**[ 11 ] 웹프로그래밍에서의 데이터베이스**

1. 오라클 설치
2. JDBC 살펴보기
   * JDBC란 JAVA 프로그램에서 SQL문을 실행하여 데이터를 관리하기 위한 JAVA API.
   * JDBC의 특징은 다양한 데이터 베이스에 대해서 별도의 프로그램을 만들 필요 없이, 해당 데이터 베이스의 JDBC를 이용하면 하나의 프로그램으로 데이터 베이스를 관리할 수 있다.
   * 우리는 Oracle을 사용하므로, Oracle용 JDBC를 사용하며, 이것은 오라클을 설치하면 자동으로 설치 되고, 이클립스에서 해당 클래스 파일을 복사하면 된다
   * 오라클 드라이버를 사용하기 위한 C:\oraclexe\app\oracle\product\11.2.0\server\jdbc\lib\ojdbc6.jar 나 ojdbc6\_g.jar 파일을 C:\Program Files\Java\jre1.8.0\_101\lib\ext 폴더(%JAVA\_HOME%/JRE/LIB/EXT 폴더) 에 복사한 후, 이클립스에서 Windows 메뉴 – preferences – Java – Installed JREs – edit – Add External JARs을 통해 두개의 jar를 등록 후 Restore Default 클릭 후 finish
   * 또는 톰캣 lib폴더에 ojdbc6.jar을 copy 한다.
   * 자바11의 경우 WEB-INF밑의 lib밑에 jar 추가
   * 데이터 베이스 연결 순서
     1. JDBC 드라이버 로드 : DriverManager로드 : Class.forName(“oracle.jdbc.driver.OracleDriver”); 메모리에 OracleDriver가 로드된다.
     2. 데이터 베이스 연결 : Connection : DriverManager.getConnection(JDBC URL, 계정아이디, 비밀번호) : connection 객체 생성
     3. SQL문 실행
        1. connection.createStatement();Statement 객체를 통해 SQL문 실행
        2. ResultSet : statement.executeQuery(), statement.executeUpdate(); SQL문의 결과값을 ResultSet객체로 받는다
     4. 데이터 베이스 연결 해제
3. Statement 객체
   * executeQuery() ; SQL문 실행 후 여러 개의 결과값 생기는 경우 사용 ex. Select
   * executeUpdate();SQL문 실행 후 테이블의 내용만 변경되는 경우 사용 ex. insert, delete, update
   * executeQuery() 실행 후 반환되는 레코드 셋

첫번째 로우 데이터

두번째 로우 데이터

…

N번째 마지막 로우 데이터

END

ResultSet.next(); 다음 레코드로 이동

ResultSet.previous(); 이전 레코드로 이동

ResultSet.first(); 처음 레코드로 이동

ResultSet.last(); 마지막 레코드로 이동

get메소드 : getString, getInt

1. 간단 예제

**ex1\_mysql.jsp**

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

<%@ 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>

</head>

<body>

<%!

String driverMysql = "com.mysql.jdbc.Driver";

String urlMysql = "jdbc:mysql://127.0.0.1:3306/kimdb";

String uidMysql = "root";

String upwMysql = "mysql";

%>

<table>

<%

Connection conn = **null**;

Statement stmt = **null**;

ResultSet rs = **null**;

String sql = "SELECT \* FROM PERSONAL";

**try**{

Class.forName(driverMysql); //1단계 : 드라이버 로드

conn = DriverManager.getConnection(urlMysql, uidMysql, upwMysql); // 2단계 : DB연결객체

stmt = conn.createStatement(); // 3단계 : SQL전송객체

rs = stmt.executeQuery(sql); // 4단계(SQL전송) + 5단계(SQL전공결과 받기)

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

out.println("<tr><th>사번</th><th>이름</th><th>직책</th><th>상사사번</th><th>입사일</th><th>급여</th><th>상여</th><th>부서번호</th></tr>");

**do**{

// 6단계 : 결과받아 적당한 로직 수행

**int** pno = rs.getInt("pno");

String pname = rs.getString("pname");

String job = rs.getString("job");

**int** manager = rs.getInt("manager");

String startdate = rs.getString("startdate");

**int** pay = rs.getInt("pay");

**int** bonus = rs.getInt("bonus");

**int** dno = rs.getInt("dno");

out.println("<tr><td>"+pno+"</td><td>"+pname+"</td><td>"+job+"</td><td>"+manager+"</td><td>"

+startdate +"</td><td>"+pay+"</td><td>"+bonus+"</td><td>"+dno+"</td></tr>");

}**while**(rs.next());

}**else**{

out.println("<tr><td>입력된 데이터가 없습니다</td></tr>");

}

}**catch**(Exception e){

System.out.println("에러 메세지 : "+ e.getMessage());

}**finally**{ // 7단계 : 연결 해제

**try**{

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

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

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

}**catch**(Exception e){

System.out.println("에러 메세지 : "+ e.getMessage());

}

}

%>

</table>

</body>

</html>

**ex2.jsp**

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

<%@ 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 driver = "oracle.jdbc.driver.OracleDriver";

String url = "jdbc:oracle:thin:@127.0.0.1:1521:xe";

String uid = "scott";

String upw = "tiger";

%>

<table>

<caption>사원데이터</caption>

<%

Connection conn = **null**;

Statement stmt = **null**;

ResultSet rs = **null**;

