

전자정부 개발 프레임워크  
**개발 환경 - DBIO(실습)**

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# 실습 개요

□ DBIO의 사용방법을 설치에서 부터 활용까지 간략하게 훑어본다.

□ 실습 순서

1. DB실행

2. Table생성

3. Datasource 설정

4. DBIO 실습

- eGovFramework Perspective 실행

- Project 생성

- SqlMapConfig 파일 생성

- SqlMap 파일 생성

- SqlMap 파일 편집

- Parameter Map 작성

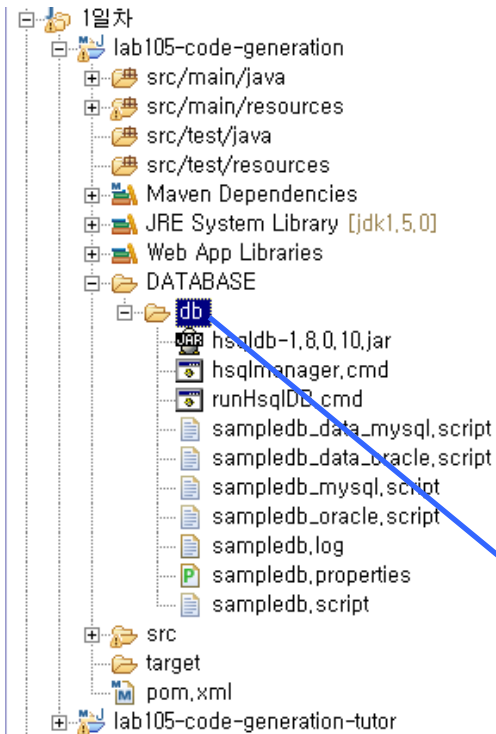
- Result Map 작성

- Query 작성

- Query 테스트

# 1. DB실행

□ 제공된 Lab의 db폴더에 있는 runHsqldb를 실행하여 DB를 실행



```
C:\WINDOWS\system32\cmd.exe

D:\wg4c\workspace\lab204-dataaccess-tutor\ddb>hsqldbmanager

D:\wg4c\workspace\lab204-dataaccess-tutor\ddb>java -cp ./hsqldb-1.8.0.10.jar org.hsqldb.util.DatabaseManager -url jdbc:hsqldb:hsql://localhost/sampledb

D:\wg4c\workspace\lab204-dataaccess-tutor\ddb>dir
D 드라이브의 볼륨: 로컬 디스크
볼륨 일련 번호: 78CE-FF82

D:\wg4c\workspace\lab204-dataaccess-tutor\ddb 디렉터리

2009-07-14 오후 02:36 <DIR> .
2009-07-14 오후 02:36 <DIR> ..
2009-07-14 오후 02:33 706,710 hsqldb-1.8.0.10.jar
2009-07-14 오후 02:33 107 hsqldbmanager.cmd
2009-07-14 오후 02:33 90 runHsqldb.cmd
2009-07-14 오후 02:53 683 sampledb.log
2009-07-14 오후 02:36 437 sampledb.properties
2009-07-14 오후 02:36 105 sampledb.script
6개 파일 708,132 바이트
2개 디렉터리 12,291,293,184 바이트 남음

D:\wg4c\workspace\lab204-dataaccess-tutor\ddb>runHsqldb_
```

## 2. 테이블 생성

### □ HSQL Manager를 실행하여 Table과 데이터를 생성

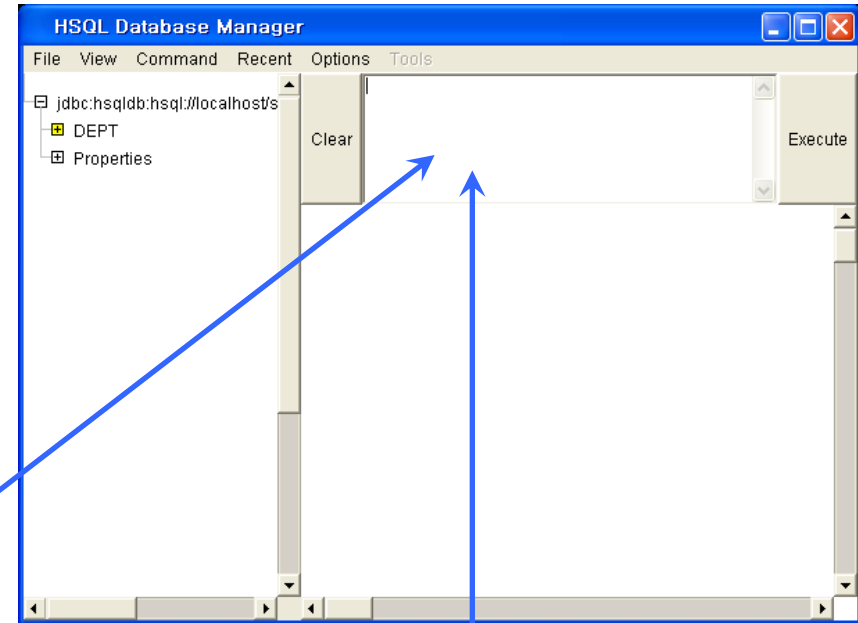
```
C:\WINDOWS\system32\cmd.exe
D:\wg4c\workspace\lab204-dataaccess-tutor\wdb>hsqldbmanager
D:\wg4c\workspace\lab204-dataaccess-tutor\wdb>java -cp ./hsqldb-1.8.0.10.jar org.hsqldb.util.DatabaseManager -url jdbc:hsqldb:hsq://localhost/sampledb
D:\wg4c\workspace\lab204-dataaccess-tutor\wdb>dir
D 드라이브의 볼륨: 로컬 디스크
볼륨 일련 번호: 78CE-FF82

D:\wg4c\workspace\lab204-dataaccess-tutor\wdb 디렉터리

2009-07-14 오후 02:36 <DIR> .
2009-07-14 오후 02:36 <DIR> ..
2009-07-14 오후 02:33 706,710 hsqldb-1.8.0.10.jar
2009-07-14 오후 02:33 107 hsqldbmanager.cmd
2009-07-14 오후 02:33 90 runHsqLDB.cmd
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2009-07-14 오후 02:36 437 sampledb.properties
2009-07-14 오후 02:36 105 sampledb.script

6개 파일 708,132 바이트
2개 디렉터리 12,291,293,184 바이트 남음

D:\wg4c\workspace\lab204-dataaccess-tutor\wdb>hsqldbmanager
```



