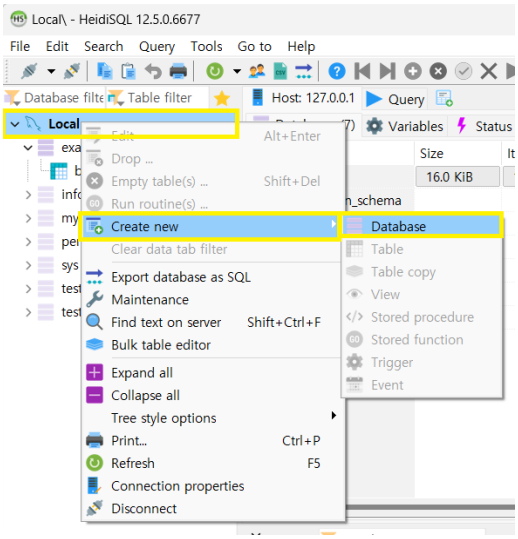
SQL CLASS 4

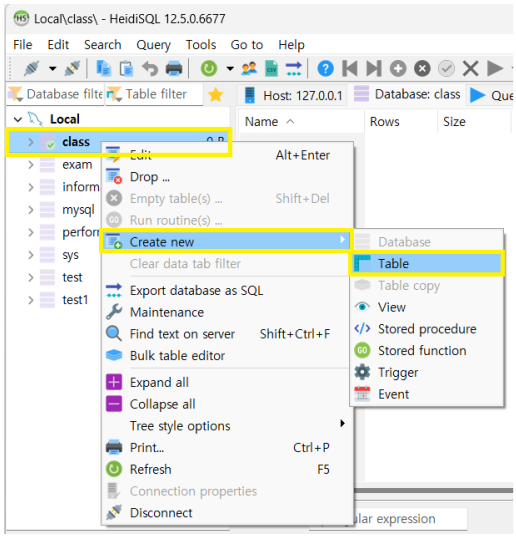
목차

MySQL(CRUD)
JSP DATABASE(CRUD)
JSP CLASS(CRUD)
JSP HTML 응용

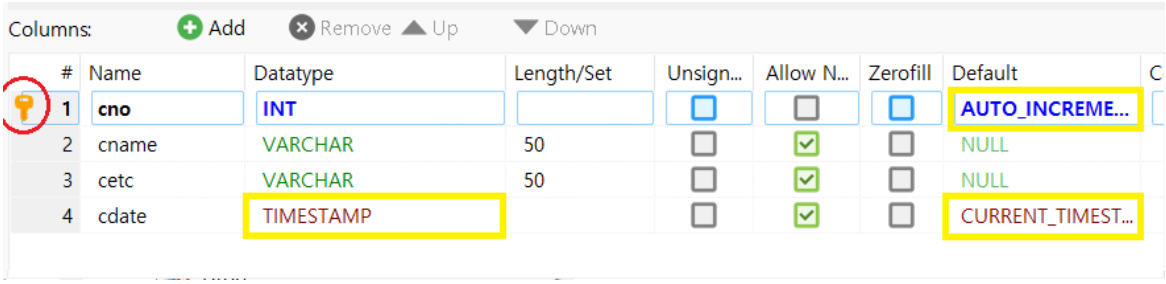
▼ MySQL(CRUD)



데이터베이스 작성

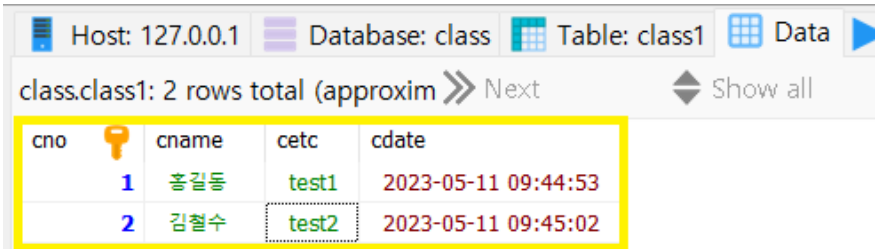


테이블 만들기

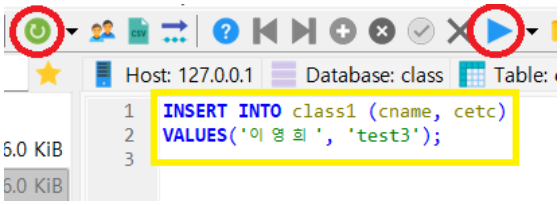


INT → AUTO_INCREMENT ⇒ 자동으로 숫자 증가(고유 번호를 위해 **PRIMARY KEY 설정**)