String sql = "SELECT \* FROM EMP";

**try**{

Class.forName(driver); //1단계 : 드라이버 로드

conn = DriverManager.getConnection(url, uid, upw); // 2단계 : DB연결객체

stmt = conn.createStatement(); // 3단계 : SQL전송객체

rs = stmt.executeQuery(sql); // 4단계(SQL전송) + 5단계(SQL전공결과 받기)

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

out.println("<tr><th>사번</th><th>이름</th><th>직책</th><th>상사사번</th><th>입사일</th><th>급여</th><th>상여</th><th>부서번호</th></tr>");

**do**{

// 6단계 : 결과받아 적당한 로직 수행

**int** empno = rs.getInt("empno");

String ename = rs.getString("ename");

String job = rs.getString("job");

**int** mgr = rs.getInt("mgr");

Date hiredate = rs.getDate("hiredate");

**int** sal = rs.getInt("sal");

**int** comm = rs.getInt("comm");

**int** deptno = rs.getInt("deptno");

out.println("<tr><td>"+empno+"</td><td>"+mgr+"</td><td>"+job+"</td><td>"+mgr+"</td><td>"

+hiredate +"</td><td>"+sal+"</td><td>"+(comm==0? "":comm)+"</td><td>"+deptno+"</td></tr>");

}**while**(rs.next());

}**else**{

out.println("<tr><td>입력된 데이터가 없습니다</td></tr>");

}

}**catch**(Exception e){

System.out.println("에러 메세지 : "+ e.getMessage());

}**finally**{ // 7단계 : 연결 해제

**try**{

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

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

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

}**catch**(Exception e){

System.out.println("에러 메세지 : "+ e.getMessage());

}

}

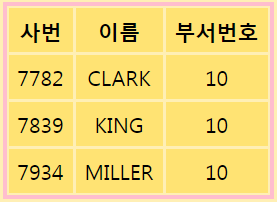
%>

</table>

</body>

</html>

**ex3\_deptnoIn.html -> ex3\_deptnoOut.jsp**

 => 

<!DOCTYPE html>

<html>

<head>

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

<title>Insert title here</title>

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

</head>

<body>

<form action=*"ex03.jsp"*>

부서번호 <select name=*"deptno"*>

<option>10</option><option>20</option>

<option>30</option><option>40</option>

</select>

<input type=*"submit"* value=*"검색"*>

</form>

</body>

</html>

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

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

pageEncoding=*"UTF-8"*%>

<!DOCTYPE html>

<html>

<head>

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

<title>Insert title here</title>

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

</head>

<body>

<%

String driver = "oracle.jdbc.driver.OracleDriver";

String url = "jdbc:oracle:thin:@127.0.0.1:1521:xe";

String uid = "scott";

String upw = "tiger";

Connection conn = **null**;

Statement stmt = **null**;

ResultSet rs = **null**;

**int** deptno = Integer.parseInt(request.getParameter("deptno"));

String sql = "SELECT \* FROM EMP WHERE DEPTNO="+deptno;

**try**{

Class.forName(driver); //1단계

conn = DriverManager.getConnection(url, uid, upw); //2단계

stmt = conn.createStatement(); // 3단계

rs = stmt.executeQuery(sql);

out.println("<table>");

out.println("<tr><th>사번</th><th>이름</th><th>부서번호</th></tr>");

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

**do**{

**int** empno = rs.getInt("empno");

String ename = rs.getString("ename");

out.println("<tr><td>"+empno+"</td><td>"+ename+"</td><td>"+deptno+"</td></tr>");

}**while**(rs.next());

}**else**{

out.println("<tr><td colspan='3'>해당부서번호 사원은 없습니다.</td></tr>");

}

out.println("</table>");

}**catch**(Exception e){

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

}**finally**{

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

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

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

}

%>

</body>

</html>

**ex3.jsp (위의 두 예제를 통합)**

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

<%@ 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"*>

<style>**p**{text-align: *center*;}</style>

</head>

<%

String deptnoStr = request.getParameter("deptno");

**if**(deptnoStr==**null**) deptnoStr = "0";

**int** deptnoInput = Integer.parseInt(deptnoStr);

%>

<body>

<form action=*""*>

부서번호 <select name=*"deptno"*>

<option value=*"0"*></option>

<%

String driver = "oracle.jdbc.driver.OracleDriver";

String url = "jdbc:oracle:thin:@127.0.0.1:1521:xe";

String uid = "scott";

String upw = "tiger";

Connection conn = **null**;

Statement stmt = **null**;

ResultSet rs = **null**;

String sql = "SELECT \* FROM DEPT";

**try**{

Class.forName(driver); //1단계

conn = DriverManager.getConnection(url, uid, upw); //2단계

stmt = conn.createStatement(); // 3단계

rs = stmt.executeQuery(sql);

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

**int** deptno = rs.getInt("deptno");

String dname = rs.getString("dname");

**if**(deptnoInput==deptno){

out.println("<option value='"+deptno+"' selected='selected'>"+deptno+" - "+dname+"</option>");

}**else**{

out.println("<option value='"+deptno+"' >"+deptno+" - "+dname+"</option>");

}

}

out.println("</table>");

}**catch**(Exception e){

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

}**finally**{

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

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

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

}

%>

</select>

<input type=*"submit"*>

</form>

<%

sql = "SELECT \* FROM EMP WHERE DEPTNO="+deptnoInput;