#### 1) 테이블 생성

```
CREATE TABLE dept (  
    dept_no    NUMERIC(2) NOT NULL,  
    dept_name  VARCHAR(14),  
    loc        VARCHAR(13),  
);
```

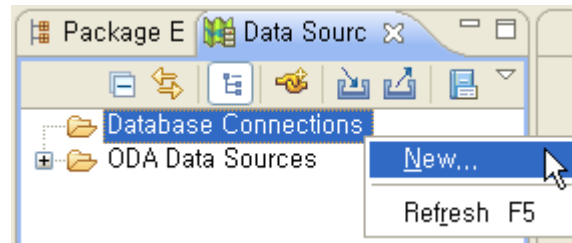
#### 2) 데이터 생성

```
INSERT INTO dept VALUES (10,'ACCOUNTING','NEW YORK');  
INSERT INTO dept VALUES (20,'RESEARCH','DALLAS');  
INSERT INTO dept VALUES (30,'SALES','CHICAGO');  
INSERT INTO dept VALUES (40,'OPERATIONS','BOSTON');
```

### 3. DataBase 설정(1/4)

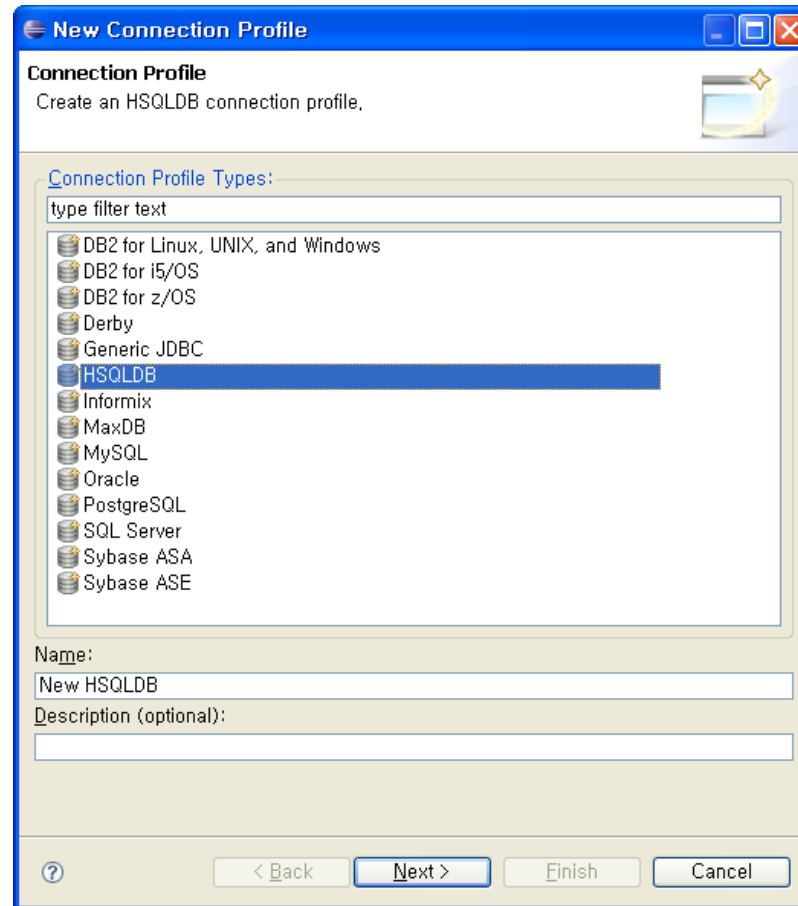
#### □ Datasource 등록

- Data Source 탭 선택
- 컨텍스트 메뉴(New...) 선택



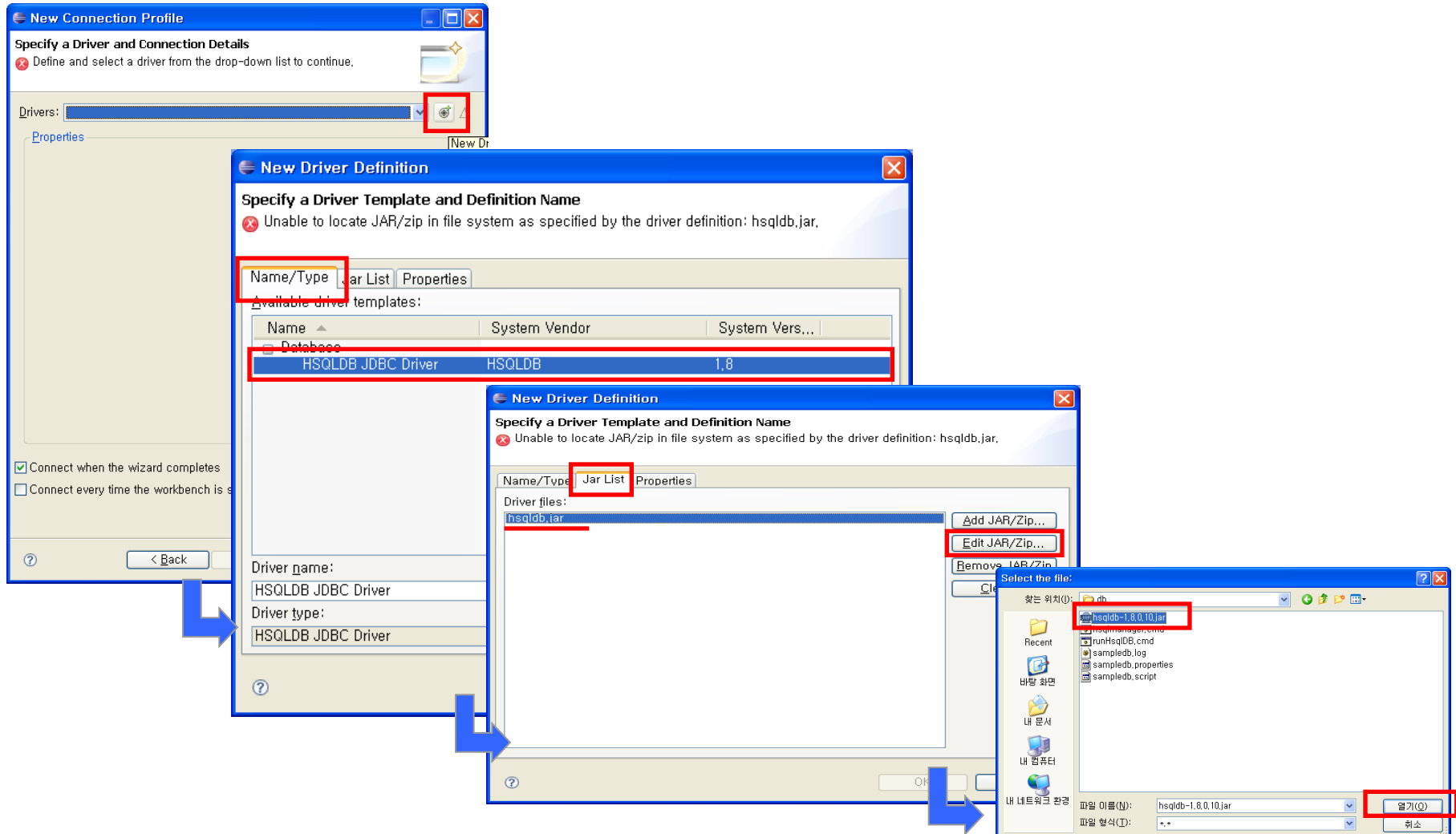
### 3. DataBase 설치(2/4)

