

서버 프로그램 구현

The title is centered and surrounded by five light purple circles. One circle is positioned behind the word '프로그램', and the other four are arranged in a semi-circular pattern below the title.

홍민준

2022-11-08 정기 수행평가

목차

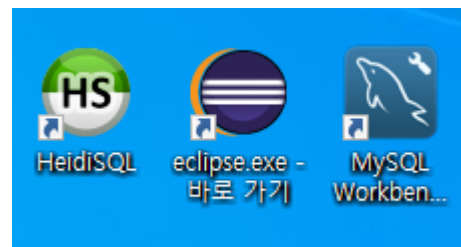
- ⦿ 문제 1번. 프로젝트 생성 및 구성
- ⦿ 문제 2번. 화면 구현
- ⦿ 문제 3번. 기능 구현
- ⦿ 문제 4번. 실행

Q 1 - 프로젝트 생성 및 구성

프로젝트 구조

- College [JSP main]
 - Deployment Descriptor: College
 - JAX-WS Web Services
 - Java Resources
 - build
 - src
 - main
 - java
 - webapp
 - js
 - json
 - META-INF
 - WEB-INF
 - lecture.jsp
 - register.jsp
 - student.jsp

개발도구



Q 2 - Lecture 화면 구현

◉ Lecture 목록

강좌 관리

[강좌관리](#) [수강관리](#) [학생관리](#)

강좌 현황

등록

번호	강좌명	학점	시간	강의장
1	2	1	1	1
167	운영체제론	167	167	167

◉ Lecture 등록

강좌 관리

[강좌관리](#) [수강관리](#) [학생관리](#)

강좌 현황

등록

번호	강좌명	학점	시간	강의장
1	2	1	1	1
167	운영체제론	167	167	167

강좌등록

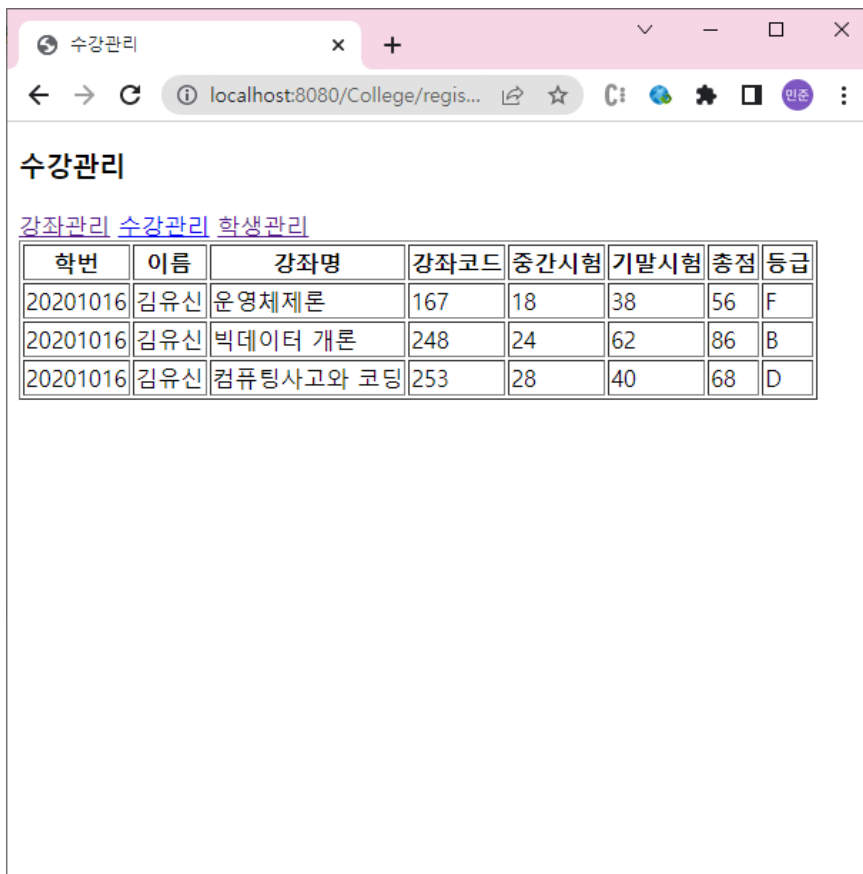
닫기

번호	<input type="text"/>
강좌명	<input type="text"/>
학점	<input type="text"/>
시간	<input type="text"/>
강의장	<input type="text"/>
<input type="button" value="추가"/>	