**try**{

Class.forName(driver); //1단계

conn = DriverManager.getConnection(url, uid, upw); //2단계

stmt = conn.createStatement(); // 3단계

rs = stmt.executeQuery(sql);

out.println("<table>");

out.println("<tr><th>사번</th><th>이름</th><th>부서번호</th></tr>");

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

**do**{

**int** empno = rs.getInt("empno");

String ename = rs.getString("ename");

out.println("<tr><td>"+empno+"</td><td>"+ename+"</td><td>"+deptnoInput+"</td></tr>");

}**while**(rs.next());

}**else**{

out.println("<tr><td colspan='3'>해당부서번호 사원은 없습니다.</td></tr>");

}

out.println("</table>");

}**catch**(Exception e){

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

}**finally**{

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

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

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

}

%>

</body>

</html>

데이터베이스 구현 평가 : Emp테이블에서 사원명을 검색하는 데이터베이스 프로그램을 구현하시오(예시화면 참조).

**<세부 요구사항>**

1. 첫 실행화면은 모든 직원을 출력한다.
2. 사원명으로 사원을 검색한 결과를 출력한다.

(ex1) 사원명으로 소문자 “ s”를 입력한 후 검색버튼을 클릭하면 사원명란에 대문자 “S”로 수정되고 S가 들어간 사원을 출력한다.

(ex2) 사원명란에 빈스트링이나 space를 입력하고 검색버튼을 클릭하면 전체 직원이 출력된다.





**<파일명> example.jsp, 첫실행화면.png, 검색화면.png**

**<결과물 제출>** 위의 파일이 압축된 파일 : 훈련생성명\_데이터베이스구현.zip

<%@page import=*"java.sql.DriverManager"*%>

<%@page import=*"java.sql.ResultSet"*%>

<%@page import=*"java.sql.PreparedStatement"*%>

<%@page import=*"java.sql.Connection"*%>

<%@page import=*"java.sql.Date"*%>

<%@ 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"* type=*"text/css"*>

<style>**p**{text-align: *center*;}</style>

</head>

<%

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

**if**(searchName==**null**){

searchName = "";

}

%>

<body>

<form action=*""*>

<p>사원명 <input type=*"text"* name=*"searchName"* value=*"*<%=searchName.toUpperCase().trim()%>*"*>

<input type=*"submit"* value=*"검색"*>

</p>

</form>

<%

String driver = "oracle.jdbc.driver.OracleDriver";

String url = "jdbc:oracle:thin:@127.0.0.1:1521:xe";

String uid = "scott";

String upw = "tiger";

Connection conn = **null**;

PreparedStatement pstmt = **null**;

ResultSet rs = **null**;

String sql = "SELECT E.\*, DNAME, LOC FROM EMP E, DEPT D" +

" WHERE D.DEPTNO=E.DEPTNO and ENAME LIKE '%'||TRIM(UPPER(?))||'%'";

**try**{

Class.forName(driver);

conn = DriverManager.getConnection(url, uid, upw);

pstmt = conn.prepareStatement(sql);

pstmt.setString(1,searchName);

rs = pstmt.executeQuery();

out.println("<table><tr><th>사번</th><th>이름</th><th>직책</th><th>상사사번</th>"

+"<th>입사일</th><th>급여</th><th>부서번호</th><th>부서명</th></tr>");

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

**do**{

**int** empno = rs.getInt("empno");

String ename = rs.getString("ENAME");

String job = rs.getString("job");

**int** mgr = rs.getInt("mgr");

Date hiredate = rs.getDate("hiredate");

**int** sal = rs.getInt("sal");

**int** deptno = rs.getInt("deptno");

String dname = rs.getString("dname");

out.println("<tr><td>"+empno+"</td>");

out.println(" <td>"+ename+"</td>");

out.println(" <td>"+job+"</td>");

out.println(" <td>"+((mgr==0)? "-":mgr)+"</td>");

out.println(" <td>"+hiredate+"</td>");

out.println(" <td>"+sal+"</td>");

out.println(" <td>"+deptno+"</td>");

out.println(" <td>"+dname+"</td></tr>");

}**while**(rs.next());

}**else**{

out.print("<tr><td colspan='8'>해당 사원이 없습니다</td></tr>");

}

}**catch**(Exception e){

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

}**finally**{

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

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

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

}

%>

</body>

</html>

아래부터는 안 하고 12장에서 회원인증프로그램 함

1. 회원 가입 및 회원 정보 수정 프로그램

join.jsp

JoinOk(서블릿)

joinResult.jsp

login.jsp

ModifyOk(서블릿)

modify.jsp

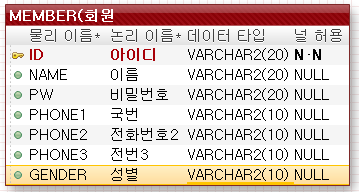
loginResult.jsp

LoginOk(서블릿)

modifyResult.jsp

logout.jsp

1. member/join.jsp : 회원가입 창
2. /JoinOk : DB에 접속하여 입력가능한 정보이면 DB에 저장하는 서블릿
3. member/joinResult.jsp : 회원가입 성공여부 출력과 그에 따른 메시지 출력
4. member/login.jsp : 로그인 창
5. /LoginOk : 로그인 인증하는 서블릿
   1. 로그인 성공하면 member/loginResult.jsp로 감
   2. 로그인 실패하면 member/login.html로 감
6. Member/loginResult.jsp : 로그인 성공 페이지
7. member/modify.jsp : 회원 정보 수정 화면
8. /ModifyOk : 회원 정보 수정 처리 화면 (비번 틀리면 ⑦번 화면으로 넘어가고, 비번이 맞으면 update 수행 후 ⑨번 으로)
9. membertest/modifyResult.jsp회원
10. member/logout.jsp : 로그아웃 화면