- Database 선택 [ HSQLDB]
- Name 입력
- Description 입력



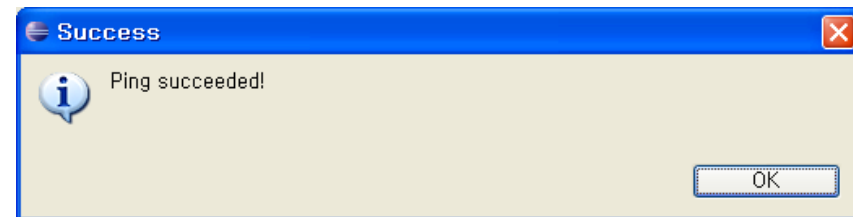
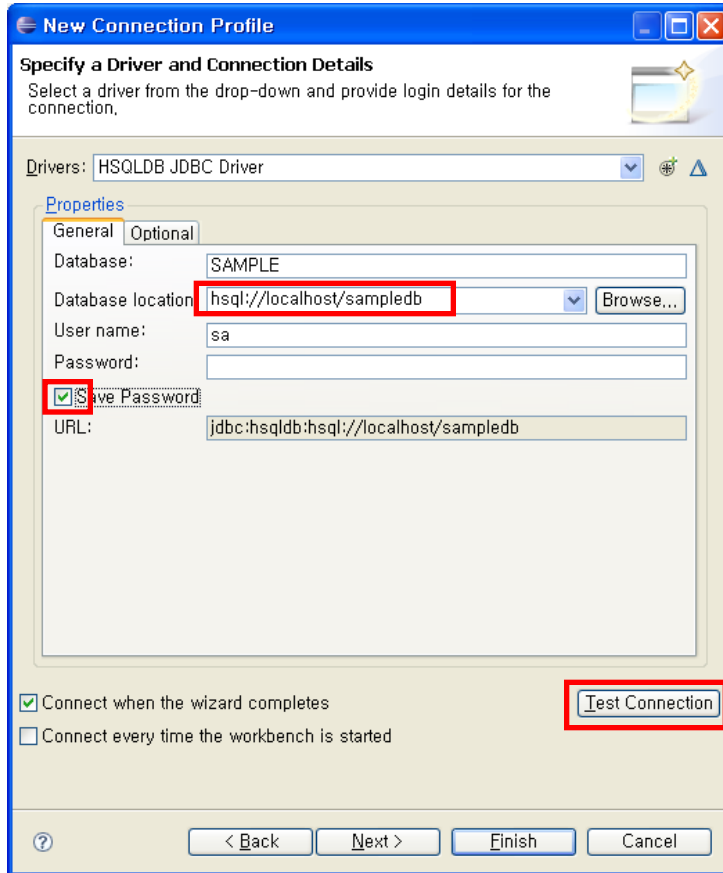
### 3. DataBase 설정(3/4)