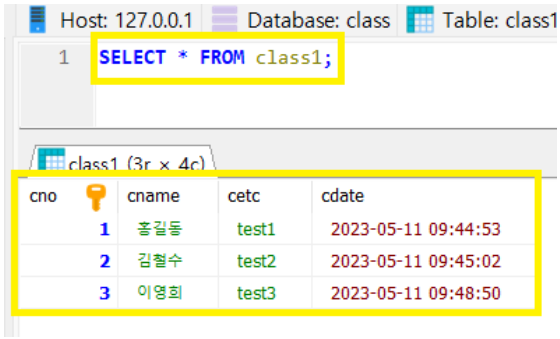
TIMESTAMP → CURRENT_TIMESTAMP() ⇒ 현재 날짜를 자동으로 출력



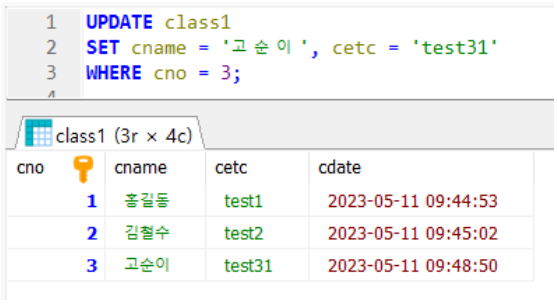
데이터 대입하고 PRIMARY KEY, Default 값 확인



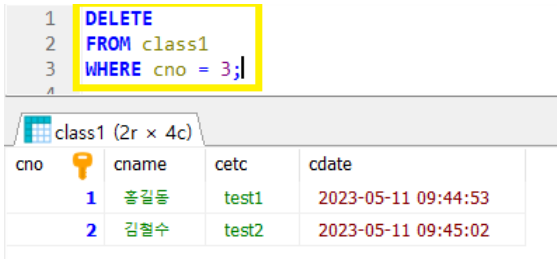
CRUD ⇒ CREATE



CRUD ⇒ READ

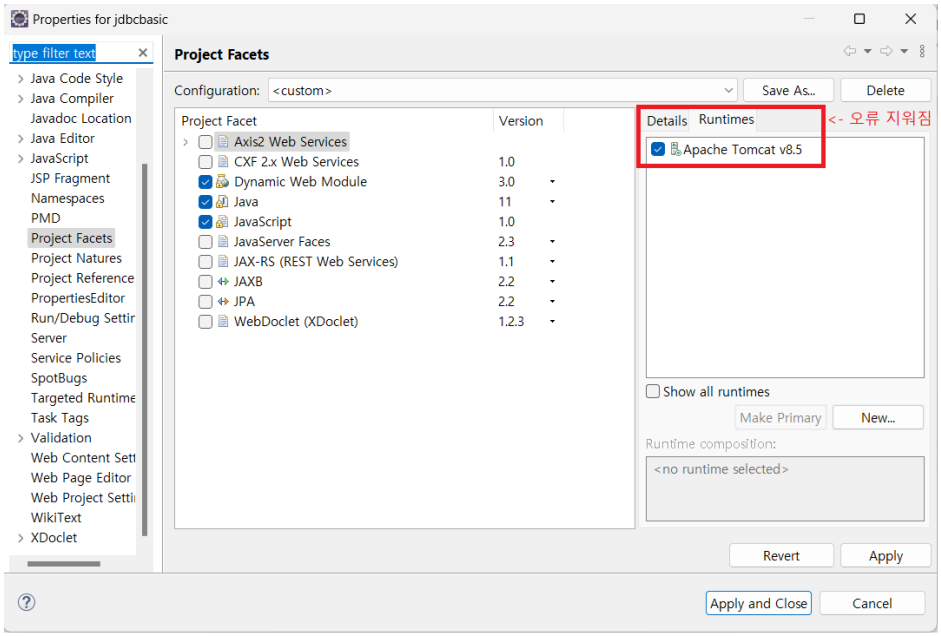


CRUD ⇒ UPDATE



CRUD ⇒ DELETE

▼ JSP DATABASE(CRUD)



