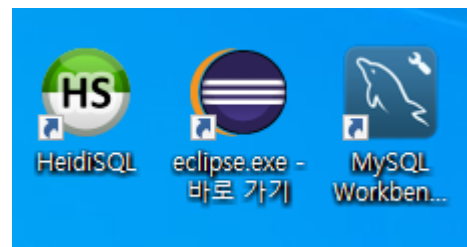# SQL 활용

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2022-10-21 정기 수행평가

목차

- 문제 1번. 프로젝트 생성 및 구성

- 문제 2번. 화면 구현

- 문제 3번. 기능 구현

- 문제 4번. 실행

Q 1 – 프로젝트 생성 및 구성

⊙ 프로젝트 구조

- ⌄ 📑 > BookStore [JSP main]
  - > 🗄 Deployment Descriptor: BookStore
  - > 🔧 JAX-WS Web Services
  - > 🗂 Java Resources
  - > 📂 build
  - ⌄ 📁 > src
    - ⌄ 📁 > main
      - > 📁 > java
      - ⌄ 📁 > webapp
        - ⌄ 📁 > book
          - 📄 delete.jsp
          - 📄 list.jsp
          - 📄 modify.jsp
          - 📄 modifyProc.jsp
          - 📄 register.jsp
          - 📄 registerProc.jsp
        - ⌄ 📁 > customer
          - 📄 delete.jsp
          - 📄 list.jsp
          - 📄 modify.jsp
          - 📄 modifyProc.jsp
          - 📄 register.jsp
          - 📄 registerProc.jsp
        - > 📁 > META-INF
        - > 📁 > WEB-INF
        - 📄 index.jsp

⊙ 개발도구

Q 2 - Book 화면 구현

⊙ Book::list 화면

⊙ Book::modify 화면

⊙ Book:: register 화면

도서번호	도서명	출판사	가격	관리
1	축구의 역사	굿스포츠	7000	수정 삭제
2	축구의 이해	대한미디어	22000	수정 삭제
3	골프바이블	대한미디어	35000	수정 삭제
4	장미s	□	123	수정 삭제

Q 2 – Customer 화면 구현

⊙ customer ::list 화면

⊙ customer ::modify 화면

⊙ customer :: register 화면

고객 목록

처음으로 고객등록

고객번호	고객명	주소	휴대폰	관리
1	박지성	영국 맨체스터	010-1234-1001	수정 삭제
2	김연아	대한민국 서울	010-1234-1002	수정 삭제
3	장미	대한민국 강원도맨체스터	010-1234-1003	수정 삭제

고객번호	1
고객명	박지성
주소	영국 맨체스터
휴대폰	010-1234-1001

수정

customer::등록

처음으로 customer 목록

고객번호	고객번호 입력
고객명	고객명 입력
주소	주소 입력
휴대폰	휴대폰 입력

등록

Q 3 – book 기능 구현

⊙ book::list 코드

```jsp
<%
    request.setCharacterEncoding("utf-8");
    String bno = request.getParameter("bno");
    BookBean bb = null;

    try{
        Connection conn = DBCP.getConnection();
        String sql = "select * from `book` where `bno`=?";
        PreparedStatement psmt = conn.prepareStatement(sql);
        psmt.setString(1, bno);

        ResultSet rs = psmt.executeQuery();

        if(rs.next()){
            bb = new BookBean();
            bb.setBno(rs.getInt(1));
            bb.setBname(rs.getString(2));
            bb.setBpub(rs.getString(3));
            bb.setBpric(rs.getInt(4));
        }

        rs.close();
        psmt.close();
        conn.close();

    }catch(Exception e){
        e.printStackTrace();
    }
%>
```

```html
<!DOCTYPE html>
<html>
    <head>
        <meta charset="UTF-8">
        <title>Book::list</title>
    </head>
    <body>
        <h3>도서 목록</h3>
        <a href="../index.jsp">처음으로</a>
        <a href="./register.jsp">도서등록</a>
        <table border='1'>
            <tr>
                <th>도서번호</th>
                <th>도서명</th>
                <th>출판사</th>
                <th>가격</th>
                <th>관리</th>
            </tr>
            <% for(BookBean bb : users) {%>
            <tr>
                <td><%= bb.getBno() %></td>
                <td><%= bb.getBname() %></td>
                <td><%= bb.getBpub() %></td>
                <td><%= bb.getBpric() %></td>
                <td>
                    <a href="./modify.jsp?bno=<%= bb.getBno() %>">수정</a>
                    <a href="./delete.jsp?bno=<%= bb.getBno() %>">삭제</a>
                </td>
            </tr>
            <% } %>
        </table>
    </body>
</html>
```