#### - HSQLDB Driver 설정



### 3. DataBase 설정 (4/4)

- DataBase 설정

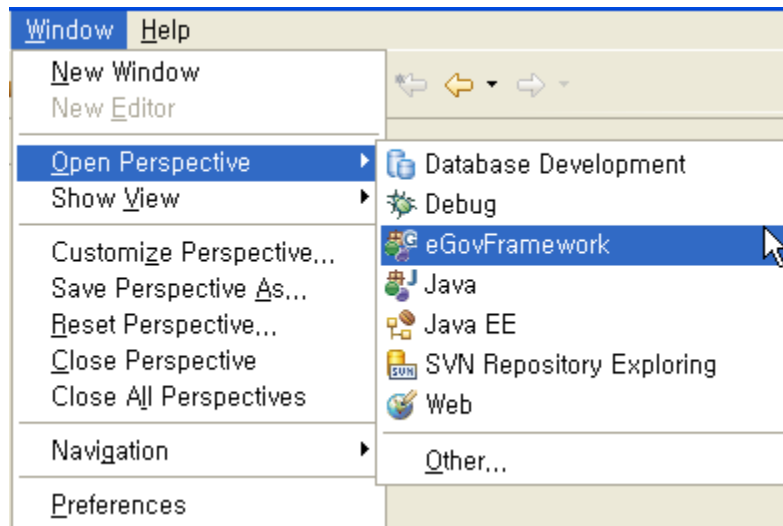




## 4. DBIO 실습 (1/16)

### ❑ eGovFramework Perspective 실행

- Eclipse Menu > Window > Open Perspective > eGovFramework

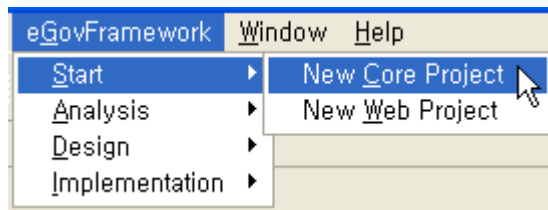


## 4. DBIO 실습 (2/16)

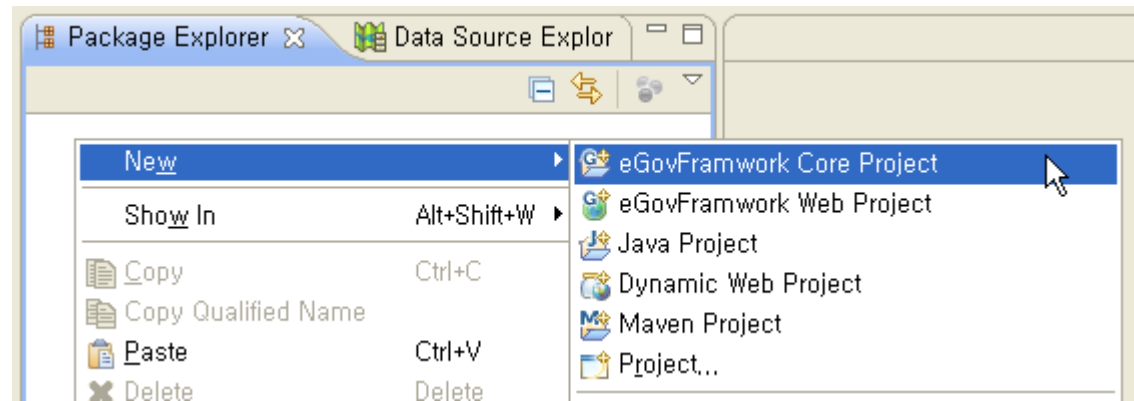
### □ Project 생성

- 방법1 : Eclipse Menu > eGovFramework > Start > New ... 선택
- 방법2 : Package Explorer > 마우스 오른쪽 버튼 클릭 > New  
> eGovFramework ... 선택

방법 1

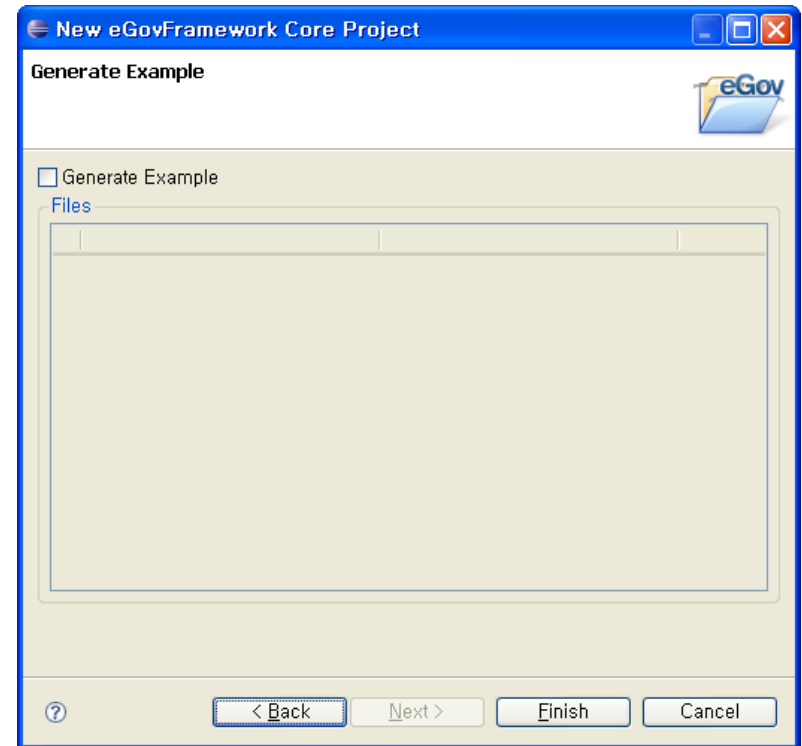
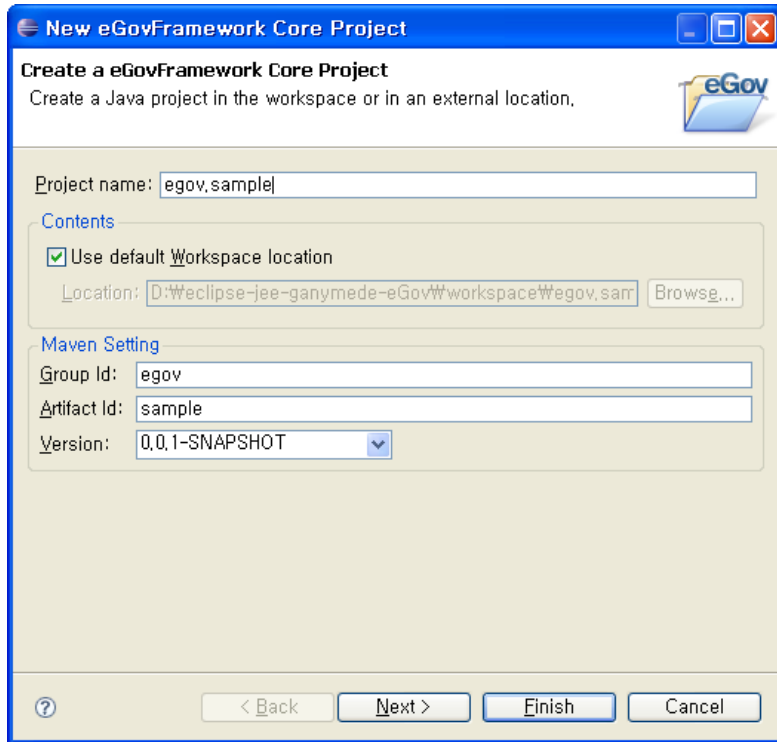


