

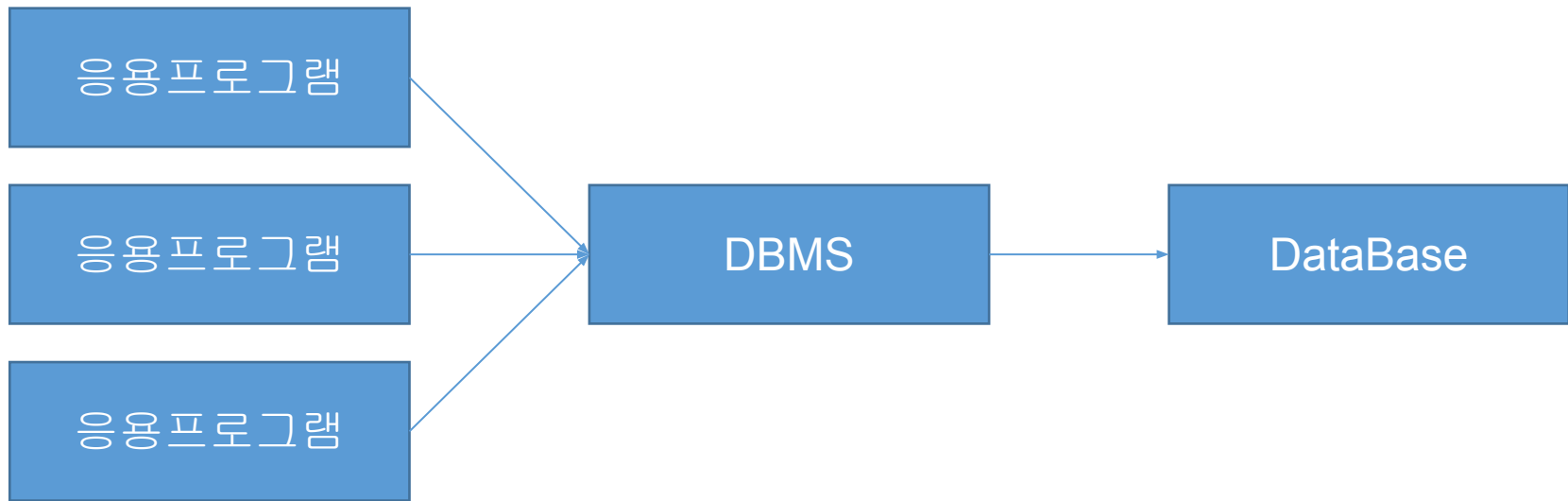
데이터베이스 for Spring

데이터 베이스 : 데이터의 추가, 삭제, 검색, 이동 등

DBMS : 데이터 베이스를 관리하는 도구, DataBase Management System

RDBMS(Relational DataBase Management System)

＞ 오라클(Oracle)



Oracle Express 11g XE

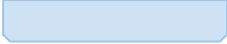
- <https://www.oracle.com/database/technologies/xe-prior-release-downloads.html>

sqldeveloper

- <https://docs.oracle.com/en/database/oracle/sql-developer/index.html>

MySQL 5.7 & Workbench

- <https://www.mysql.com/downloads/>
- <https://downloads.mysql.com/archives/installer/>