오류 지울 수 있는 설정

▼ CREATE

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
    <%@ page import="java.sql.*" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>CREATE</title>
</head>
<body>
<%
  Class.forName("com.mysql.jdbc.Driver");

  Connection conn = null;

  String hostname = "jdbc:mysql://localhost:3306/class";
  String username = "root";
  String password = "0000";

  conn = DriverManager.getConnection(hostname, username, password);


  String sql = "INSERT INTO class1 VALUES(?,?,?,now())";

  PreparedStatement pstmt = conn.prepareStatement(sql);
    pstmt.setInt(1, 5);
    pstmt.setString(2, "홍길동");
    pstmt.setString(3, "tset4");

  pstmt.executeUpdate();

  pstmt.close();
  conn.close();

%>
```

```
</body>
</html>
```

cno	cname	cetc	cdate
1	홍길동	test1	2023-05-11 09:44:53
2	김철수	test2	2023-05-11 09:45:02
4	temp	tempcon	2023-05-11 11:15:39
5	홍길동	tset4	2023-05-11 11:17:51

CRUD ⇒ CREATE

▼ READ

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
    <%@ page import="java.sql.*" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>READ</title>
</head>
<body>
<%
  Class.forName("com.mysql.jdbc.Driver");

  Connection conn = null;

  String hostname = "jdbc:mysql://localhost:3306/class";
  String username = "root";
  String password = "0000";

  conn = DriverManager.getConnection(hostname, username, password);


  String sql = "SELECT * FROM class1";

  PreparedStatement pstmt = conn.prepareStatement(sql);

  ResultSet rset = pstmt.executeQuery();

  while(rset.next()) {          // 다음 항목이 있으면 반복(while) 실행
    String cno = rset.getString("cno");
    String cname = rset.getString("cname");
    String cetc = rset.getString("cetc");
    String cdate = rset.getString("cdate");

  %>

  <%=cno %> <%=cname %> <%=cetc %> <%=cdate %><br>
  <!-- JAVA문 사이에 HTML문을 끼워넣어 줄바꿈(또 다른 HTML기능도 추가 가능) -->

<%
  }
%>
</body>
</html>
```

1 홍길동 test1 2023-05-11 09:44:53
2 김철수 test2 2023-05-11 09:45:02
4 temp tempcon 2023-05-11 11:15:39

CRUD ⇒ READ

▼ UPDATE

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
    <%@ page import="java.sql.*" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>UPDATE</title>
</head>
<body>
<%
  Class.forName("com.mysql.jdbc.Driver");

  Connection conn = null;

  String hostname = "jdbc:mysql://localhost:3306/class";
  String username = "root";
  String password = "0000";

  conn = DriverManager.getConnection(hostname, username, password);


  String sql = "UPDATE class1 SET cname = ?, cetc = ? WHERE cno = ?";

  PreparedStatement pstmt = conn.prepareStatement(sql);
    pstmt.setString(1, "김민수");
    pstmt.setString(2, "tset5");
    pstmt.setInt(3, 5);

  pstmt.executeUpdate();

  pstmt.close();
  conn.close();

%>
</body>
</html>
```

cno	cname	cetc	cdate
1	홍길동	test1	2023-05-11 09:44:53
2	김철수	test2	2023-05-11 09:45:02
4	temp	tempcon	2023-05-11 11:15:39
5	김민수	tset5	2023-05-11 11:54:29

CRUD ⇒ UPDATE

▼ DELETE

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
    <%@ page import="java.sql.*" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>DELETE</title>
</head>
<body>
<%
  Class.forName("com.mysql.jdbc.Driver");

  Connection conn = null;

  String hostname = "jdbc:mysql://localhost:3306/class";
  String username = "root";
  String password = "0000";

  conn = DriverManager.getConnection(hostname, username, password);


  String sql = "DELETE FROM class1 WHERE cno = ?";

  PreparedStatement pstmt = conn.prepareStatement(sql);
    pstmt.setInt(1, 5);

  pstmt.executeUpdate();

  pstmt.close();
  conn.close();

%>
</body>
</html>
```

cno	cname	cetc	cdate
1	홍길동	test1	2023-05-11 09:44:53
2	김철수	test2	2023-05-11 09:45:02
4	temp	tempcon	2023-05-11 11:15:39