Q 2 - register 화면 구현

◉ register 목록

◉ register 등록

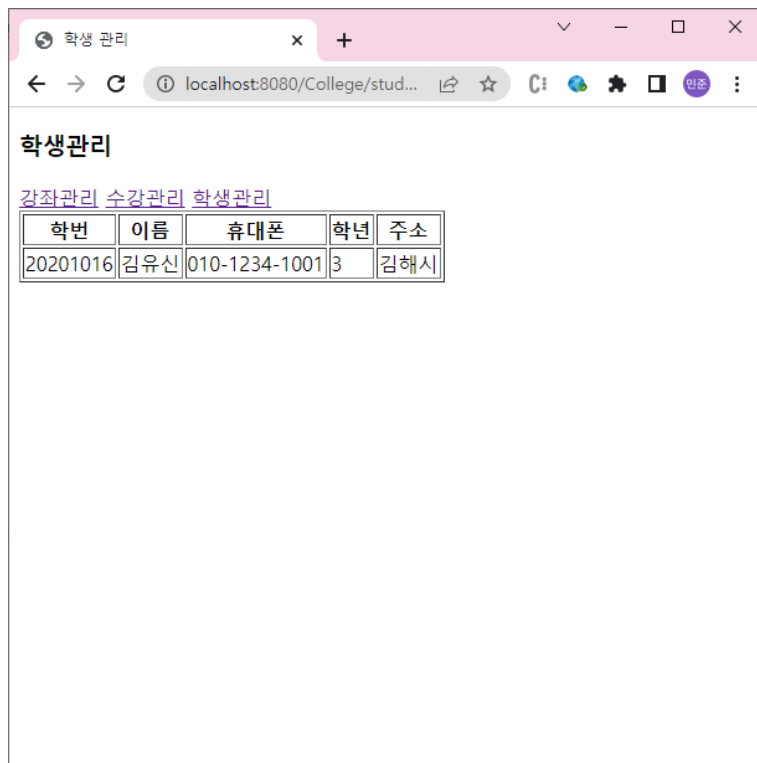


학번	이름	강좌명	강좌코드	중간시험	기말시험	총점	등급
20201016	김유신	운영체제론	167	18	38	56	F
20201016	김유신	빅데이터 개론	248	24	62	86	B
20201016	김유신	컴퓨팅사고와 코딩	253	28	40	68	D

Q 2 - student 화면 구현

◉ student 목록

◉ student 등록



The screenshot shows a web browser window with the title '학생 관리' (Student Management). The address bar shows 'localhost:8080/College/stud...'. The page content includes a title '학생관리' and three links: '강좌관리' (Class Management), '수강관리' (Enrollment Management), and '학생관리' (Student Management). Below the links is a table with student information.