⊙ book::register 코드

```jsp
<%@ page contentType="text/html;charset=UTF-8" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta charset="UTF-8">
        <title>book::register</title>
    </head>
    <body>
        <h3>book::등록</h3>

        <a href="../index.jsp">처음으로</a>
        <a href="./list.jsp">book 목록</a>

        <form action="./registerProc.jsp" method="post">
            <table border="1">
                <tr>
                    <td>도서번호</td>
                    <td><input type="text" name="bno" placeholder="도서번호 입력"></input></td>
                </tr>
                <tr>
                    <td>도서명</td>
                    <td><input type="text" name="bname" placeholder="도서명 입력"></input></td>
                </tr>
                <tr>
                    <td>출판사</td>
                    <td><input type="text" name="bpub" placeholder="출판사 입력"></input></td>
                </tr>
                <tr>
                    <td>가격</td>
                    <td><input type="text" name="bprice" placeholder="가격 입력"></input></td>
                </tr>
                <tr>
                    <td colspan="2" align="right"><input type="submit" value="등록"></input></td>
                </tr>
            </table>
        </form>

    </body>
</html>
```

⊙ book::modify 코드

```html
<!DOCTYPE html>
<html>
        <form action="./modifyProc.jsp" method="post">
            <table border="1">
                <tr>
                    <td>도서번호</td>
                    <td><input type="text" name="bno" value="<%= bb.getBno() %>"/></td>
                </tr>
                <tr>
                    <td>도서명</td>
                    <td><input type="text" name="bname" value="<%= bb.getBname() %>"/></td>
                </tr>
                <tr>
                    <td>출판사</td>
                    <td><input type="text" name="bpub" value="<%= bb.getBpub() %>"/></td>
                </tr>
                <tr>
                    <td>가격</td>
                    <td><input type="text" name="bpric" value="<%= bb.getBpric() %>"/></td>
                </tr>
                <tr>
                    <td colspan="2" align="right"><input type="submit" value="수정"/></td>
                </tr>
            </table>
        </form>
</html>
```

```jsp
<%
    List<BookBean> users = new ArrayList<>();

    try{
        //1단계
        Connection conn = DBCP.getConnection();
        //2단계
        Statement stmt = conn.createStatement();
        //3단계
        ResultSet rs = stmt.executeQuery("select * from `book`");

        //4단계
        while(rs.next()){
            BookBean bb = new BookBean();
            bb.setBno(rs.getInt(1));
            bb.setBname(rs.getString(2));
            bb.setBpub(rs.getString(3));
            bb.setBpric(rs.getInt(4));
            users.add(bb);

        }
        //5단계
        conn.close();
        stmt.close();
        rs.close();
    } catch(Exception e){
        e.printStackTrace();
    }
%>
```

⊙ book::delete 코드

```jsp
<%
    request.setCharacterEncoding("UTF-8");
    String bno = request.getParameter("bno");

    try{
        Connection conn = DBCP.getConnection();
        String sql = "delete from `book` where `bno`=?";
        PreparedStatement psmt = conn.prepareStatement(sql);
        psmt.setString(1, bno);

        psmt.executeUpdate();

        psmt.close();
        conn.close();

    } catch(Exception e){
        e.printStackTrace();
    }

    response.sendRedirect("./list.jsp");

%>
```

Q 3 – customer 기능 구현

⊙ customer::list 코드

```jsp
<%@page import="bean.CustomerBean"%>
<%@page import="java.sql.ResultSet"%>
<%@page import="java.sql.Statement"%>
<%@page import="config.DBCP"%>
<%@page import="java.sql.Connection"%>
<%@page import="java.util.ArrayList"%>
<%@page import="java.util.List"%>
<%@ page contentType="text/html;charset=UTF-8" pageEncoding="UTF-8"%>
<%

    List<CustomerBean> users = new ArrayList<>();

    try{
        Connection conn = DBCP.getConnection();
        Statement stmt = conn.createStatement();
        ResultSet rs = stmt.executeQuery("select * from `customer`");

        while(rs.next()){
            CustomerBean cb = new CustomerBean();
            cb.setCustId(rs.getInt(1));
            cb.setCusname(rs.getString(2));
            cb.setCusaddr(rs.getString(3));
            cb.setCushp(rs.getString(4));
            users.add(cb);
        }

        conn.close();
        stmt.close();
        rs.close();

    } catch(Exception e){
        e.printStackTrace();
    }

%>
```

```html
<!DOCTYPE html>
<html>
    <head>
        <meta charset="UTF-8">
        <title>Customer::list</title>
    </head>
    <body>
        <h3>고객 목록</h3>

        <a href="../index.jsp">처음으로</a>
        <a href="./register.jsp">고객등록</a>

        <table border='1'>
            <tr>
                <th>고객번호</th>
                <th>고객명</th>
                <th>주소</th>
                <th>휴대폰</th>
                <th>관리</th>
            </tr>
            <% for(CustomerBean cb : users) {%>
            <tr>
                <td><%= cb.getCustId() %></td>
                <td><%= cb.getCusname() %></td>
                <td><%= cb.getCusaddr() %></td>
                <td><%= cb.getCushp() %></td>
                <td>
                    <a href="./modify.jsp?custId=<%= cb.getCustId() %>">수정</a>
                    <a href="./delete.jsp?custId=<%= cb.getCustId() %>">삭제</a>
                </td>
            </tr>
            <% } %>
        </table>
    </body>
</html>
```