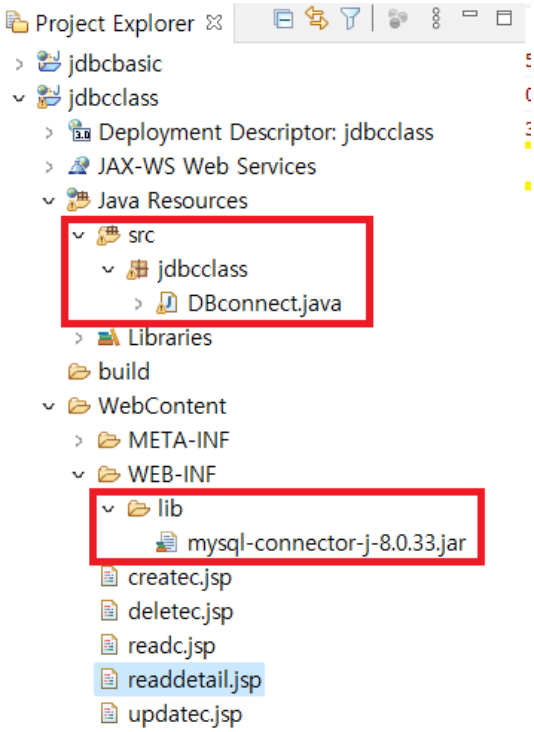
CRU**D** ⇒ DELETE

▼ JSP CLASS(CRUD)

▼ CLASS 생성

```
package jdbcclass;

import java.sql.*;

public class DBconnect {
```

```
  public static Connection getConnection() throws ClassNotFoundException, SQLException{

    Class.forName("com.mysql.jdbc.Driver");

    Connection conn = null;

    String hostname = "jdbc:mysql://localhost:3306/class";

    String username = "root";

    String password = "0000";

    conn = DriverManager.getConnection(hostname, username, password);

    PreparedStatement pstmt = null;

    return conn;
  }

}
```



CRUD 모든 파일에 반복되는 내용을 CLASS에 담아서 따로 import 하는 방법
⇒ src에서 dbconnect 클래스를 만들어 CRUD파일에 import시킴
※ lib에 mysql-connector 있는지 확인
훨씬 간결해진 코드를 볼 수 있음!

▼ CREATE

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
    <%@ page import = "java.sql.*" %>
    <%@ page import = "jdbcclass.*" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>CREATE_CLASS</title>
```

```
</head>
<body>

<%
  Connection conn = null;
  conn = DBconnect.getConnection();
%>

<%
  String sql = "INSERT INTO class1(cname, cetc) VALUES ('김동휘', 'test1')";
  PreparedStatement pstmt = conn.prepareStatement(sql);
  pstmt.executeUpdate();
%>

</body>
</html>
```

▼ READ

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
    <%@ page import = "java.sql.*" %>
    <%@ page import = "jdbcclass.*" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>READ1_CLASS</title>
</head>
<body>
<%
  Connection conn = null;
  conn = DBconnect.getConnection();
%>

<%
  String sql = "SELECT * FROM class1";
  PreparedStatement pstmt = conn.prepareStatement(sql);
  ResultSet rset = pstmt.executeQuery();

  while(rset.next()) {
    String cno = rset.getString("cno");
    String cname = rset.getString("cname");
    String cetc = rset.getString("cetc");
    String cdate = rset.getString("cdate");
%>
  <%=cno %> <%=cname %> <%=cetc %> <%=cdate %> <br>
<%
  }
%>
</body>
</html>
```

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
    <%@ page import = "java.sql.*" %>
    <%@ page import = "jdbcclass.*" %>
```

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>READ2_CLASS</title>
</head>
<body>

<%
  Connection conn = null;
  conn = DBconnect.getConnection();

  int no = 7;

  String sql = "SELECT * FROM class1 WHERE cno = ?";
  PreparedStatement pstmt = conn.prepareStatement(sql);
  pstmt.setInt(1, no);

  ResultSet rset = pstmt.executeQuery();
  rset.next();

  String cno = rset.getString("cno");
  String cname = rset.getString("cname");
  String cetc = rset.getString("cetc");
  String cdate = rset.getString("cdate");
%>
  <%=cno %> <%=cname %> <%=cetc %> <%=cdate %> <br>

</body>
</html>
```