<sql문>

drop table member;

CREATE TABLE MEMBER(

NAME VARCHAR2(20) NOT NULL,

ID VARCHAR2(20) PRIMARY KEY,

PW VARCHAR2(20) NOT NULL,

PHONE1 VARCHAR2(10),

PHONE2 VARCHAR2(10),

PHONE3 VARCHAR2(10),

GENDER VARCHAR2(10));

INSERT INTO MEMBER VALUES ('홍','aaa','111','02','9999','9999','남'); -- 가입

commit;

select \* from member;

delete from member where id='ccc';

SELECT \* FROM MEMBER WHERE ID='aaa'; --로그인

SELECT \* FROM MEMBER WHERE ID='aaa' AND PW='111'; -- 로그인

UPDATE MEMBER SET NAME='최', PW='222', PHONE1='010', PHONE2='9999',PHONE3='9999',GENDER='여'

WHERE ID='bbb'; -- 정보수정

**member/join.jsp : 회원가입 창**

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

pageEncoding=*"UTF-8"*%>

<!DOCTYPE html>

<html>

<head>

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

<title>Insert title here</title>

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

<script>

**function** chk(){

**if**(frm.pw.value!=frm.pwChk.value){

alert('비밀번호를 확인하세요');

frm.pw.focus();

**return** **false**;

}

}

</script>

</head>

<body>

<form action=*"../JoinOk"* method=*"post"* name=*"frm"* onsubmit="return chk()">

<table>

<caption>회원가입</caption>

<tr><th>아이디</th>

<td><input type=*"text"* name=*"id"* required=*"required"* size=*"20"*></td>

</tr>

<tr><th>이름</th>

<td><input type=*"text"* name=*"name"* required=*"required"* size=*"20"*></td>

</tr>

<tr><th>비밀번호</th>

<td><input type=*"password"* name=*"pw"* required=*"required"* size=*"20"*></td>

</tr>

<tr><th>비밀번호 확인</th>

<td><input type=*"password"* name=*"pwChk"* required=*"required"* size=*"20"*></td>

</tr>

<tr><th>전화번호</th>

<td><select name=*"phone1"*>

<option></option><option>02</option><option>010</option>

</select> -

<input type=*"text"* name=*"phone2"* size=*"3"*> -

<input type=*"text"* name=*"phone3"* size=*"3"*>

</td>

</tr>

<tr><th>성별</th>

<td><input type=*"radio"* name=*"gender"* value=*"m"*>남

<input type=*"radio"* name=*"gender"* value=*"f"*>여

</td>

</tr>

<tr><td colspan=*"2"*>

<input type=*"submit"* value=*"가입"*>

<input type=*"reset"* value=*"취소"*>

<input type=*"button"* value=*"로그인"* onclick="location.href='login.jsp'">

</td>

</tr>

</table>

</form>

</body>

</html>

**joinOk.jsp**

<%@page import=*"java.sql.DriverManager"*%>

<%@page import=*"java.sql.PreparedStatement"*%>

<%@page import=*"java.sql.Connection"*%>

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

pageEncoding=*"UTF-8"*%>

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

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

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

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

String phone1 = request.getParameter("phone1");

String phone2 = request.getParameter("phone2");

String phone3 = request.getParameter("phone3");

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

String driver = "oracle.jdbc.driver.OracleDriver";

String url = "jdbc:oracle:thin:@127.0.0.1:1521:xe";

String uid = "scott";

String upw = "tiger";

Connection conn = **null**;

PreparedStatement pstmt = **null**;

String sql = "INSERT INTO MEMBER VALUES (?,?,?,?,?,?,?)"; // id, name, pw, phone, gender

**try**{

Class.forName(driver);

conn = DriverManager.getConnection(url, uid, upw);

pstmt = conn.prepareStatement(sql);

pstmt.setString(1, id);

pstmt.setString(2, name);

pstmt.setString(3, pw);

pstmt.setString(4, phone1);

pstmt.setString(5, phone2);

pstmt.setString(6, phone3);

pstmt.setString(7,gender);

**int** result = pstmt.executeUpdate();

**if**(result>0){//회원가입 성공

System.out.println("회원가입 성공");

session.setAttribute("id", id); // 로그인폼에서 가입한 id 보이기 위함

response.sendRedirect("joinResult.jsp?result=success");

}**else**{ // 회원가입실패

System.out.println("회원가입 실패");

response.sendRedirect("joinResult.jsp?result=fail");

}

}**catch**(Exception e){

//회원가입실패

System.out.println("회원가입 실패 메세지 : "+e.getMessage());

response.sendRedirect("joinResult.jsp?result=fail");

}**finally**{

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

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

}

%>

<!DOCTYPE html>

<html>

<head>

</head>

<body></body>

</html>

**/JoinOk : DB에 접속하여 입력가능한 정보이면 DB에 저장하는 서블릿**

@WebServlet("/JoinOk")