⊙ customer::register 코드

```html
<!DOCTYPE html>
<html>
    <head>
        <meta charset="UTF-8">
        <title>customer::register</title>
    </head>
    <body>
        <h3>customer::등록</h3>

        <a href="../index.jsp">처음으로</a>
        <a href="./list.jsp">customer 목록</a>

        <form action="./registerProc.jsp" method="post">
            <table border="1">
                <tr>
                    <td>고객번호</td>
                    <td><input type="text" name="cusno" placeholder="고객번호 입력"></input></td>
                </tr>
                <tr>
                    <td>고객명</td>
                    <td><input type="text" name="cusname" placeholder="고객명 입력"></input></td>
                </tr>
                <tr>
                    <td>주소</td>
                    <td><input type="text" name="cusaddr" placeholder="주소 입력"></input></td>
                </tr>
                <tr>
                    <td>휴대폰</td>
                    <td><input type="text" name="cushp" placeholder="휴대폰 입력"></input></td>
                </tr>
                <tr>
                    <td colspan="2" align="right"><input type="submit" value="등록"></input></td>
                </tr>

            </table>
        </form>

    </body>
</html>
```

⊙ customer::modify 코드

```html
<!DOCTYPE html>
<html>
        <form action="./modifyProc.jsp" method="post">
            <table border="1">
                <tr>
                    <td>고객번호</td>
                    <td><input type="text" name="custId" value="<%= cb.getCustId() %>"/></td>
                </tr>
                <tr>
                    <td>고객명</td>
                    <td><input type="text" name="cusname" value="<%= cb.getCusname() %>"/></td>
                </tr>
                <tr>
                    <td>주소</td>
                    <td><input type="text" name="cusaddr" value="<%= cb.getCusaddr() %>"/></td>
                </tr>
                <tr>
                    <td>휴대폰</td>
                    <td><input type="text" name="cushp" value="<%= cb.getCushp() %>"/></td>
                </tr>
                <tr>
                    <td colspan="2" align="right"><input type="submit" value="수정"/></td>
                </tr>
            </table>
        </form>

</html>
```

```jsp
<%
    request.setCharacterEncoding("utf-8");
    String custId = request.getParameter("custId");
    CustomerBean cb = null;

    try{
        Connection conn = DBCP.getConnection();
        String sql = "select * from `customer` where `custId`=?";
        PreparedStatement psmt = conn.prepareStatement(sql);
        psmt.setString(1, custId);

        ResultSet rs = psmt.executeQuery();

        if(rs.next()){
            cb = new CustomerBean();
            cb.setCustId(rs.getInt(1));
            cb.setCusname(rs.getString(2));
            cb.setCusaddr(rs.getString(3));
            cb.setCushp(rs.getString(4));
        }

        rs.close();
        psmt.close();
        conn.close();

    }catch(Exception e){
        e.printStackTrace();
    }

%>
```

⊙ customer::delete 코드

```jsp
<%
    request.setCharacterEncoding("UTF-8");
    String custId = request.getParameter("custId");

    try{
        Connection conn = DBCP.getConnection();
        String sql = "delete from `customer` where `custId`=?";
        PreparedStatement psmt = conn.prepareStatement(sql);
        psmt.setString(1, custId);

        psmt.executeUpdate();

        psmt.close();
        conn.close();

    } catch(Exception e){
        e.printStackTrace();
    }

    response.sendRedirect("./list.jsp");

%>
```

Q 3 – 기능 구현 DBCP 커넥션

```java
package config;

import java.sql.Connection;

public class DBCP {

    private static DataSource ds = null;


    public static Connection getConnection() throws NamingException, SQLException {
        if(ds == null) {
            ds = (DataSource) new InitialContext().lookup("java:comp/env/dbcp_java1_BookStore");
        }
        return ds.getConnection();
    }

}
```

Q 4 - book 실행

⊙ book::list 동작

⊙ book::register 동작

-->

⊙ book::modify 동작

-->

⊙ book::delete 동작

Q 4 – customer 실행

⊙ customer::list 동작

⊙ customer::register 동작

-->

⊙ customer::modify 동작

-->

⊙ customer::delete 동작