방법2



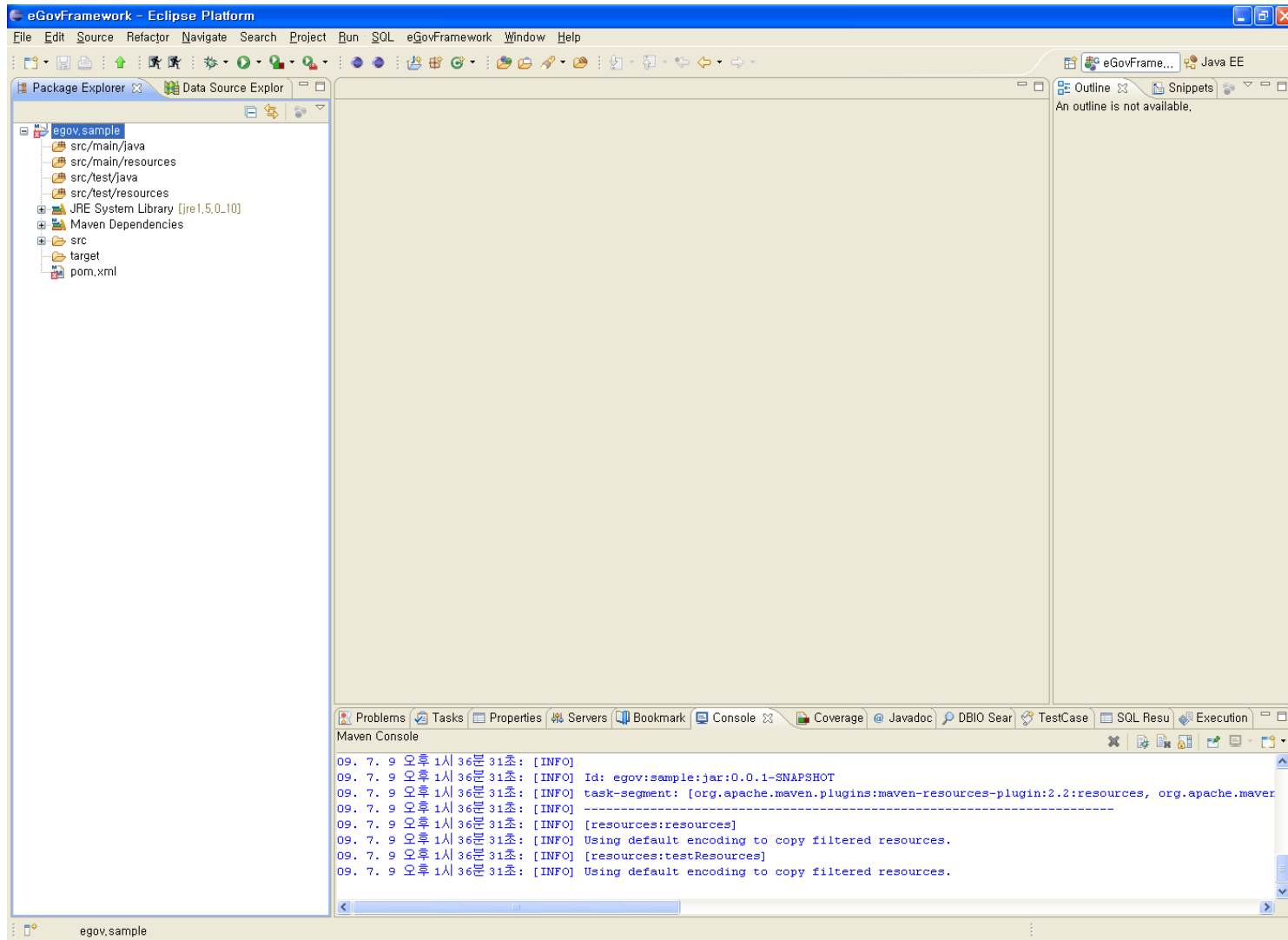
실습예제로 eGovFramework Core Project 선택

## 4. DBIO 실습 (3/16)



# 4. DBIO 실습 (4/16)

- 결과

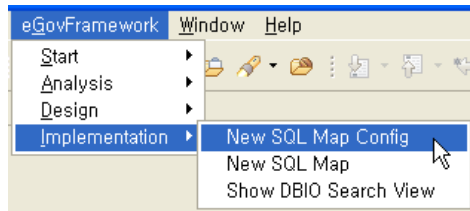


## 4. DBIO 실습 (5/16)

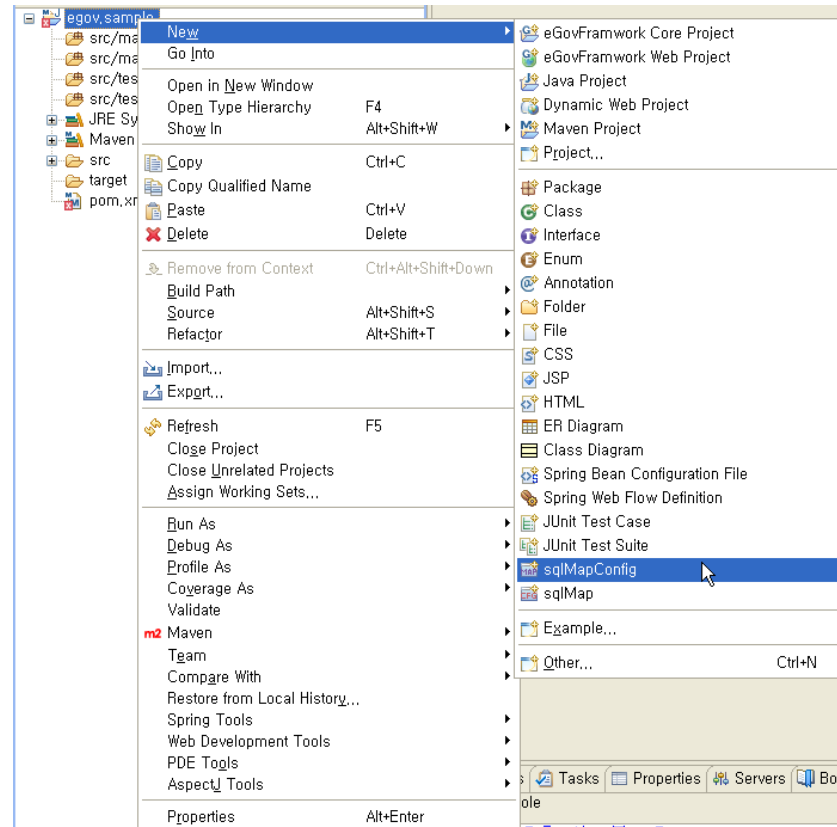
### □ SqlMapConfig 파일 생성

- 방법1 : Eclipse Menu > eGovFramework > Implementation > New Sql Map Config
- 방법2 : Package Explorer > 마우스 오른쪽 버튼 클릭 > New > sqlMapConfig