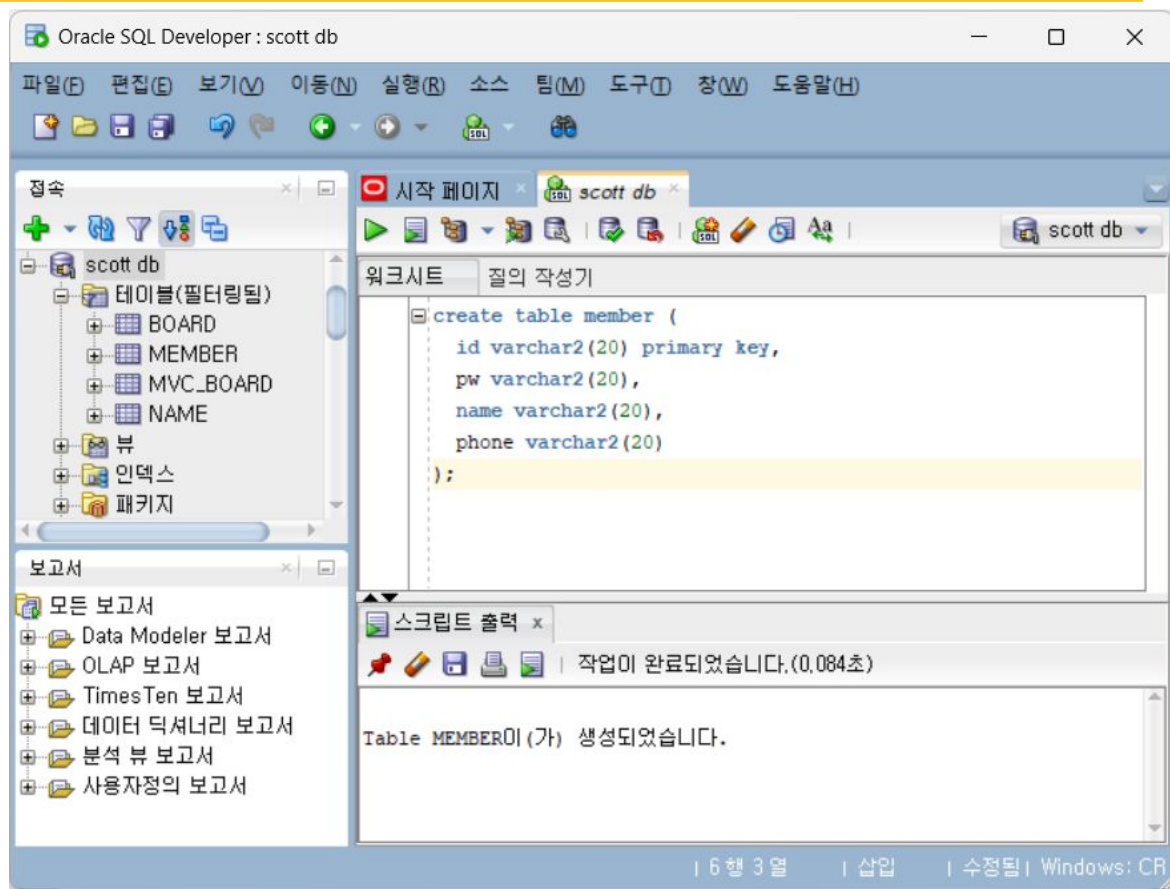
17-3. 기본적인 SQL문

테이블 생성

- ✓ `create table` 테이블명
(컬럼명 자료형);

자료형

- ✓ `number` : 수치 데이터형
- ✓ `char` : 고정 문자열
- ✓ `varchar2` : 가변길이
문자열



테이블 검색

Select * from tab;

The screenshot displays the Oracle SQL Developer environment. On the left, the 'scott db' connection is selected, showing a tree view of database objects including tables (BOARD, MEMBER, MVC_BOARD, NAME), views, indexes, packages, and procedures. The main workspace is divided into two panes. The top pane, titled '워크시트', contains a SQL script with the following content:

```
create table member (  
  id varchar2(20) primary key,  
  pw varchar2(20),  
  name varchar2(20),  
  phone varchar2(20)  
);  
select * from tab;
```

The bottom pane, titled '질의 결과', shows the execution results of the SQL script. It displays a table with the following columns: TNAME, TABTYPE, and CLUSTERID. The results are as follows:

TNAME	TABTYPE	CLUSTERID
1 BOARD	TABLE	(null)
2 MEMBER	TABLE	(null)
3 MVC_BOARD	TABLE	(null)
4 NAME	TABLE	(null)

레코드 추가

Insert into 테이블이름 (컬럼이름, 컬럼이름,) values (데이터, 데이터,);
commit;