학번	이름	휴대폰	학년	주소
20201016	김유신	010-1234-1001	3	김해시

Q 3 - Lecture 기능 구현

◉ Lecture 코드

```
1 <%@page import="com.google.gson.JsonObject"%>
2 <%@page import="java.sql.PreparedStatement"%>
3 <%@page import="java.sql.Connection"%>
4 <%@page import="config.DBCP"%>
5 <%@page import="java.util.ArrayList"%>
6 <%@page import="baen.LectureBean"%>
7 <%@page import="java.util.List"%>
8 <%@page contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>
9 <%
10
11 List<LectureBean> lectures = new ArrayList<>();
12
13 try{
14     Connection conn = DBCP.getConnection();
15     Statement stmt = conn.createStatement();
16     ResultSet rs = stmt.executeQuery("select * from `lecture`");
17
18     while(rs.next()){
19         LectureBean lb = new LectureBean();
20         lb.setLecNo(rs.getInt(1));
21         lb.setLecName(rs.getString(2));
22         lb.setLecCredit(rs.getInt(1));
23         lb.setLecTime(rs.getInt(1));
24         lb.setLecClass(rs.getString(1));
25
26         lectures.add(lb);
27
28     }
29
30     rs.close();
31     stmt.close();
32     conn.close();
33
34 } catch(Exception e){
35     e.printStackTrace();
36 }
37
38 >%
39 <!DOCTYPE html>
40 <html>
41 <head>
42     <meta charset="UTF-8">
43     <title>강좌 관리</title>
44     <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.6.1/jquery.min.js"></script>
45     <script src="/js/LecReg.js"></script>
46 </script>
```

```
</script>
<head>
<body>
<h3>강좌 관리</h3>
<nav>
<a href="#">강좌관리</a>
<a href="/register.jsp">수강관리</a>
<a href="/student.jsp">학생관리</a>
</nav>
<h4>강좌 현황</h4>
<input type="submit" name="register" value="등록"/>
<table border="1">
<tr>
<th>번호</th>
<th>강좌명</th>
<th>학점</th>
<th>시간</th>
<th>강의장</th>
</tr>
<% for(LectureBean lb : lectures){ %>
<tr>
<td><%= lb.getLecNo() %></td>
<td><%= lb.getLecName() %></td>
<td><%= lb.getLecCredit() %></td>
<td><%= lb.getLecTime() %></td>
<td><%= lb.getLecClass() %></td>
</tr>
<% } %>
</table>
<nav id="LecReg"></nav>
</body>
</html>
```

```
$(function(){
//lecture 등록
$(document).on('click', 'input[name=register]', function(e){
e.preventDefault();
lecReg();
});
//lecture 등록하기(submit)
$(document).on('click', 'input[name=append]', function(e){
e.preventDefault();
// 데이터 가져오기
let lecNo = $('input[name=lecNo]').val();
let lecName = $('input[name=lecName]').val();
let lecCredit = $('input[name=lecCredit]').val();
let lecTime = $('input[name=lecTime]').val();
let lecClass = $('input[name=lecClass]').val();
// JSON 데이터 생성
let jsonData = {
"lecNo":lecNo,
"lecName":lecName,
"lecCredit":lecCredit,
"lecTime":lecTime,
"lecClass":lecClass
};
console.log(jsonData);
// 데이터 전송
$.ajax({
url: '/json/lectureReg.jsp',
type: 'post',
data: jsonData,
datatype: 'json',
success: function(data){
console.log(data);
if(data.result == 1){
alert('데이터 입력 성공');
} else{
alert('데이터 입력 실패');
}
}
});
});
```

```
<%@page import="com.google.gson.JsonObject"%>
<%@page import="java.sql.PreparedStatement"%>
<%@page import="config.DBCP"%>
<%@page import="java.sql.Connection"%>
<%@page contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>
<%
request.setCharacterEncoding("utf-8");
String lecNo = request.getParameter("lecNo");
String lecName = request.getParameter("lecName");
String lecCredit = request.getParameter("lecCredit");
String lecTime = request.getParameter("lecTime");
String lecClass = request.getParameter("lecClass");
int result = 0;
try{
Connection conn = DBCP.getConnection();
String sql = "insert into `lecture` values(?,?,?,?,?)";
PreparedStatement pstmt = conn.prepareStatement(sql);
pstmt.setString(1, lecNo);
pstmt.setString(2, lecName);
pstmt.setString(3, lecCredit);
pstmt.setString(4, lecTime);
pstmt.setString(5, lecClass);
result = pstmt.executeUpdate();
pstmt.close();
conn.close();
}catch(Exception e){
e.printStackTrace();
}
JsonObject json = new JsonObject();
json.addProperty("result", result);
String jsonData = json.toString();
out.print(jsonData);
%>
function lecReg(){
$(function(){
$('#lecReg').empty();
$('#lecReg').append("<h4>강좌등록</h4>");
$('#lecReg').append("<input type='submit' name='close' value='닫기' />");
let tags = "<table border='1'>";
tags += "<tr>";
tags += "<td>번호</td>";
tags += "<td><input type='text' name='lecNo' /></td>";
tags += "</tr>";
tags += "<tr>";
tags += "<td>강좌명</td>";
tags += "<td><input type='text' name='lecName' /></td>";
tags += "</tr>";
tags += "<tr>";
tags += "<td>학점</td>";
tags += "<td><input type='text' name='lecCredit' /></td>";
tags += "</tr>";
tags += "<tr>";
tags += "<td>시간</td>";
tags += "<td><input type='text' name='lecTime' /></td>";
tags += "</tr>";
tags += "<tr>";
tags += "<td>강의장</td>";
tags += "<td><input type='text' name='lecClass' /></td>";
tags += "</tr>";
tags += "<tr>";
tags += "<td colspan='2' align='right'><input type='submit' name='append' value='추가' /></td>";
tags += "</tr>";
tags += "</table>";
$('#lecReg').append(tags);
});
});
```