방법 1

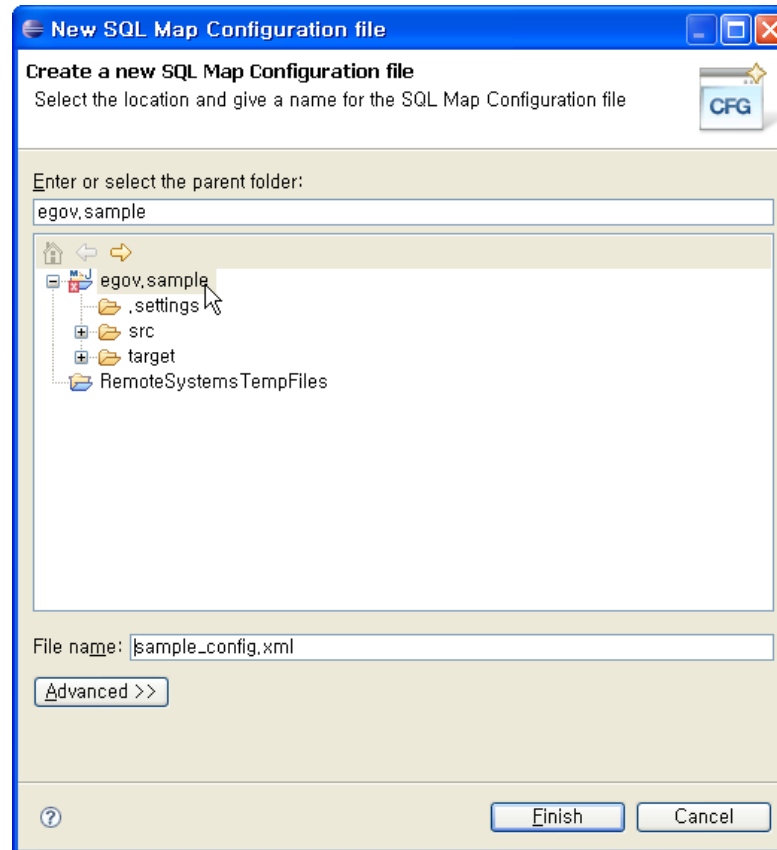


방법2



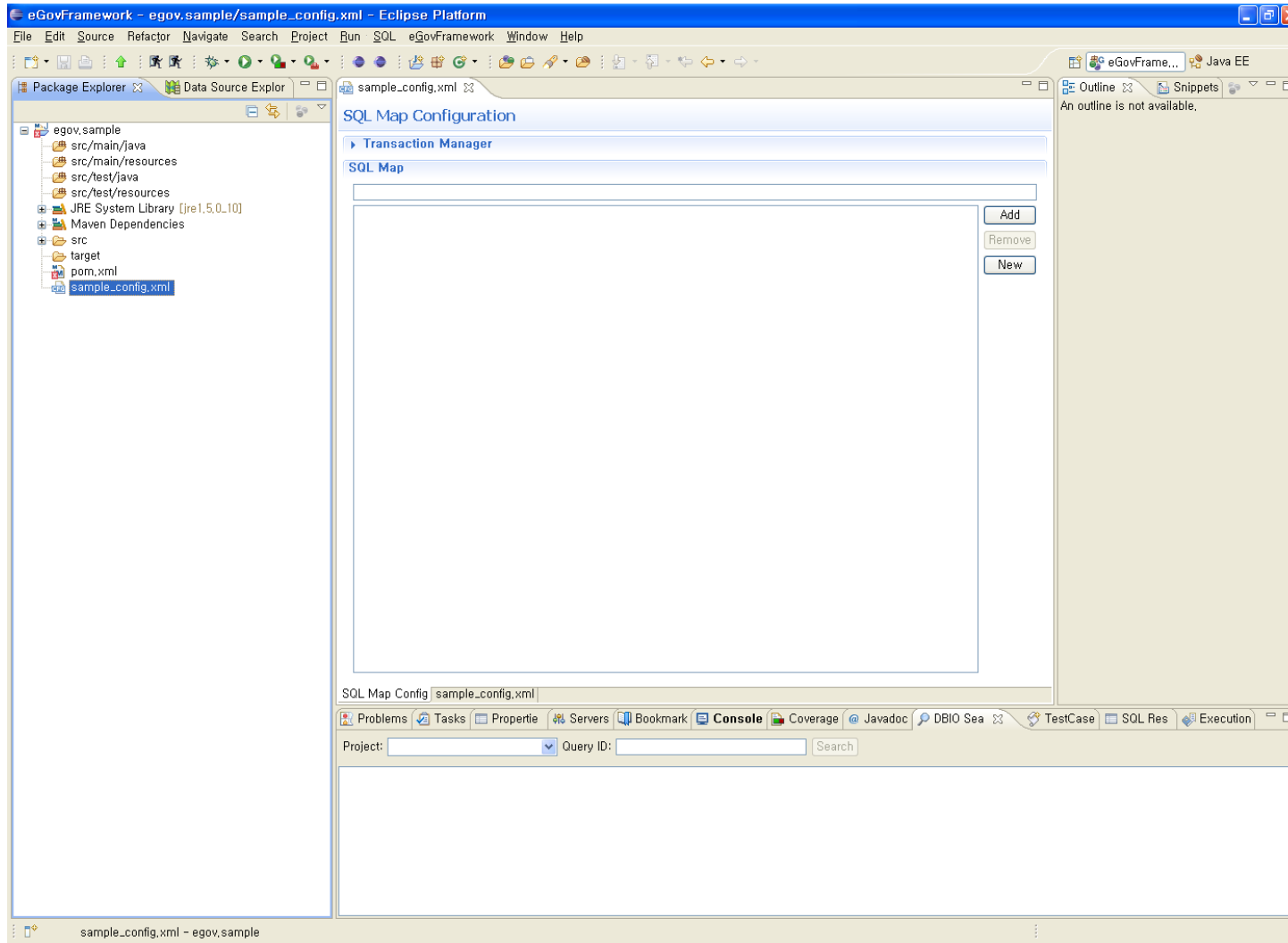
## 4. DBIO 실습 (6/16)