**public** **class** JoinOk **extends** HttpServlet {

**private** **static** **final** **long** ***serialVersionUID*** = 1L;

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

actionDo(request, response);

}

**protected** **void** doPost(HttpServletRequest request, HttpServletResponse response) **throws** ServletException, IOException {

request.setCharacterEncoding("utf-8");

actionDo(request, response);

}

**private** **void** actionDo(HttpServletRequest request, HttpServletResponse response) **throws** ServletException, IOException {

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

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

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

String phone1 = request.getParameter("phone1");

String phone2 = request.getParameter("phone2");

String phone3 = request.getParameter("phone3");

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

String driver = "oracle.jdbc.driver.OracleDriver";

String url = "jdbc:oracle:thin:@127.0.0.1:1521:xe";

String uid = "scott";

String upw = "tiger";

Connection conn = **null**;

PreparedStatement pstmt = **null**;

String sql = "INSERT INTO MEMBER VALUES (?,?,?,?,?,?,?)"; // id, name, pw, phone, gender

**try**{

Class.*forName*(driver);

conn = DriverManager.*getConnection*(url, uid, upw);

pstmt = conn.prepareStatement(sql);

pstmt.setString(1, id);

pstmt.setString(2, name);

pstmt.setString(3, pw);

pstmt.setString(4, phone1);

pstmt.setString(5, phone2);

pstmt.setString(6, phone3);

pstmt.setString(7,gender);

**int** result = pstmt.executeUpdate();

**if**(result>0){//회원가입 성공

System.***out***.println("회원가입 성공");

HttpSession session = request.getSession();

session.setAttribute("id", id); // 로그인폼에서 가입한 id 보이기 위함

response.sendRedirect("lect2\_member/joinResult.jsp?result=success");

}**else**{ // 회원가입실패

System.***out***.println("회원가입 실패");

response.sendRedirect("lect2\_member/joinResult.jsp?result=fail");

}

}**catch**(Exception e){

//회원가입실패

System.***out***.println("회원가입 실패 메세지 : "+e.getMessage());

response.sendRedirect("lect2\_member/joinResult.jsp?result=fail");

}**finally**{

**try** {

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

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

}**catch** (Exception e) {

// **TODO**: handle exception

}

}

}

}

**member/joinResult.jsp : 회원가입 성공여부 출력과 그에 따른 메시지 출력**

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

pageEncoding=*"UTF-8"*%>

<!DOCTYPE html>

<html>

<head>

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

<title>Insert title here</title>

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

</head>

<body>

<%**if**(request.getParameter("result").equals("success")) {%>

<h2>회원가입이 정상처리되었습니다</h2>

<hr>

<button onclick="location.href='login.jsp'">로그인</button>

<%}**else** { %>

<h2>회원가입이 처리되지 않았습니다.</h2>

<button onclick="location.href='join.jsp'">회원가입</button>

<button onclick="location.href='login.jsp'">로그인</button>

<%} %>

</body>

</html>

**member/login.jsp : 로그인 창**

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

pageEncoding=*"UTF-8"*%>

<!DOCTYPE html>

<html>

<head>

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

<title>Insert title here</title>

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

<%**if**(request.getParameter("result")!=**null**){%>

<script>

alert('아이디와 비밀번호를 확인하세요');

</script>

<%}%>

</head>

<body>

<form action=*"../LoginOk"* method=*"post"*>

<table>

<tr><th>아이디</th>

<td><input type=*"text"* name=*"id"* value=*"*<%

String id = (String)session.getAttribute("id");

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

out.print(id);

}

%>*"* required=*"required"*></td>

</tr>

<tr><th>비밀번호</th><td><input type=*"password"* name=*"pw"* required=*"required"*></td></tr>

<tr><td colspan=*"2"*>

<input type=*"submit"* value=*"로그인"*>

<input type=*"button"* value=*"회원가입"* onclick="location.href='join.jsp'">

</td>

</tr>

</table>

</form>

</body>

</html>

**/LoginOk : 로그인 인증하는 서블릿**

* 1. **로그인 성공하면 member/loginResult.jsp로 감**
  2. **로그인 실패하면 member/login.jsp로 감**

@WebServlet("/LoginOk")

**public** **class** LoginOk **extends** HttpServlet {

**private** **static** **final** **long** ***serialVersionUID*** = 1L;

**private** String driver = "oracle.jdbc.driver.OracleDriver";

**private** String url = "jdbc:oracle:thin:@127.0.0.1:1521:xe";

**private** String uid = "scott";

**private** String upw = "tiger";

**private** Connection conn;

**private** PreparedStatement pstmt;

**private** ResultSet rs;

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

actionDo(request, response);

}

**protected** **void** doPost(HttpServletRequest request, HttpServletResponse response) **throws** ServletException, IOException {

request.setCharacterEncoding("utf-8");

actionDo(request, response);

}

**private** **void** actionDo(HttpServletRequest request, HttpServletResponse response) **throws** ServletException, IOException {

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

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

String sql = "SELECT \* FROM MEMBER WHERE ID=? AND PW=?";

**try** {

Class.*forName*(driver);

conn = DriverManager.*getConnection*(url, uid, upw);

pstmt = conn.prepareStatement(sql);

pstmt.setString(1, id);

pstmt.setString(2, pw);

rs = pstmt.executeQuery();

**if**(rs.next()) { // id, pw를 제대로 입력하여 로그인 성공할 경우

String name = rs.getString("name");

