

book\_kind VARCHAR2(3), -- 책분류

book\_title VARCHAR2(100) NOT NULL,-- 책제목

book\_price NUMBER(10), -- 가격

book\_count NUMBER(5), -- 재고 수량

author VARCHAR2(20), -- 지은이

publishing\_com VARCHAR2(20), --출판사

publishing\_date VARCHAR2(20), --출판일

book\_image VARCHAR2(20) DEFAULT 'nothing.jpg',-- 책이미지

book\_content VARCHAR2(500), -- 책소개

discount\_rate NUMBER(3), -- 할인율

rdate DATE); -- 사이트 등록일

1. 데이터베이스

**DROP** **TABLE** BOOK;

**CREATE** **TABLE** BOOK(

BOOK\_ID NUMBER(5) **PRIMARY** **KEY**,

BOOK\_KIND VARCHAR2(3),

BOOK\_TITLE VARCHAR2(100) **NOT** **NULL**,

BOOK\_PRICE NUMBER(10),

BOOK\_COUNT NUMBER(5),

AUTHOR VARCHAR2(20),

PUBLISHING\_COM VARCHAR2(50),

PUBLISHING\_DATE VARCHAR2(20),

BOOK\_IMAGE VARCHAR2(20) **DEFAULT** 'NOTHING.JPG',

BOOK\_CONTENT VARCHAR2(500),

DISCOUNT\_RATE NUMBER(3),

RDATE **DATE**);

**DROP** **TABLE** BOOK;

**CREATE** **TABLE** BOOK(

BOOK\_ID NUMBER(5) **PRIMARY** **KEY**,

BOOK\_TITLE VARCHAR2(100) **NOT** **NULL**,

BOOK\_PRICE NUMBER(10),

BOOK\_IMAGE1 VARCHAR2(20) **DEFAULT** 'NOTHING.JPG',

BOOK\_IMAGE2 VARCHAR2(20) **DEFAULT** 'NOTHING.JPG',

BOOK\_CONTENT VARCHAR2(500),

DISCOUNT\_RATE NUMBER(3));

**DROP** SEQUENCE BOOK\_SEQ;

**CREATE** SEQUENCE BOOK\_SEQ START **WITH** 1;

**INSERT** **INTO** BOOK (BOOK\_ID, BOOK\_TITLE, BOOK\_PRICE,

BOOK\_IMAGE1, BOOK\_CONTENT, DISCOUNT\_RATE)

**VALUES** (BOOK\_SEQ.NEXTVAL, '훈지',50000,

'NOTHING.JPG', '참좋은 책이다',0);

**select** \* **from** book **order** **by** book\_price **desc**;

**SELECT** ROWNUM RN, A.\* **FROM**

(**SELECT** \* **FROM** BOOK **ORDER** **BY** BOOK\_PRICE **DESC**) A;

**SELECT** \* **FROM** (

**SELECT** ROWNUM RN, A.\* **FROM**

(**SELECT** \* **FROM** BOOK **ORDER** **BY** BOOK\_PRICE **DESC**) A)

**WHERE** RN **BETWEEN** 2 **AND** 3;

1. BookDto.java

**public** **class** BookDto {

**private** **int** book\_id;

**private** String book\_title;

**private** **int** book\_price;

**private** String book\_image1;

**private** String book\_image2;

**private** String book\_content;

**private** **int** discount\_rate;

**public** BookDto() { }

**public** BookDto(**int** book\_id, String book\_title, **int** book\_price, String book\_image1, String book\_image2,

String book\_content, **int** discount\_rate) {

**super**();

**this**.book\_id = book\_id;

**this**.book\_title = book\_title;

**this**.book\_price = book\_price;

**this**.book\_image1 = book\_image1;

**this**.book\_image2 = book\_image2;

**this**.book\_content = book\_content;

**this**.discount\_rate = discount\_rate;

}

**public** **int** getBook\_id() { **return** book\_id; }

**public** **void** setBook\_id(**int** book\_id) { **this**.book\_id = book\_id; }

**public** String getBook\_title() { **return** book\_title; }

**public** **void** setBook\_title(String book\_title) {**this**.book\_title = book\_title;}

**public** **int** getBook\_price() {**return** book\_price;}

**public** **void** setBook\_price(**int** book\_price) {**this**.book\_price = book\_price;}

**public** String getBook\_image1() {**return** book\_image1;}

**public** **void** setBook\_image1(String book\_image1) {**this**.book\_image1 = book\_image1;}

**public** String getBook\_image2() {**return** book\_image2;}

**public** **void** setBook\_image2(String book\_image2) {**this**.book\_image2 = book\_image2;}

**public** String getBook\_content() {**return** book\_content;}

**public** **void** setBook\_content(String book\_content) {**this**.book\_content = book\_content;}

**public** **int** getDiscount\_rate() {**return** discount\_rate;}

**public** **void** setDiscount\_rate(**int** discount\_rate) {**this**.discount\_rate = discount\_rate;}

@Override

**public** String toString() {

**return** "BookDto [book\_id=" + book\_id + ", book\_title=" + book\_title + ", book\_price=" + book\_price

+ ", book\_image1=" + book\_image1 + ", book\_image2=" + book\_image2 + ", book\_content=" + book\_content