- 파일 저장 folder 선택
- 파일명 입력
- Finish 버튼 클릭



# 4. DBIO 실습 (7/16)

## - 결과화면(SqlMapConfig Editor)

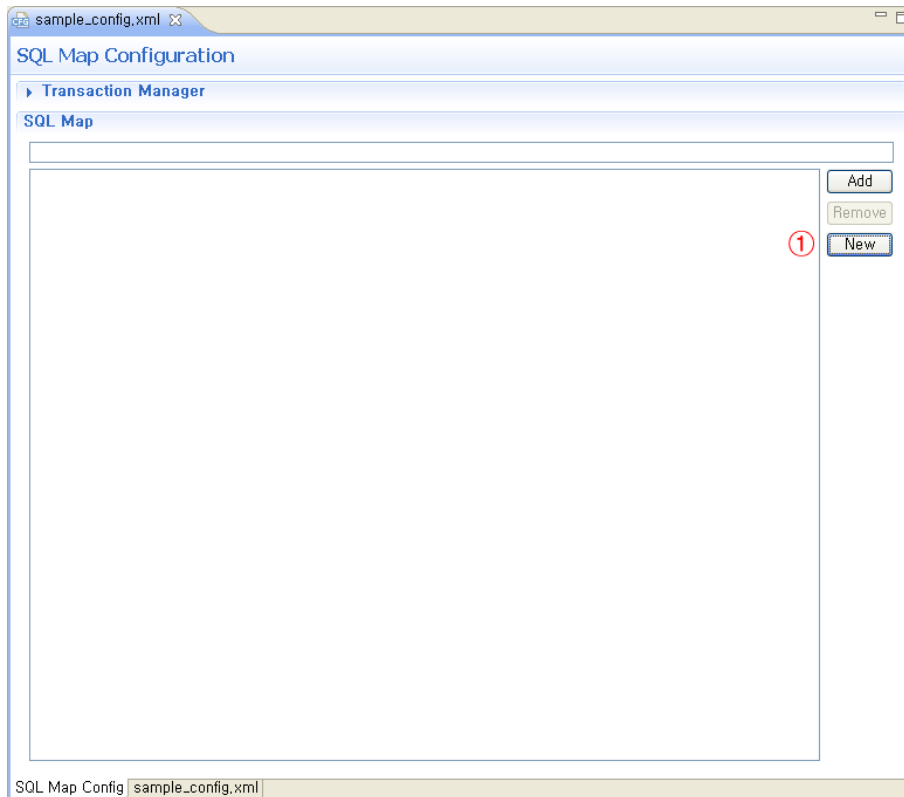


## 4. DBIO 실습 (8/16)

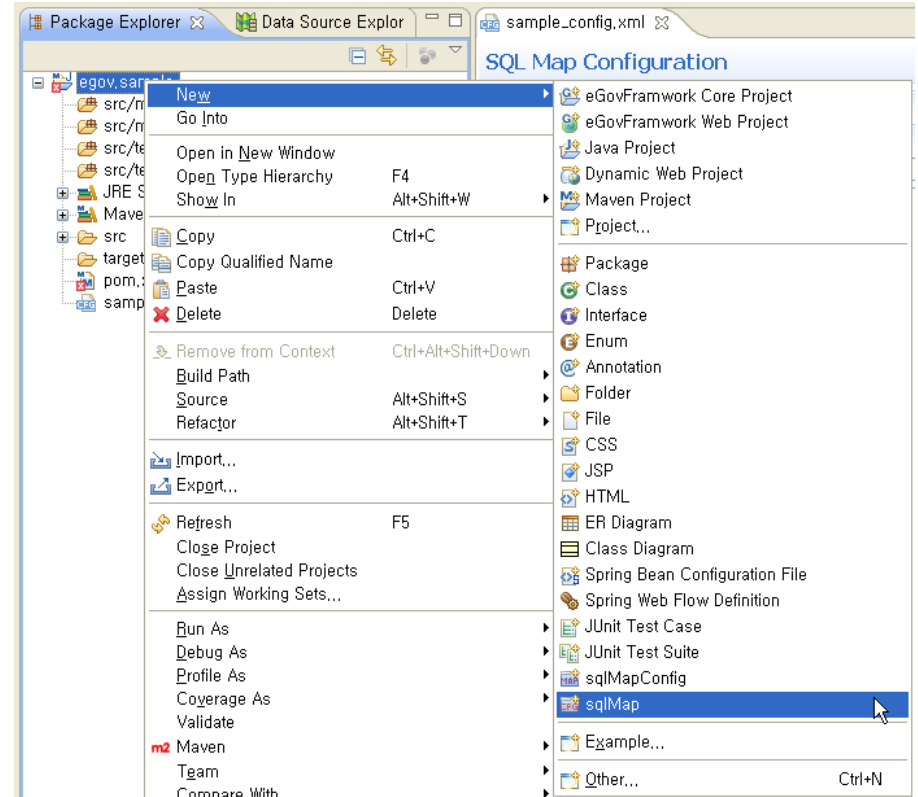
### □ SqlMap 파일 생성

- 방법1 : SqlMapConfig Editor > New 버튼 클릭 (파일 생성과 동시에 SQL Map 목록에 추가)
- 방법2 : Package Explorer > 마우스 오른쪽 버튼 클릭 > New > sqlMap

