

서버 프로그램 구현

박진휘, 2022년 11월 08일



목 차 CONTENTS

- (1) 프로젝트 생성
- (2) 화면 구현
- (3) 기능 구현
- (4) 실행



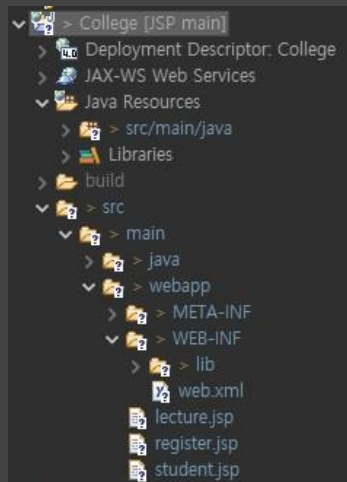
(1)프로젝트 생성

프로젝트명 : College

Was : Tomcat9

DB : java1_college

개발도구 : Eclipse, Workbench





(2) 화면 구현에 필요한 파일 생성

```
package JDBC;

import java.sql.Connection;

public class JDBC {

    private static JDBC instance = new JDBC();

    public static JDBC getInstance() {
        return instance;
    }

    private JDBC(){}

    private final String HOST = "jdbc:mysql://127.0.0.1:3306/java1_college";
    private final String USER = "root";
    private final String PASS = "1234";

    public Connection getConnetction() throws Exception {
        Class.forName("com.mysql.cj.jdbc.Driver");
        return DriverManager.getConnection(HOST, USER, PASS);
    }
}
```



(2) 화면 구현에 필요한 파일 생성

```
public class RegisterBean {
    private String regStdNo;
    private int regLecNo;
    private int regMidScore;
    private int regFinalScore;
    private int regTotalScore;
    private String regGrade;

    private String lecName;
    private String stdName;

    public String getLecName() {
        return lecName;
    }
    public void setLecName(String lecName) {
        this.lecName = lecName;
    }
    public String getStdName() {
        return stdName;
    }
    public void setStdName(String stdName) {
        this.stdName = stdName;
    }
    public String getRegStdNo() {
        return regStdNo;
    }
    public void setRegStdNo(String regStdNo) {
        this.regStdNo = regStdNo;
    }
    public int getRegLecNo() {
        return regLecNo;
    }
    public void setRegLecNo(int regLecNo) {
        this.regLecNo = regLecNo;
    }
}
```

```
public class LectureBean {
    private int lecNo;
    private String lecName;
    private int lecCredit;
    private int lecTime;
    private String lecClass;

    public int getLecNo() {
        return lecNo;
    }
    public void setLecNo(int lecNo) {
        this.lecNo = lecNo;
    }
    public String getLecName() {
        return lecName;
    }
    public void setLecName(String lecName) {
        this.lecName = lecName;
    }
    public int getLecCredit() {
        return lecCredit;
    }
    public void setLecCredit(int lecCredit) {
        this.lecCredit = lecCredit;
    }
    public int getLecTime() {
        return lecTime;
    }
    public void setLecTime(int lecTime) {
        this.lecTime = lecTime;
    }
    public String getLecClass() {
        return lecClass;
    }
    public void setLecClass(String lecClass) {
        this.lecClass = lecClass;
    }
}
```

```
public class StudentBean {
    private String stdNo;
    private String stdName;
    private String stdHp;
    private int stdYear;
    private String stdAddress;

    public String getStdNo() {
        return stdNo;
    }
    public void setStdNo(String stdNo) {
        this.stdNo = stdNo;
    }
    public String getStdName() {
        return stdName;
    }
    public void setStdName(String stdName) {
        this.stdName = stdName;
    }
    public String getStdHp() {
        return stdHp;
    }
    public void setStdHp(String stdHp) {
        this.stdHp = stdHp;
    }
    public int getStdYear() {
        return stdYear;
    }
    public void setStdYear(int stdYear) {
        this.stdYear = stdYear;
    }
    public String getStdAddress() {
        return stdAddress;
    }
    public void setStdAddress(String stdAddress) {
        this.stdAddress = stdAddress;
    }
}
```