+ ", discount\_rate=" + discount\_rate + "]";

}

}

1. BookDao.java

**public** **class** BookDao {

**private** **static** BookDao *instance* = **new** BookDao();

**private** BookDao() {}

**public** **static** BookDao getInstance() {

**return** *instance*;

}

**private** Connection getConnection() **throws** SQLException {

Connection conn = **null**;

**try** {

Context ctx = **new** InitialContext();

DataSource ds = (DataSource) ctx.lookup("java:comp/env/jdbc/Oracle11g");

conn = ds.getConnection();

} **catch** (NamingException e) {

e.printStackTrace();

}

**return** conn;

}

**public** **int** insertBook(BookDto dto) {

**int** result = 0;

Connection conn = **null**;

PreparedStatement pstmt = **null**;

**try** {

conn = getConnection();

**if**(dto.getBook\_image1()!=**null** && dto.getBook\_image2()!=**null**) {

String sql = "INSERT INTO BOOK (BOOK\_ID, BOOK\_TITLE, BOOK\_PRICE, " +

" BOOK\_IMAGE1,BOOK\_IMAGE2, BOOK\_CONTENT, DISCOUNT\_RATE) " +

" VALUES (BOOK\_SEQ.NEXTVAL, ?, ?, ?, " +

" ?, ?, ?)";

pstmt = conn.prepareStatement(sql);

pstmt.setString(1, dto.getBook\_title());

pstmt.setInt(2, dto.getBook\_price());

pstmt.setString(3, dto.getBook\_image1());

pstmt.setString(4, dto.getBook\_image2());

pstmt.setString(5, dto.getBook\_content());

pstmt.setInt(6, dto.getDiscount\_rate());

System.***out***.println("insert 수행전");

}**else** **if**(dto.getBook\_image1()==**null** && dto.getBook\_image2()!=**null**) {

String sql = "INSERT INTO BOOK (BOOK\_ID, BOOK\_TITLE, BOOK\_PRICE, " +

" BOOK\_IMAGE2, BOOK\_CONTENT, DISCOUNT\_RATE) " +

" VALUES (BOOK\_SEQ.NEXTVAL, ?, ?, " +

" ?, ?, ?)";

pstmt = conn.prepareStatement(sql);

pstmt.setString(1, dto.getBook\_title());

pstmt.setInt(2, dto.getBook\_price());

pstmt.setString(3, dto.getBook\_image2());

pstmt.setString(4, dto.getBook\_content());

pstmt.setInt(5, dto.getDiscount\_rate());

System.***out***.println("insert 수행전");

}**else** **if**(dto.getBook\_image1()!=**null** && dto.getBook\_image2()==**null**){

String sql = "INSERT INTO BOOK (BOOK\_ID, BOOK\_TITLE, BOOK\_PRICE, " +

" BOOK\_IMAGE1, BOOK\_CONTENT, DISCOUNT\_RATE) " +

" VALUES (BOOK\_SEQ.NEXTVAL, ?, ?, " +

" ?, ?, ?)";

pstmt = conn.prepareStatement(sql);

pstmt.setString(1, dto.getBook\_title());

pstmt.setInt(2, dto.getBook\_price());

pstmt.setString(3, dto.getBook\_image1());

pstmt.setString(4, dto.getBook\_content());

pstmt.setInt(5, dto.getDiscount\_rate());

System.***out***.println("insert 수행전");

}**else** **if**(dto.getBook\_image1()==**null** && dto.getBook\_image2()==**null**){

String sql = "INSERT INTO BOOK (BOOK\_ID, BOOK\_TITLE, BOOK\_PRICE, " +

" BOOK\_CONTENT, DISCOUNT\_RATE) " +

" VALUES (BOOK\_SEQ.NEXTVAL, ?, ?, " +

" ?, ?)";

pstmt = conn.prepareStatement(sql);

pstmt.setString(1, dto.getBook\_title());

pstmt.setInt(2, dto.getBook\_price());

pstmt.setString(3, dto.getBook\_content());

pstmt.setInt(4, dto.getDiscount\_rate());