레코드 검색

select 컬럼이름 from 테이블이름

The screenshot shows a database management interface with a left sidebar containing a tree view of the 'scott db' schema. The tree view includes folders for '테이블(필터링됨)', '뷰', '인덱스', '패키지', and '프로시저'. Under '테이블(필터링됨)', there are tables named 'BOARD', 'MEMBER', 'MVC_BOARD', and 'NAME'. The main window displays a SQL script in a text editor. The script contains the following queries:

```
select * from tab;

insert into member (id, pw, name, phone) values ('abc', '123', '홍길동', '010-1111-1111');

commit;

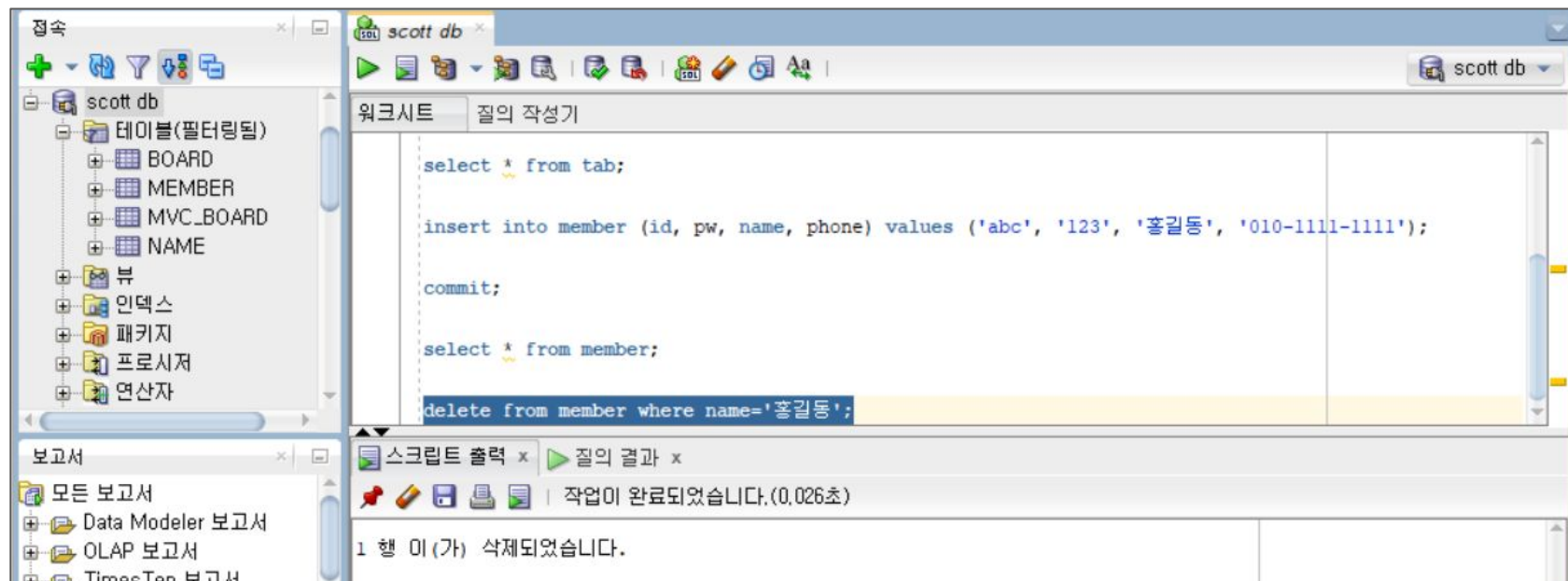
select * from member;
```

The last query, 'select * from member;', is highlighted. Below the script editor, there is a section for '스크립트 출력' and '질의 결과'. The '질의 결과' section shows the results of the last query in a table format. The table has four columns: ID, PW, NAME, and PHONE. The results are as follows:

ID	PW	NAME	PHONE
1 abc	123	홍길동	010-1111-1111

레코드 삭제

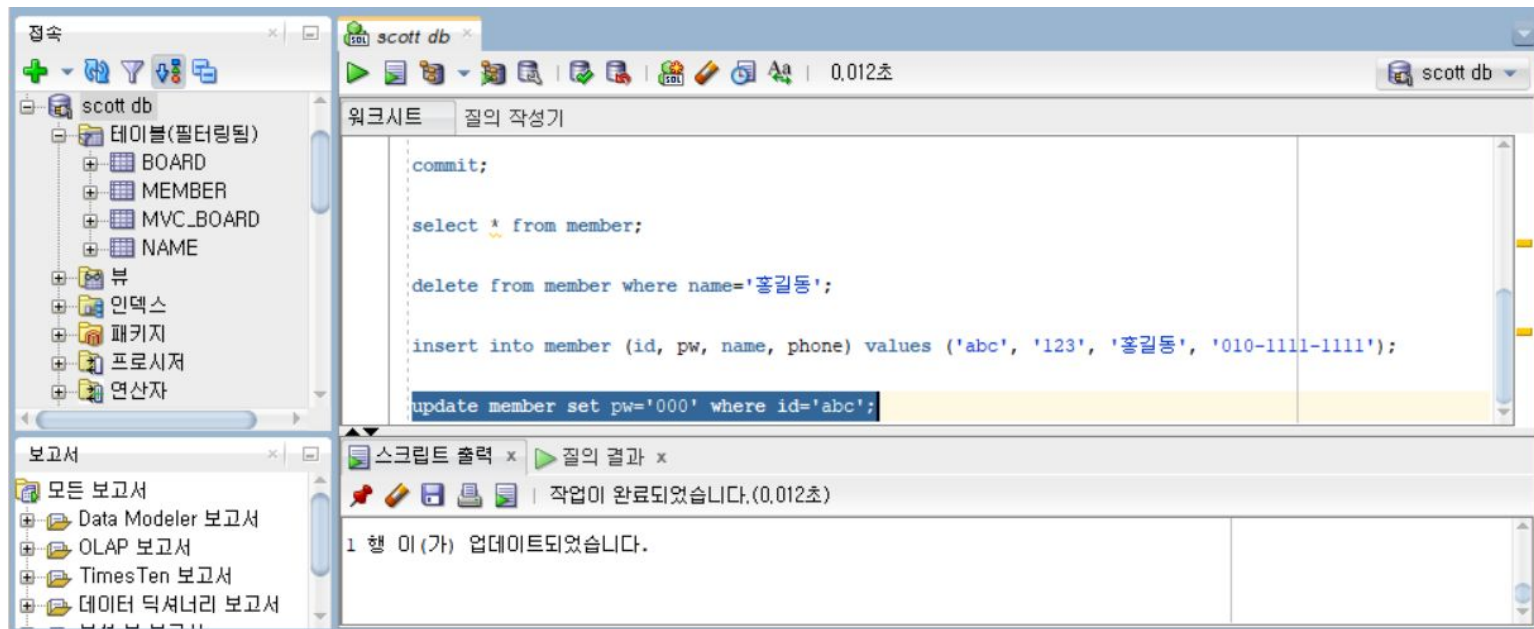
delete from 테이블이름 (조건)