String phone1 = rs.getString("phone1");

String phone2 = rs.getString("phone2");

String phone3 = rs.getString("phone3");

String gender = rs.getString("gender");

HttpSession session = request.getSession();

session.setAttribute("id", id);

session.setAttribute("name", name);

session.setAttribute("pw", pw);

session.setAttribute("phone1", phone1);

session.setAttribute("phone2", phone2);

session.setAttribute("phone3", phone3);

session.setAttribute("gender", gender);

session.setAttribute("validMember", "ok");

response.sendRedirect("lect2\_member/loginResult.jsp");

}**else** { // id나 pw를 제대로 입력하지 않은 경우

response.sendRedirect("lect2\_member/login.jsp?result=loginFail");

}

} **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 e) {}

}//try-catch-finally

}//actionDo()

}//class

**Member/loginResult.jsp : 로그인 성공 페이지**

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

pageEncoding=*"UTF-8"*%>

<!DOCTYPE html>

<html>

<head>

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

<title>Insert title here</title>

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

</head>

<body>

<%

String name = (String)session.getAttribute("name");

String id = (String)session.getAttribute("id");

%>

<h2><%=name %>(<%=id %>)님 안녕하세요</h2>

<button onclick="location.href='modify2.jsp'">회원정보수정</button>

<button onclick="location.href='logout.jsp'">로그아웃</button>

</body>

</html>

**member/modify.jsp : 회원 정보 수정 화면(회원정보를 DB에서 가져옴)**

<%@page import=*"java.sql.DriverManager"*%>

<%@page import=*"java.sql.ResultSet"*%>

<%@page import=*"java.sql.PreparedStatement"*%>

<%@page import=*"java.sql.Connection"*%>

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

pageEncoding=*"UTF-8"*%>

<!DOCTYPE html>

<html>

<head>

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

<title>Insert title here</title>

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

</head>

<body>

<%!String name, pw, phone1, phone2, phone3, gender; %>

<%

**if**(session.getAttribute("validMember")==**null**){

response.sendRedirect("login.jsp");

}

**if**(request.getParameter("result")!=**null**){

%>

<script>alert('현비밀번호가 맞지 않아 수정불가합니다');</script>

<%

}

//화면에 수정할 정보를 가져오기

String id = (String)session.getAttribute("id");

String driver = "oracle.jdbc.driver.OracleDriver";

String url = "jdbc:oracle:thin:@127.0.0.1:1521:xe";

String uid = "scott";

String upw = "tiger";

Connection conn = **null**;

PreparedStatement pstmt = **null**;

ResultSet rs = **null**;

String query = "SELECT \* FROM MEMBER WHERE ID=?";

**try**{

Class.forName(driver); //1

conn = DriverManager.getConnection(url, uid, upw);

pstmt = conn.prepareStatement(query);

pstmt.setString(1, id);

rs = pstmt.executeQuery();

rs.next();

name = rs.getString("name");

pw = rs.getString("pw");

phone1 = rs.getString("phone1");

phone2 = rs.getString("phone2");

phone3 = rs.getString("phone3");

gender = rs.getString("gender");

}**catch**(Exception e){

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

}**finally**{

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

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

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

}

%>

<form action=*"../ModifyOk"* method=*"post"*>

<input type=*"hidden"* name=*"dbPw"* value=*"*<%=pw %>*"*>

<table>

<caption>회원 정보 수정</caption>

<tr><th>아이디</th>

<td><input type=*"text"* name=*"id"* value=*"*<%=id %>*"* readonly=*"readonly"* size=*"20"*></td>

</tr>

<tr><th>이름</th>

<td><input type=*"text"* name=*"name"* value=*"*<%=name %>*"* required=*"required"* size=*"20"*></td>

</tr>

<tr><th>현비밀번호</th>

<td><input type=*"password"* name=*"oldPw"* required=*"required"* size=*"20"*></td>

</tr>

<tr><th>새비밀번호</th>

<td><input type=*"password"* name=*"newPw"* size=*"20"*></td>

</tr>

<tr><th>전화번호</th>

<td><select name=*"phone1"*>

<option></option>

<option <%**if**("02".equals(phone1)){out.print("selected='selected'");} %>>02</option>

<option <%**if**("010".equals(phone1)){out.print("selected='selected'");} %>>010</option>

</select> -

<input type=*"text"* name=*"phone2"* value=*"*<%=phone2!=**null**? phone2:"" %>*"* size=*"3"*> -

<input type=*"text"* name=*"phone3"* value=*"*<%=phone3==**null**? "":phone2 %>*"* size=*"3"*>

</td>

</tr>

<tr><th>성별</th>

<td>

<%**if**("m".equals(gender)){%>

<input type=*"radio"* name=*"gender"* value=*"m"* checked=*"checked"*>남

<input type=*"radio"* name=*"gender"* value=*"f"*>여

<%}**else** **if**("f".equals(gender)){%>

<input type=*"radio"* name=*"gender"* value=*"m"*>남

<input type=*"radio"* name=*"gender"* value=*"f"* checked=*"checked"*>여

<%}**else**{%>

<input type=*"radio"* name=*"gender"* value=*"m"*>남

<input type=*"radio"* name=*"gender"* value=*"f"*>여

<%}%>

</td>

</tr>

<tr><td colspan=*"2"*>

<input type=*"submit"* value=*"수정"*>

<input type=*"reset"* value=*"취소"*>

<input type=*"button"* value=*"로그아웃"* onclick="location.href='logout.jsp'">

</td>

</tr>

</table>

</form>

</body>

</html>

**또는 modify2.jsp (세션에서 정보 받아오기)**

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

pageEncoding=*"UTF-8"*%>

<!DOCTYPE html>

<html>

<head>

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

<title>Insert title here</title>

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

</head>

<body>

<%

**if**(session.getAttribute("validMember")==**null**){

response.sendRedirect("login.jsp");