System.***out***.println("insert 수행전");

}

result = pstmt.executeUpdate();

} **catch** (SQLException e) {

e.printStackTrace();

} **finally** {

**if** (pstmt != **null**) **try** { pstmt.close(); } **catch**(SQLException ex) {}

**if** (conn != **null**) **try** { conn.close(); } **catch**(SQLException ex) {}

}

**return** result;

}

**public** ArrayList<BookDto> getBooks(){

ArrayList<BookDto> bookList = **new** ArrayList<BookDto>();

Connection conn = **null**;

PreparedStatement pstmt = **null**;

ResultSet rs = **null**;

String sql = "SELECT \* FROM BOOK ORDER BY BOOK\_PRICE DESC";

**try** {

conn = getConnection();

pstmt = conn.prepareStatement(sql);

rs = pstmt.executeQuery();

**while**(rs.next()) {

**int** book\_id = rs.getInt("book\_id");

String book\_title =rs.getString("book\_title");

**int** book\_price = rs.getInt("book\_price");

String book\_image1 = rs.getString("book\_image1");

String book\_image2 = rs.getString("book\_image2");

String book\_content = rs.getString("book\_content");

**int** discount\_rate = rs.getInt("discount\_rate");

bookList.add(**new** BookDto(book\_id, book\_title, book\_price, book\_image1, book\_image2, book\_content, discount\_rate));

}

} **catch** (SQLException e) {

e.printStackTrace();

} **finally** {

**if** (rs != **null**) **try** { rs.close(); } **catch**(SQLException ex) {}

**if** (pstmt != **null**) **try** { pstmt.close(); } **catch**(SQLException ex) {}

**if** (conn != **null**) **try** { conn.close(); } **catch**(SQLException ex) {}

}

**return** bookList;

}

**public** ArrayList<BookDto> getBooks(**int** startRow, **int** endRow){

ArrayList<BookDto> bookList = **new** ArrayList<BookDto>();

Connection conn = **null**;

PreparedStatement pstmt = **null**;

ResultSet rs = **null**;

String sql = "SELECT \* FROM ( " +

" SELECT ROWNUM RN, A.\* FROM " +

" (SELECT \* FROM BOOK ORDER BY BOOK\_PRICE DESC) A) " +

" WHERE RN BETWEEN ? AND ?";

**try** {

conn = getConnection();

pstmt = conn.prepareStatement(sql);

pstmt.setInt(1, startRow);

pstmt.setInt(2, endRow);

rs = pstmt.executeQuery();

**while**(rs.next()) {

**int** book\_id = rs.getInt("book\_id");

String book\_title =rs.getString("book\_title");

**int** book\_price = rs.getInt("book\_price");

String book\_image1 = rs.getString("book\_image1");

String book\_image2 = rs.getString("book\_image2");

String book\_content = rs.getString("book\_content");

**int** discount\_rate = rs.getInt("discount\_rate");

bookList.add(**new** BookDto(book\_id, book\_title, book\_price, book\_image1, book\_image2, book\_content, discount\_rate));

}

} **catch** (SQLException e) {

e.printStackTrace();

} **finally** {

**if** (rs != **null**) **try** { rs.close(); } **catch**(SQLException ex) {}

**if** (pstmt != **null**) **try** { pstmt.close(); } **catch**(SQLException ex) {}

**if** (conn != **null**) **try** { conn.close(); } **catch**(SQLException ex) {}

}

**return** bookList;

}

**public** **int** getTotCnt() {

**int** totCnt = 0;

Connection conn = **null**;

PreparedStatement pstmt = **null**;

ResultSet rs = **null**;

String sql = "SELECT COUNT(\*) FROM BOOK";

**try**{

conn = getConnection();

pstmt= conn.prepareStatement(sql);

rs = pstmt.executeQuery();

**if**(rs.next()){

totCnt = rs.getInt(1);

}

}**catch** (Exception e) {

System.***out***.println(e.getMessage());

}**finally** {

**try**{

**if**(rs != **null**) rs.close();

**if**(pstmt!= **null**) pstmt.close();

**if**(conn != **null**) conn.close();

}**catch** (Exception eg) {eg.printStackTrace(); }

}

**return** totCnt;

}

}

1. bookRegisterForm.jsp

<%@ page language=*"java"* contentType=*"text/html; charset=UTF-8"*

pageEncoding=*"UTF-8"*%>

<!DOCTYPE html>

<html>

<head>

<meta http-equiv=*"Content-Type"* content=*"text/html; charset=UTF-8"*>

<title>도서등록</title>

<link href=*"../css/style.css"* rel=*"stylesheet"*>

</head>

<body>

<div>

<h2>책등록</h2>

<form action=*"bookRegisterPro.jsp"* method=*"post"* enctype=*"multipart/form-data"*>