데이터 변경

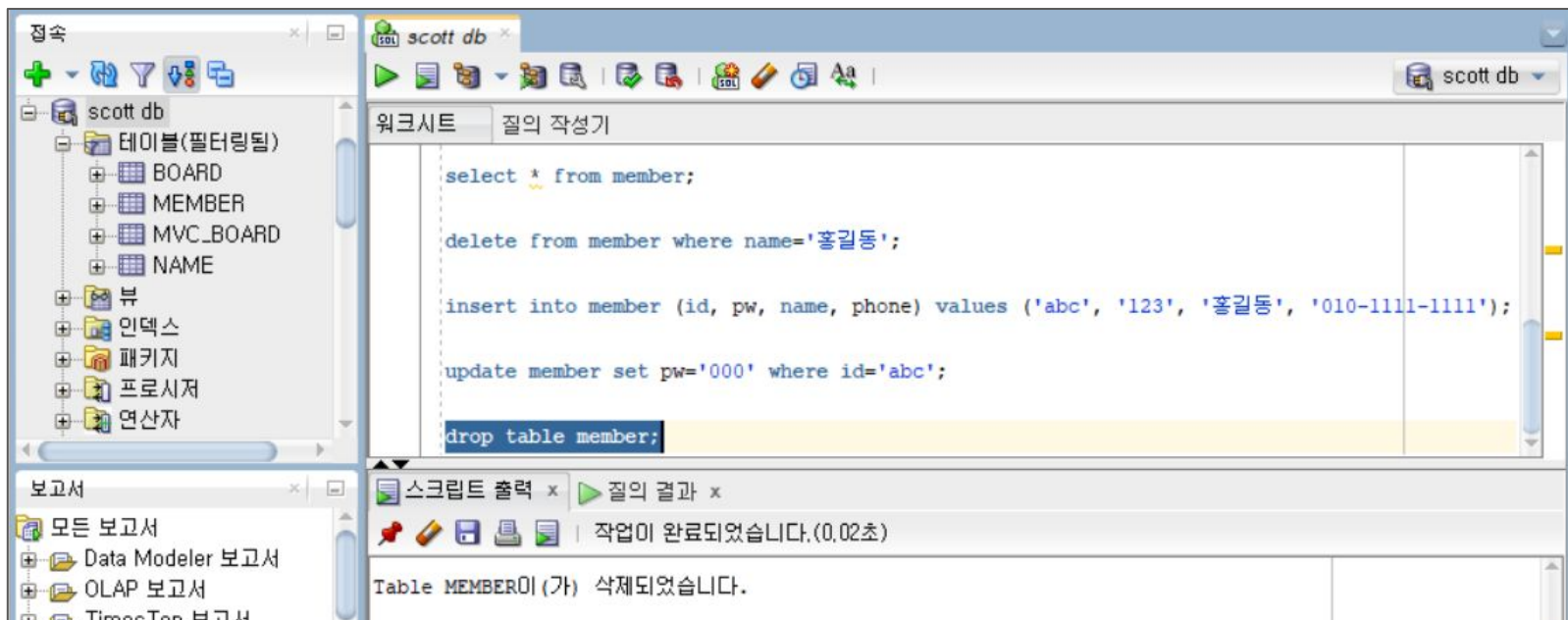
update 테이블이름 set 컬럼이름=값, 컬럼이름=값, 조건

[조건] where 컬럼이름=값



테이블 삭제

drop table 테이블이름



SQLPLUS

CMD : sqlplus

계정생성 : `create user scott identified by tiger;`
`grant connect, resource to scott;`
`show user;`
`select * from all_users;`

계정전환 : `conn scott/tiger;`

비번변경: `ALTER USER scott IDENTIFIED BY "tiger";`

계정삭제: `DROP USER scott;`

권한: `GRANT DELETE, INSERT, SELECT, UPDATE ON scott_db TO scott;`

요약

```
create table 테이블명 (컬럼명 자료형);  
select * from tab;  
insert into 테이블이름(컬럼이름, 컬럼이름, ..... ) values (데이터, 데이터, ....);  
select 컬럼이름 from 테이블이름;  
delete from 테이블이름 (조건);  
update 테이블이름 set 컬럼이름=값, 컬럼이름=값, .... 조건;  
    [조건] where 컬럼이름=값  
drop table 테이블이름;  
  
commit;
```



JDBC : SQL문을 실행하여 데이터를 관리하기 위한 JAVA API

오라클 DB 설치 후 만들어진 Oracle용 JDBC 를 사용

현재 프로젝트의 jdk 버전을 1.8 로 설정

- C:\oraclexe\app\oracle\product\11.2.0\server\jdbc\lib\ojdbc6_g.jar

rt.jar 위치 확인 (이클립스-preference-classpath-..확인)

- ojdbc6_g.jar 를 rt.jar 있는 디렉토리 ..\lib\ext 디렉토리에 복사
- ojdbc6_g.jar 를 현재 프로젝트의 ..\WEB-INF\lib 디렉토리에 복사

JDBC 드라이버 로드

DriverManager

`Class.forName("oracle.jdbc.driver.OracleDriver");`
: 메모리에 `OracleDriver`가 로드 됩니다.

데이터베이스 연결

Connection

`DriverManager.getConnection`
(JDBC URL, 계정아이디, 비밀번호);
: `Connection`객체 생성 합니다.

SQL문 실행

Statement

`connection.createStatement();`
: `Statement`객체를 통해 SQL문이 실행 됩니다.

데이터베이스 연결 해제

ResultSet

`statement.executeQuery(), statement.executeUpdate()`
: SQL문의 결과값을 `ResultSet`객체로 받습니다.

<%!

Connection connection;

Statement statement;

ResultSet resultSet;

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

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

String uid = "scott";

String upw = "tiger";

String query = "select * from member";

%>

jsp_db102

<%

try{

```
Class.forName(driver);
connection = DriverManager.getConnection(url, uid, upw);
statement = connection.createStatement();
resultSet = statement.executeQuery(query);
```

while(resultSet.next()){

```
String id = resultSet.getString("id");
String pw = resultSet.getString("pw");
String name = resultSet.getString("name");
String phone = resultSet.getString("phone");
```

```
out.println("아이디 : " + id + ", 비밀번호 : " + pw + ", 이름 : " + name + ", 전화번호 : " + phone + "<br />");
```