}

**if**(request.getParameter("result")!=**null**){

%>

<script>alert('현비밀번호가 맞지 않아 수정불가합니다');</script>

<%

}

//화면에 수정할 정보를 가져오기

String id = (String)session.getAttribute("id");

String name = (String)session.getAttribute("name");

String phone1 = (String)session.getAttribute("phone1");

String phone2 = (String)session.getAttribute("phone2");

String phone3 = (String)session.getAttribute("phone3");

String gender = (String)session.getAttribute("gender");

%>

<form action=*"../ModifyOk2"* method=*"post"*>

<table>

<caption>회원 정보 수정</caption>

<tr><th>아이디</th>

<td><input type=*"text"* name=*"id"* value=*"*<%=id %>*"* readonly=*"readonly"* size=*"20"*></td>

</tr>

<tr><th>이름</th>

<td><input type=*"text"* name=*"name"* value=*"*<%=name %>*"* required=*"required"* size=*"20"*></td>

</tr>

<tr><th>현비밀번호</th>

<td><input type=*"password"* name=*"oldPw"* required=*"required"* size=*"20"*></td>

</tr>

<tr><th>새비밀번호</th>

<td><input type=*"password"* name=*"newPw"* size=*"20"*></td>

</tr>

<tr><th>전화번호</th>

<td><select name=*"phone1"*>

<option></option>

<option <%**if**("02".equals(phone1)){out.print("selected='selected'");} %>>02</option>

<option <%**if**("010".equals(phone1)){out.print("selected='selected'");} %>>010</option>

</select> -

<input type=*"text"* name=*"phone2"* value=*"*<%=phone2!=**null**? phone2:"" %>*"* size=*"3"*> -

<input type=*"text"* name=*"phone3"* value=*"*<%=phone3==**null**? "":phone3 %>*"* size=*"3"*>

</td>

</tr>

<tr><th>성별</th>

<td>

<%**if**("m".equals(gender)){%>

<input type=*"radio"* name=*"gender"* value=*"m"* checked=*"checked"*>남

<input type=*"radio"* name=*"gender"* value=*"f"*>여

<%}**else** **if**("f".equals(gender)){%>

<input type=*"radio"* name=*"gender"* value=*"m"*>남

<input type=*"radio"* name=*"gender"* value=*"f"* checked=*"checked"*>여

<%}**else**{%>

<input type=*"radio"* name=*"gender"* value=*"m"*>남

<input type=*"radio"* name=*"gender"* value=*"f"*>여

<%}%>

</td>

</tr>

<tr><td colspan=*"2"*>

<input type=*"submit"* value=*"수정"*>

<input type=*"reset"* value=*"취소"*>

<input type=*"button"* value=*"로그아웃"* onclick="location.href='logout.jsp'">

</td>

</tr>

</table>

</form>

</body>

</html>

**/ModifyOk : 회원 정보 수정 처리 화면 (현비번 틀리면 ⑦번 화면으로 넘어가고, 현비번이 맞으면 update 수행 후 ⑨번 으로)**

@WebServlet("/ModifyOk")

**public** **class** ModifyOk **extends** HttpServlet {

**private** **static** **final** **long** ***serialVersionUID*** = 1L;

**private** String driver = "oracle.jdbc.driver.OracleDriver";

**private** String url = "jdbc:oracle:thin:@127.0.0.1:1521:xe";

**private** String uid = "scott";

**private** String upw = "tiger";

**private** Connection conn;

**private** PreparedStatement pstmt;

**private** String dbPw, id, name, oldPw, newPw, phone1, phone2, phone3, gender; // param

**private** HttpSession session;

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

actionDo(request, response);

}

**protected** **void** doPost(HttpServletRequest request, HttpServletResponse response) **throws** ServletException, IOException {

request.setCharacterEncoding("utf-8");

actionDo(request, response);

}

**private** **void** actionDo(HttpServletRequest request, HttpServletResponse response) **throws** ServletException, IOException {

dbPw = request.getParameter("dbPw");

id = request.getParameter("id");

name = request.getParameter("name");

oldPw = request.getParameter("oldPw");

newPw = request.getParameter("newPw");

phone1 = request.getParameter("phone1");

phone2 = request.getParameter("phone2");

phone3 = request.getParameter("phone3");

gender = request.getParameter("gender");

String query = "UPDATE MEMBER " +

" SET NAME=?, PW=?, PHONE1 = ?, PHONE2=?,PHONE3=?,GENDER=?" +

" WHERE ID=?";

**if**(dbPw.equals(oldPw)) { // 회원정보 수정 1~7단계

**if**(newPw.equals("")) {

newPw = oldPw;

}

**try** {

Class.*forName*(driver);

conn = DriverManager.*getConnection*(url, uid, upw);

pstmt = conn.prepareStatement(query);

pstmt.setString(1, name);

pstmt.setString(2, newPw);

pstmt.setString(3, phone1);

pstmt.setString(4, phone2);

pstmt.setString(5, phone3);

pstmt.setString(6, gender);

pstmt.setString(7, id);