<table style="width:*70%*;">

<tr>

<td>제 목</td>

<td><input type=*"text"* size=*"20"* maxlength=*"50"*

name=*"book\_title"*></td>

</tr>

<tr>

<th>책가격</th>

<td><input type=*"number"* name=*"book\_price"*></td>

</tr>

<tr>

<td>이미지1</td>

<td><input type=*"file"* name=*"book\_image1"*></td>

</tr>

<tr>

<td>이미지2</td>

<td><input type=*"file"* name=*"book\_image2"*></td>

</tr>

<tr>

<td>책소개</td>

<td><textarea rows=*"5"* cols=*"20"* name=*"book\_content"*></textarea></td>

</tr>

<tr>

<td>할인율</td>

<td><input type=*"number"* name=*"discount\_rate"*></td>

</tr>

<tr>

<td colspan=*2*><input type=*"submit"* value=*"책등록"*> <input

type=*"reset"* value=*"다시작성"*></td>

</tr>

</table>

</form>

</div>

</body>

</html>

1. bookRegisterPro.jsp

<%@page import=*"book.BookDao, book.BookDto"*%>

<%@page import=*"java.io.FileInputStream, java.io.FileOutputStream"*%>

<%@page import=*"java.io.OutputStream, java.io.InputStream, java.io.File"*%>

<%@page import=*"java.util.Enumeration"*%>

<%@page import=*"com.oreilly.servlet.multipart.DefaultFileRenamePolicy"*%>

<%@page import=*"com.oreilly.servlet.MultipartRequest"*%>

<%@ page language=*"java"* contentType=*"text/html; charset=UTF-8"*

pageEncoding=*"UTF-8"*%>

<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">

<html>

<head>

<meta http-equiv=*"Content-Type"* content=*"text/html; charset=UTF-8"*>

<title>Insert title here</title>

</head>

<body>

<% // request.setCharacterEncoding("utf-8"); 필요없음%>

<%

String path = request.getRealPath("fileUpFolder");

**int** size = 5\*1024\*1024; //최대 업로될 파일크기 5Mb

String[] file ={"",""};

MultipartRequest imageUp = **null**;

**try**{

imageUp = **new** MultipartRequest(request,path,

size,"utf-8", **new** DefaultFileRenamePolicy());

Enumeration<String> files = imageUp.getFileNames();

**int** idx = 0;

**while**(files.hasMoreElements()){

String paramname = files.nextElement();

file[idx] = imageUp.getFilesystemName(paramname);

idx++;

}

}**catch**(Exception e){

e.printStackTrace();

}

**for**(String f : file){

InputStream is = **null**;

OutputStream os = **null**;

**try**{

File serverFile = **new** File(path+"/"+f);

**if**(serverFile.exists()){

is = **new** FileInputStream(serverFile);

os = **new** FileOutputStream("C:/mega-IT/source/5\_jsp/ch14/WebContent/fileUpFolder/"+f);

**byte**[] bs = **new** **byte**[(**int**)serverFile.length()];

**while**(**true**){

**int** nReadByte = is.read(bs);

**if**(nReadByte==-1) **break**;

os.write(bs, 0, nReadByte);

}

}

}**catch**(Exception e){

e.printStackTrace();

}**finally**{

**try**{

**if**(os!=**null**) os.close();

**if**(is!=**null**) is.close();

}**catch**(Exception e){}

}

}

BookDto dto = **new** BookDto();

String book\_title = imageUp.getParameter("book\_title");

**int** book\_price = Integer.parseInt(imageUp.getParameter("book\_price"));

String book\_image1 = file[1];

String book\_image2 = file[0];

String book\_content = imageUp.getParameter("book\_content");

**int** discount\_rate = Integer.parseInt(imageUp.getParameter("discount\_rate"));

dto.setBook\_title(book\_title);

dto.setBook\_price(book\_price);

dto.setBook\_image1(book\_image1);

dto.setBook\_image2(book\_image2);

dto.setBook\_content(book\_content);

dto.setDiscount\_rate(discount\_rate);

BookDao bookDao = BookDao.getInstance();