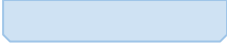
}

<%!

```
Connection connection;
Statement statement;
ResultSet resultSet;
```

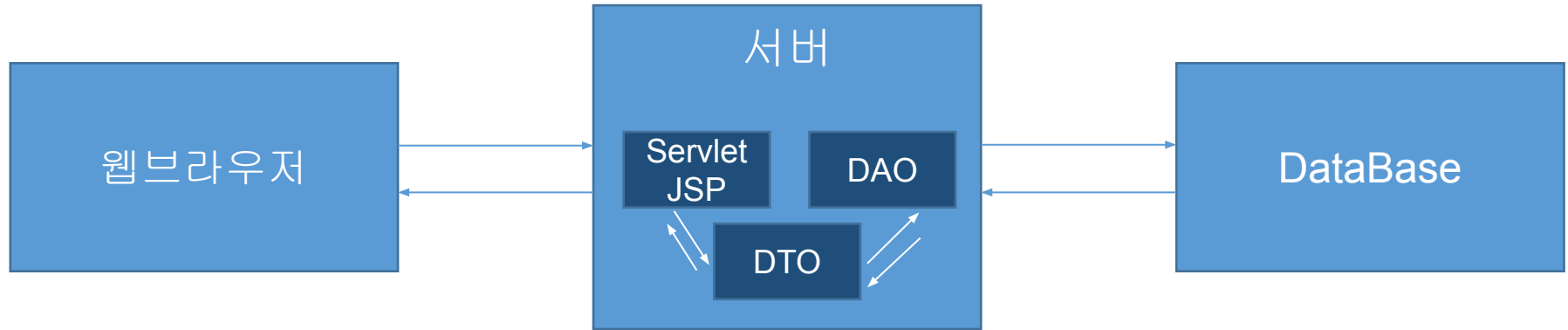
```
String driver = "oracle.jdbc.driver.OracleDriver";
String url = "jdbc:oracle:thin:@localhost:1521:xe";
String uid = "scott";
String upw = "tiger";
String query = "select * from member";
```

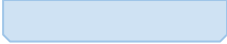
%>



DAO : Data Access Object

DTO : Data Transfer Object



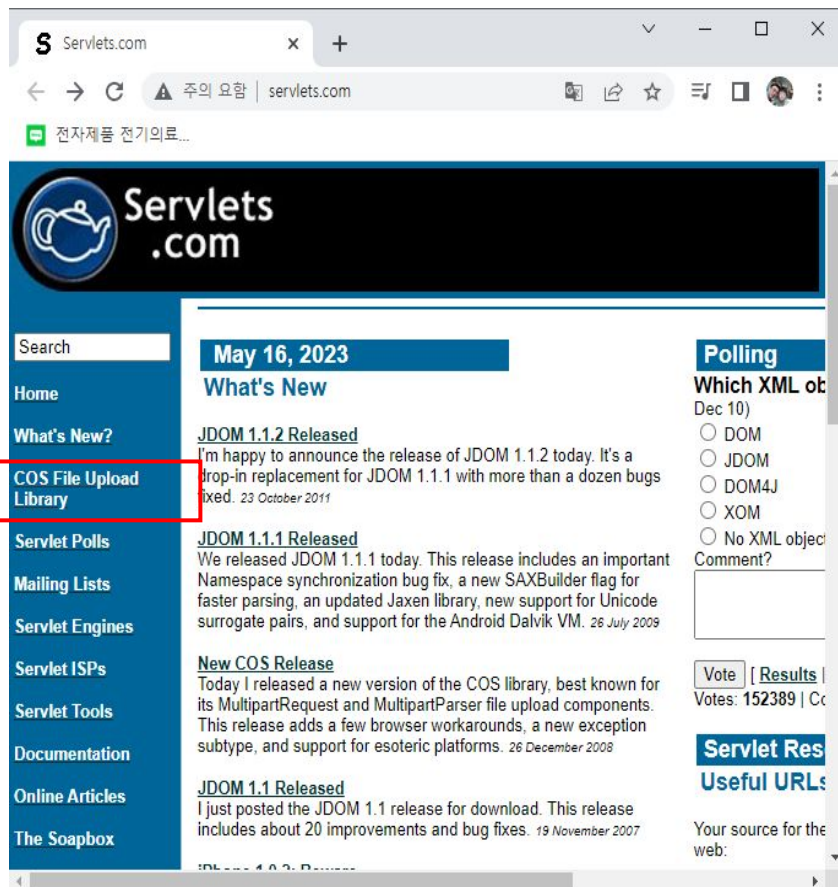


파일 업로드

www.servlets.com 접속 =>

COS(com.oreilly.servlet)

File Upload Library 클릭



Download

This is a .zip readable by "jar", newer releases are at the top.
To be notified when new versions release, [subscribe here](#).
Be sure to check out the [FAQ](#) and [Javadocs](#) below.

Version	Comments
cos-22.05.zip	<p>File upload improvements:</p> <ul style="list-style-type: none">• Modernized the Javadoc and copyrights• Added support for Servlets 2.4 and Java 5.• Added an ExceededSizeException type to make catching easier.• Added support for EBCDIC machines.• Added a workaround for browsers that send Content-Length of -1.• Added a workaround for Opera missing parameter names.

zip 다운로드

WEB-INF>lib에 복사



업로드할 폴더 생성