**int** result = pstmt.executeUpdate();

**if**(result>0) { // DB에 회원정보 수정함

// DB에 수정된 내용을 session에도 setAttribute

session = request.getSession();

session.setAttribute("name", name);

session.setAttribute("pw", newPw);

session.setAttribute("phone1", phone1);

session.setAttribute("phone2", phone2);

session.setAttribute("phone3", phone3);

session.setAttribute("gender", gender);

response.sendRedirect("lect2\_member/modifyResult.jsp?result=success");

}**else** {// DB에 회원정보 수정 못함

response.sendRedirect("lect2\_member/modifyResult.jsp?result=fail");

}

} **catch** (Exception e) {

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

// DB에 회원정보 수정 못함

response.sendRedirect("lect2\_member/modifyResult.jsp?result=fail");

} **finally** {

**try** {

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

}

}**else** {

response.sendRedirect("lect2\_member/modify2.jsp?result=");

}

}//actionDo()

}//class

**또는 ModifyOk2.java**

@WebServlet("/ModifyOk2")

**public** **class** ModifyOk2 **extends** HttpServlet {

**private** **static** **final** **long** ***serialVersionUID*** = 1L;

**private** String driver = "oracle.jdbc.driver.OracleDriver";

**private** String url = "jdbc:oracle:thin:@127.0.0.1:1521:xe";

**private** String uid = "scott";

**private** String upw = "tiger";

**private** Connection conn;

**private** PreparedStatement pstmt;

**private** String dbPw, id, name, oldPw, newPw, phone1, phone2, phone3, gender; // param

**private** HttpSession session;

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

actionDo(request, response);

}

**protected** **void** doPost(HttpServletRequest request, HttpServletResponse response) **throws** ServletException, IOException {

request.setCharacterEncoding("utf-8");

actionDo(request, response);

}

**private** **void** actionDo(HttpServletRequest request, HttpServletResponse response) **throws** ServletException, IOException {

session = request.getSession();

dbPw = (String)session.getAttribute("pw");

id = request.getParameter("id");

name = request.getParameter("name");

oldPw = request.getParameter("oldPw");

newPw = request.getParameter("newPw");

phone1 = request.getParameter("phone1");

phone2 = request.getParameter("phone2");

phone3 = request.getParameter("phone3");

gender = request.getParameter("gender");

String query = "UPDATE MEMBER " +

" SET NAME=?, PW=?, PHONE1 = ?, PHONE2=?,PHONE3=?,GENDER=?" +

" WHERE ID=?";

**if**(dbPw.equals(oldPw)) { // 회원정보 수정 1~7단계

**if**(newPw.equals("")) {

newPw = oldPw;

}

**try** {

Class.*forName*(driver);

conn = DriverManager.*getConnection*(url, uid, upw);

pstmt = conn.prepareStatement(query);

pstmt.setString(1, name);

pstmt.setString(2, newPw);

pstmt.setString(3, phone1);

pstmt.setString(4, phone2);

pstmt.setString(5, phone3);

pstmt.setString(6, gender);

pstmt.setString(7, id);

**int** result = pstmt.executeUpdate();

**if**(result>0) { // DB에 회원정보 수정함

// DB에 수정된 내용을 session에도 setAttribute

session.setAttribute("name", name);

session.setAttribute("pw", newPw);

session.setAttribute("phone1", phone1);

session.setAttribute("phone2", phone2);

session.setAttribute("phone3", phone3);

session.setAttribute("gender", gender);

response.sendRedirect("lect2\_member/modifyResult.jsp?result=success");

}**else** {// DB에 회원정보 수정 못함

response.sendRedirect("lect2\_member/modifyResult.jsp?result=fail");

}

} **catch** (Exception e) {

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

// DB에 회원정보 수정 못함

response.sendRedirect("lect2\_member/modifyResult.jsp?result=fail");

} **finally** {

**try** {

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

}

}**else** {

response.sendRedirect("lect2\_member/modify.jsp?result=");

}

}//actionDo()

}//class

**membertest/modifyResult.jsp**

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

pageEncoding=*"UTF-8"*%>

<!DOCTYPE html>

<html>

<head>

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

<title>Insert title here</title>

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

</head>

<body>

<%

**if**(request.getParameter("result").equals("success")){

out.println("<h2>회원정보 수정이 완료되었습니다</h2>");

}**else**{

out.println("<h2>회원정보 수정이 실패되었습니다</h2>");

}

String name = (String)session.getAttribute("name");

String id = (String)session.getAttribute("id");

%>

<h2><%=name %>(<%=id %>)님 안녕하세요</h2>

<button onclick="history.go(-1)">이전페이지</button>

<button onclick="location.href='modify2.jsp'">정보수정</button>

<button onclick="location.href='logout.jsp'">로그아웃</button>

</body>

</html>

**member/logout.jsp : 로그아웃 화면**

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

pageEncoding=*"UTF-8"*%>

<!DOCTYPE html>

<html>

<head>

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

<title>Insert title here</title>

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

</head>

<body>

<%session.invalidate();%>

<h2>로그아웃 되었습니다</h2>

<hr>

<button onclick="location.href='login.jsp'">로그인</button>

<button onclick="location.href='join.jsp'">회원가입</button>

</body>

</html>