(2)화면 구현_강좌목록

```
<%@ page contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%> <!DOCTYPE html>
<%> <html>
    request.setCharacterEncoding("UTF-8");
    <head>
        <meta charset="UTF-8">
        <title>강좌관리</title>
    </head>
    List<LectureBean> lectures = new ArrayList<>();
    <body>
        try{
            <h3>강좌관리</h3>
            Connection conn = JDBC.getInstance().getConnection();
            String sql = "select * from `lecture`";
            <a href="/College/lecture.jsp">강좌관리</a>
            PreparedStatement psmt = conn.prepareStatement(sql);
            <a href="/College/register.jsp">수강관리</a>
            ResultSet rs = psmt.executeQuery();
            <a href="/College/student.jsp">학생관리</a>
            while(rs.next()){
                <h4>강좌현황</h4>
                <button>등록</button>
                <table border="1">
                    <tr>
                        <th>번호</th>
                        <th>강좌명</th>
                        <th>학점</th>
                        <th>시간</th>
                        <th>강의장</th>
                    </tr>
                    <% for(LectureBean lecture : lectures) { %>
                    <tr>
                        <td><%= lecture.getLecNo() %></td>
                        <td><%= lecture.getLecName() %></td>
                        <td><%= lecture.getLecCredit() %></td>
                        <td><%= lecture.getLecTime() %></td>
                        <td><%= lecture.getLecClass() %></td>
                    </tr>
                    <% } %>
                </table>
            }
            </body>
            rs.close();
            psmt.close();
            conn.close();
        }catch(Exception e){
            </html>
            e.printStackTrace();
        }
    </html>
%>
```



(2)화면 구현_수강목록

```
<%@ page contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>
<%
    request.setCharacterEncoding("UTF-8");

    List<RegisterBean> registers = new ArrayList<>();

    try{
        Connection conn = JDBC.getInstance().getConnection();
        String sql = "SELECT a.*,b.`lecName`,c.`stdName` FROM `register` AS a ";
        sql += "JOIN `lecture` AS b ON a.regLecNo = b.lecNo ";
        sql += "JOIN `student` AS c ON a.regStdNo = c.stdNo";
        PreparedStatement psmt = conn.prepareStatement(sql);
        ResultSet rs = psmt.executeQuery();
        while(rs.next()){
            RegisterBean register = new RegisterBean();
            register.setRegStdNo(rs.getString(1));
            register.setRegLecNo(rs.getInt(2));
            register.setRegMidScore(rs.getInt(3));
            register.setRegFinalScore(rs.getInt(4));
            register.setRegTotalScore(rs.getInt(5));
            register.setRegGrade(rs.getString(6));
            register.setLecName(rs.getString(7));
            register.setStdName(rs.getString(8));
            registers.add(register);
        }
        rs.close();
        psmt.close();
        conn.close();
    }catch(Exception e){
        e.printStackTrace();
    }
%>
<!DOCTYPE html>
```

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>수강관리</title>
</head>
<body>
<h3>수강관리</h3>
<a href="/College/lecture.jsp">강좌관리</a>
<a href="/College/register.jsp">수강관리</a>
<a href="/College/student.jsp">학생관리</a>
<h4>수강현황</h4>
<input type="search" value="검색">
<button>검색</button>
<button>수강신청</button>
<table border="1">
<tr>
<th>학번</th>
<th>이름</th>
<th>강좌명</th>
<th>강좌코드</th>
<th>중간시험</th>
<th>기말시험</th>
<th>총점</th>
<th>등급</th>
</tr>
<% for(RegisterBean register : registers) { %>
<tr>
<td>%=register.getRegStdNo() %></td>
<td>%=register.getStdName() %></td>
<td>%=register.getLecName() %></td>
<td>%=register.getRegLecNo() %></td>
<td>%=register.getRegMidScore() %></td>
<td>%=register.getRegFinalScore() %></td>
<td>%=register.getRegTotalScore() %></td>
<td>%=register.getRegGrade() %></td>
</tr>
<% } %>
</table>
</body>
</html>
```




(2)화면 구현_학생목록