**int** result = bookDao.insertBook(dto);

**if**(result==1){

%>

<h2>업로드 완료</h2>

<h2>제목 : <%=book\_title %></h2>

<h2>가격 : <%=book\_price %></h2>

<h2>그림1 : <%=book\_image1 %></h2>

<h2>그림2 : <%=book\_image2 %></h2>

<h2>소개 : <%=book\_content %></h2>

<h2>할인 : <%=discount\_rate %></h2>

<% }**else**{%>

<h2>업로드 실패</h2>

<h2>제목 : <%=book\_title %></h2>

<h2>가격 : <%=book\_price %></h2>

<h2>그림1 : <%=book\_image1 %></h2>

<h2>그림2 : <%=book\_image2 %></h2>

<h2>소개 : <%=book\_content %></h2>

<h2>할인 : <%=discount\_rate %></h2>

<% } %>

<a href=*"introList.jsp"*>책리스트</a>

<a href=*"introListPaging.jsp"*>책리스트(페이징)</a>

</body>

</html>

1. introList.jsp

<%@ page language=*"java"* contentType=*"text/html; charset=UTF-8"*

pageEncoding=*"UTF-8"*%>

<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">

<html>

<head>

<meta http-equiv=*"Content-Type"* content=*"text/html; charset=UTF-8"*>

<title>Book List</title>

<link href=*"../css/style.css"* rel=*"stylesheet"*>

</head>

<body>

<table>

<tr><th>책ID</th><th>책이름</th><th>책표지</th><th>가격</th><th>할인율</th></tr>

<%

BookDao dao = BookDao.getInstance();

ArrayList<BookDto> bookList = dao.getBooks();

**for**(**int** i=0;i<bookList.size();i++){

%>

<tr><td><%=bookList.get(i).getBook\_id() %></td>

<td><%=bookList.get(i).getBook\_title()%></td>

<td>

<img width=*"50"* src=*"../fileFolder/*<%=bookList.get(i).getBook\_image1()%>*"*>

</td>

<td><%=bookList.get(i).getBook\_price() %></td>

<td><%=bookList.get(i).getDiscount\_rate() %></td>

</tr>

<% } %>

</table>

</body>

</html>

1. introListPaging.jsp

<%@page import=*"book.BookDao, book.BookDto, java.util.ArrayList"*%>

<%@ page language=*"java"* contentType=*"text/html; charset=UTF-8"*

pageEncoding=*"UTF-8"*%>

<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">

<html>

<head>

<meta http-equiv=*"Content-Type"* content=*"text/html; charset=UTF-8"*>

<title>Insert title here</title>

<link href=*"../css/style.css"* rel=*"stylesheet"*>

</head>

<body>

<table>

<tr><th>책ID</th><th>책이름</th><th>책표지</th><th>가격</th><th>할인율</th></tr>

<% String pageNum = request.getParameter("pageNum");

**if**(pageNum==**null**){

pageNum = "1";

}

**int** currentPage = Integer.parseInt(pageNum);

**final** **int** PAGESIZE = 5, BLOCKSIZE= 5;

**int** startRow = (currentPage - 1) \* PAGESIZE + 1;

**int** endRow = startRow + PAGESIZE - 1;

BookDao bookDao = BookDao.getInstance();

ArrayList<BookDto> bookList = bookDao.getBooks(startRow, endRow);

**for**(**int** i=0;i<bookList.size();i++){

%>

<tr><td><%=bookList.get(i).getBook\_id() %></td>

<td><%=bookList.get(i).getBook\_title()%></td>

<td>

<img width=*"50"* src=*"../fileFolder/*<%=bookList.get(i).getBook\_image1()%>*"*>

</td>

<td><%=bookList.get(i).getBook\_price() %></td>

<td><%=bookList.get(i).getDiscount\_rate() %></td>

</tr>

<% } %>

</table>

<div class=*"paging"*>

<% **int** totCnt = bookDao.getTotCnt();

**int** pageCnt = (**int**)Math.ceil((**double**)totCnt/PAGESIZE);

**int** startPage = ((currentPage-1)/BLOCKSIZE) \* BLOCKSIZE + 1;

**int** endPage = startPage + BLOCKSIZE - 1;

**if**(endPage>pageCnt)

endPage = pageCnt;

**if**(startPage > BLOCKSIZE){

out.print(" [ <a href='introListPaging.jsp?pageNum="+(startPage-1)+"'> 이전 </a> ] ");

}

**for**( **int** i=startPage ; i<= endPage ; i++){

**if**(i==currentPage){

out.print(" [ "+i+" ] ");

}**else**{

out.print(" [ <a href='introListPaging.jsp?pageNum="+i+"'>"+i+"</a> ] ");

}

}

**if**(endPage < pageCnt){

out.print(" [ <a href='introListPaging.jsp?pageNum="+(endPage+1)+"'>다음 </a> ] ");

}

%>

</div>

</body>

</html>