▼ UPDATE

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
    <%@ page import = "java.sql.*" %>
    <%@ page import = "jdbcclass.*" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>UPDATE_CLASS</title>
</head>
<body>

<%
  Connection conn = null;
  conn = DBconnect.getConnection();
%>

<%
  String sql = "UPDATE class1 SET cname = '김동휘', cetc = 'test10' WHERE cno = 10";
  PreparedStatement pstmt = conn.prepareStatement(sql);
  pstmt.executeUpdate();
%>

</body>
</html>
```

▼ DELETE

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
    <%@ page import = "java.sql.*" %>
    <%@ page import = "jdbcclass.*" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>DELETE_CLASS</title>
</head>
<body>
<%
  Connection conn = null;
  conn = DBconnect.getConnection();
%>

<%
  String sql = "DELETE FROM class1 WHERE cno = 8";
  PreparedStatement pstmt = conn.prepareStatement(sql);
  pstmt.executeUpdate();
%>
</body>
</html>
```

▼ JSP HTML 응용

▼ 추가된 사항

```
<%
    Connection conn = null;
    conn = DBconnect.getConnection();

    String name = request.getParameter("name");     // 입력한 값을 name과 etc에 넘겨줌
    String etc = request.getParameter("etc");

    String sql = "INSERT INTO class1(cname, cetc) VALUES (?,?)";
    PreparedStatement pstmt = conn.prepareStatement(sql);
        pstmt.setString(1, name);
        pstmt.setString(2, etc);

    pstmt.executeUpdate();

    response.sendRedirect("readc.jsp");
%>
```

name과 etc에 입력받은 값 대입

```jsp
<%
    Connection conn = null;
    conn = DBconnect.getConnection();
%>

<%
    String sql = "SELECT * FROM class1";
    PreparedStatement pstmt = conn.prepareStatement(sql);
    ResultSet rset = pstmt.executeQuery();

    while(rset.next()) {
        String cno = rset.getString("cno");
        String cname = rset.getString("cname");
        String cetc = rset.getString("cetc");
        String cdate = rset.getString("cdate");
%>
    <%=cno %> <a href="readdetail.jsp?no=<%=cno %>"><%=cname %></a> <%=cetc %> <%=cdate %> <br>
<%
    }
%>
```

출력되는 이름에 하이퍼링크 걸기

```jsp
<%
    Connection conn = null;
    conn = DBconnect.getConnection();

    int no = Integer.parseInt(request.getParameter("no"));

    String sql = "SELECT * FROM class1 WHERE cno = ?";
    PreparedStatement pstmt = conn.prepareStatement(sql);
    pstmt.setInt(1, no);

    ResultSet rset = pstmt.executeQuery();
    rset.next();

    String cno = rset.getString("cno");
    String cname = rset.getString("cname");
    String cetc = rset.getString("cetc");
    String cdate = rset.getString("cdate");
%>
    <%=cno %> <%=cname %> <%=cetc %> <%=cdate %> <br>
```

no에 요청받은 값을 대입

▼ 코드

- CREATE

```jsp
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
    <%@ page import = "java.sql.*" %>
    <%@ page import = "jdbcclass.*" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>CREATE_CLASS</title>
</head>
```

```
<body>

<%
  Connection conn = null;
  conn = DBconnect.getConnection();

  String name = request.getParameter("name");   // 입력한 값을 name과 etc에 넘겨줌
  String etc = request.getParameter("etc");

  String sql = "INSERT INTO class1(cname, cetc) VALUES (?,?)";
  PreparedStatement pstmt = conn.prepareStatement(sql);
    pstmt.setString(1, name);
    pstmt.setString(2, etc);

  pstmt.executeUpdate();

  response.sendRedirect("readc.jsp");
%>

</body>
</html>
```

- READ

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
    <%@ page import = "java.sql.*" %>
    <%@ page import = "jdbcclass.*" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>READ1_CLASS</title>
</head>
<body>
<%
  Connection conn = null;
  conn = DBconnect.getConnection();
%>