```
<%@ page contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%> <!DOCTYPE html>
<%
    request.setCharacterEncoding("UTF-8");

    List<StudentBean> students = new ArrayList<>();

    try{
        Connection conn = JDBC.getInstance().getConnection();
        String sql = "select * from `student`";
        PreparedStatement psmt = conn.prepareStatement(sql);
        ResultSet rs = psmt.executeQuery();
        while(rs.next()){
            StudentBean student = new StudentBean();
            student.setStdNo(rs.getString(1));
            student.setStdName(rs.getString(2));
            student.setStdHp(rs.getString(3));
            student.setStdYear(rs.getInt(4));
            student.setStdAddress(rs.getString(5));
            students.add(student);
        }
        rs.close();
        psmt.close();
        conn.close();
    }catch(Exception e){
        e.printStackTrace();
    }
%>
```

```
<html>
<head>
    <meta charset="UTF-8">
    <title>학생관리</title>
</head>
<body>
    <h3>학생관리</h3>
    <a href="/College/lecture.jsp">강좌관리</a>
    <a href="/College/register.jsp">수강관리</a>
    <a href="/College/student.jsp">학생관리</a>
    <h4>학생목록</h4>
    <button>등록</button>
    <table border="1">
        <tr>
            <th>학번</th>
            <th>이름</th>
            <th>휴대폰</th>
            <th>학년</th>
            <th>주소</th>
        </tr>
        <% for(StudentBean student : students) { %>
        <tr>
            <td><%=student.getStdNo() %></td>
            <td><%=student.getStdName() %></td>
            <td><%=student.getStdHp() %></td>
            <td><%=student.getStdYear() %></td>
            <td><%=student.getStdAddress() %></td>
        </tr>
        <% } %>
    </table>
</body>
</html>
```




(2)화면 구현_강좌목록

강좌관리

localhost8080/College...

강좌관리

[강좌관리](#) [수강관리](#) [학생관리](#)

강좌현황

등록

번호	강좌명	학점	시간	강의장
159	인지행동심리학	3	40	본304
167	운영체제론	3	25	본805
234	중급 영문법	3	20	본201
239	세법개론	3	40	본204
248	빅데이터 개론	3	20	본801
253	컴퓨팅사고와 코딩	2	10	본802
349	사회복지 마케팅	2	50	본301

수강관리

localhost8080/College/regist...

수강관리

[강좌관리](#) [수강관리](#) [학생관리](#)

수강현황

검색

검색

수강신청

학번	이름	강좌명	강좌코드	중간시험	기말시험	총점	등급
20201126	김준추	중급 영문법	234	36	42	78	C
20201016	김유신	빅데이터 개론	248	24	62	86	B
20201016	김유신	컴퓨팅사고와 코딩	253	28	40	68	D
20201126	김준추	세법개론	239	37	57	94	A
20210216	장보고	사회복지 마케팅	349	28	68	96	A
20210326	강감찬	사회복지 마케팅	349	16	65	81	B
20201016	김유신	운영체제론	167	18	38	56	F
20220416	이순신	사회복지 마케팅	349	25	58	83	B

학생관리

localhost8080/College/student.jsp

학생관리

[강좌관리](#) [수강관리](#) [학생관리](#)

학생목록

등록

학번	이름	휴대폰	학년	주소
20201016	김유신	010-1234-1001	3	null
20201126	김준추	010-1234-1002	3	경상남도 경주시
20210216	장보고	010-1234-1003	2	전라남도 완도시
20210326	강감찬	010-1234-1004	2	서울시 영등포구
20220416	이순신	010-1234-1005	1	부산시 부산진구
20220521	송상현	010-1234-1006	1	부산시 동래구