Q 3 - register 기능 구현

Register 코드

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

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

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

    while(rs.next()){
        registerList reg = new registerList();
        reg.setRegNo(rs.getString(1));
        reg.setRegName(rs.getString(2));
        reg.setReglecName(rs.getString(3));
        reg.setReglecCode(rs.getInt(4));
        reg.setRegMid(rs.getInt(5));
        reg.setRegFinal(rs.getInt(6));
        reg.setRegTotal(rs.getInt(7));
        reg.setRegGrade(rs.getString(8));
        registers.add(reg);
    }

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

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

%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>수강관리</title>
</head>
<body>
<h3>수강관리</h3>
<nav>
<a href='./Lecture.jsp'>강좌관리</a>
<a href='#'>수강관리</a>
<a href='./student.jsp'>학생관리</a>
</nav>
<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(registerList rt : registers){ %>
<tr>
<td><%= rt.getRegNo() %></td>
<td><%= rt.getRegName() %></td>
<td><%= rt.getReglecName() %></td>
<td><%= rt.getReglecCode() %></td>
<td><%= rt.getRegMid() %></td>
<td><%= rt.getRegFinal() %></td>
<td><%= rt.getRegTotal() %></td>
<td><%= rt.getRegGrade() %></td>
</tr>
<% } %>
</table>
</body>
</html>
```


Q 3 - student 기능 구현

◉ student 코드

```
<%@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="baen.studentList"%%
<%@page import="java.util.List"%%
<%@ page contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>
<%

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

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

    while(rs.next()){
        studentList std = new studentList();
        std.setStdNo(rs.getString(1));
        std.setStdName(rs.getString(2));
        std.setStdHp(rs.getString(3));
        std.setStdGrade(rs.getInt(4));
        std.setStdAddr(rs.getString(5));
        students.add(std);
    }

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

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

%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>학생 관리</title>
</head>
<body>
<h3>학생관리</h3>
<nav>
<a href='./Lecture.jsp'>강좌관리</a>
<a href='./register.jsp'>수강관리</a>
<a href='#'>학생관리</a>
</nav>
<table border="1">
<tr>
<th>학번</th>
<th>이름</th>
<th>휴대폰</th>
<th>학년</th>

```

```

<th>주소</th>
</tr>
<% for(studentList st : students){ %>
<tr>
<td><%= st.getStdNo() %></td>
<td><%= st.getStdName() %></td>
<td><%= st.getStdHp() %></td>
<td><%= st.getStdGrade() %></td>
<td><%= st.getStdAddr() %></td>
</tr>
<% } %>
</table>
</body>
</html>
```

Q 3 - 기능 구현 DBCP 커넥션

```
package config;

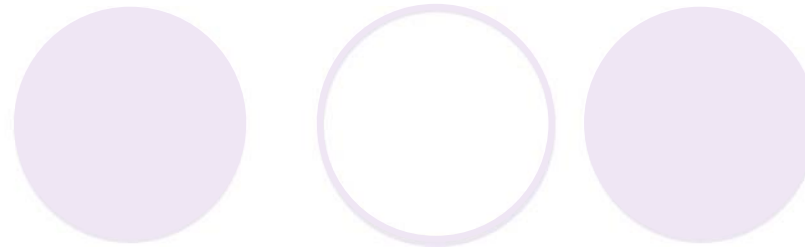
import java.sql.Connection;

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_college");
        }
        return ds.getConnection();
    }
}
```

Q 4 - Lecture 실행



◉ Lecture 동작

강좌 관리

[강좌관리](#) [수강관리](#) [학생관리](#)

강좌 현황

등록

번호	강좌명	학점	시간	강의장
1	2	1	1	1
167	운영체제론	167	167	167

◉ Lecture 등록 동작

강좌등록

닫기

번호	3
강좌명	3
학점	3
시간	3
강의장	3
<input type="text"/>	

추가

-->

강좌 현황

등록				
번호	강좌명	학점	시간	강의장
1	2	1	1	1
2	2	2	2	2
3	3	3	3	3
167	운영체제론	167	167	167