<%
  String sql = "SELECT * FROM class1";
  PreparedStatement pstmt = conn.prepareStatement(sql);
  ResultSet rset = pstmt.executeQuery();

  while(rset.next()) {
    String cno = rset.getString("cno");
    String cname = rset.getString("cname");
    String cetc = rset.getString("cetc");
    String cdate = rset.getString("cdate");
%>
  <%=cno %> <a href="readdetail.jsp?no=<%=cno %>"><%=cname %></a> <%=cetc %> <%=cdate %> <br>
<%
  }
%>
</body>
</html>
```

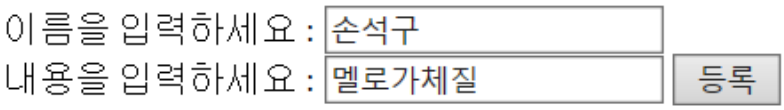
- READ_DETAIL

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
    <%@ page import = "java.sql.*" %>
    <%@ page import = "jdbcclass.*" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>READ2_CLASS</title>
</head>
<body>

<%
  Connection conn = null;
  conn = DBconnect.getConnection();

  int no = Integer.parseInt(request.getParameter("no"));

  String sql = "SELECT * FROM class1 WHERE cno = ?";
  PreparedStatement pstmt = conn.prepareStatement(sql);
  pstmt.setInt(1, no);

  ResultSet rset = pstmt.executeQuery();
  rset.next();

  String cno = rset.getString("cno");
  String cname = rset.getString("cname");
  String cetc = rset.getString("cetc");
  String cdate = rset.getString("cdate");
%>
  <%=cno %> <%=cname %> <%=cetc %> <%=cdate %> <br>

</body>
</html>
```

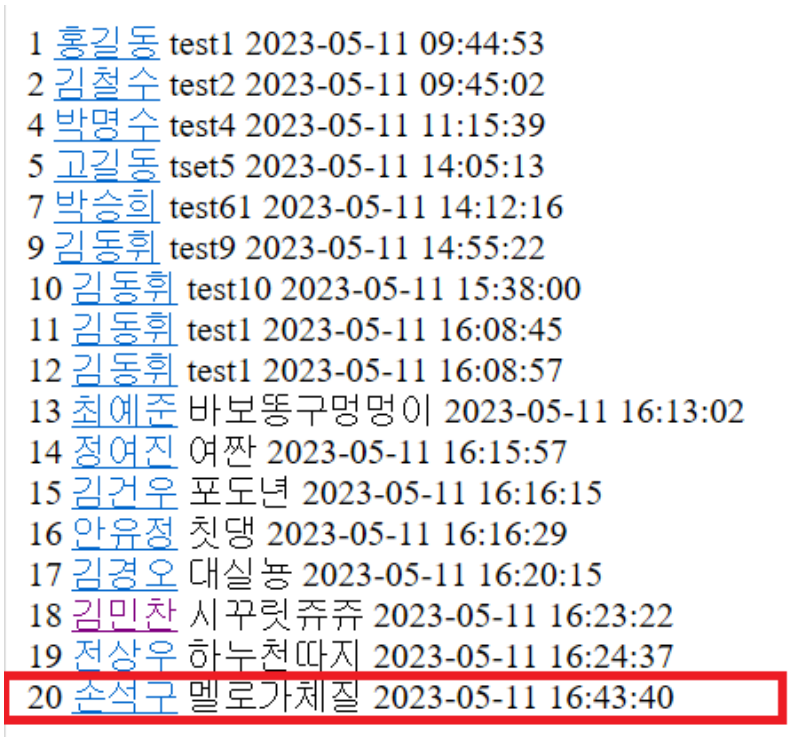
- INPUT

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>INPUT</title>
</head>
<body>

<form action = "createc.jsp">
  이름을 입력하세요 : <input type = "text" name = "name"> <br>
  내용을 입력하세요 : <input type = "text" name = "etc">
  <input type = "submit" value = "등록">
</form>

</body>
</html>
```

▼ 결과



input의 cname, cetc에 값을 입력



등록 누르면 입력한 값을 table에 대입(이름에 하이퍼링크)

이름 하이퍼링크 클릭 시 그 번호(cno) detail로 들어감