#### 방법1



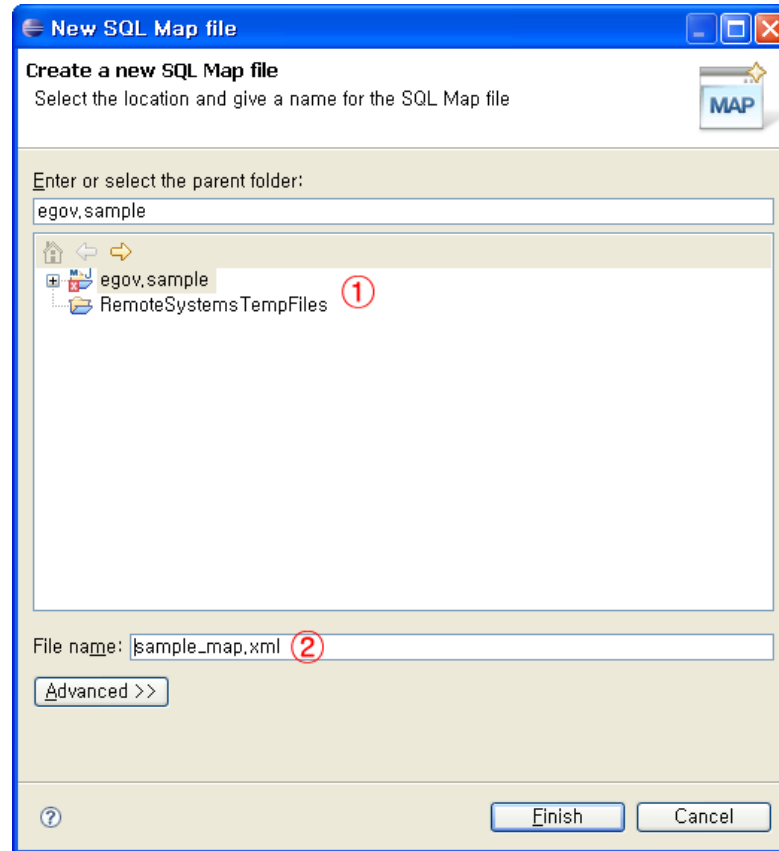
#### 방법2





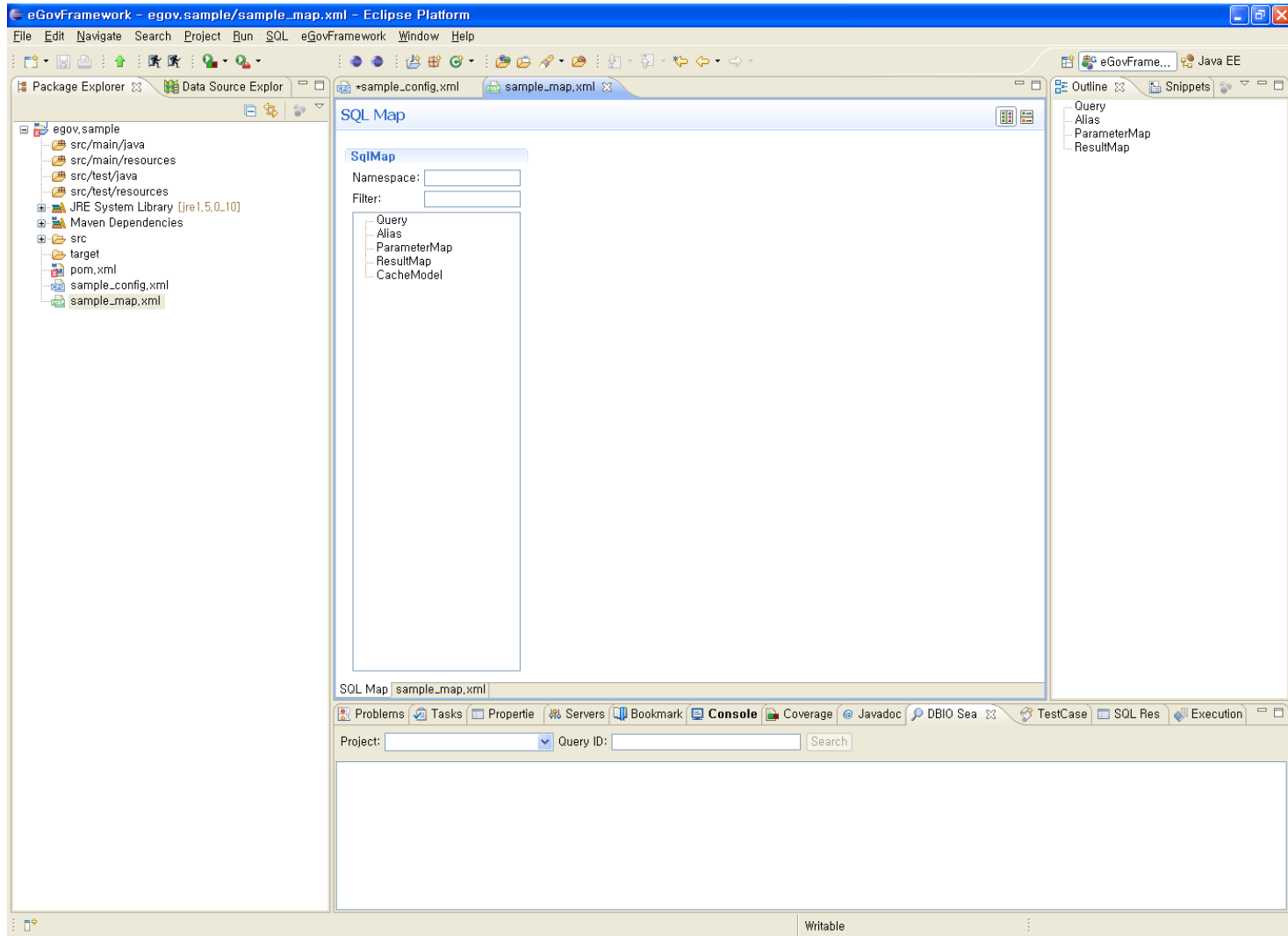
## 4. DBIO 실습 (9/16)

- 파일 저장 폴더 선택
- 파일명 입력



# 4. DBIO 실습 (10/16)

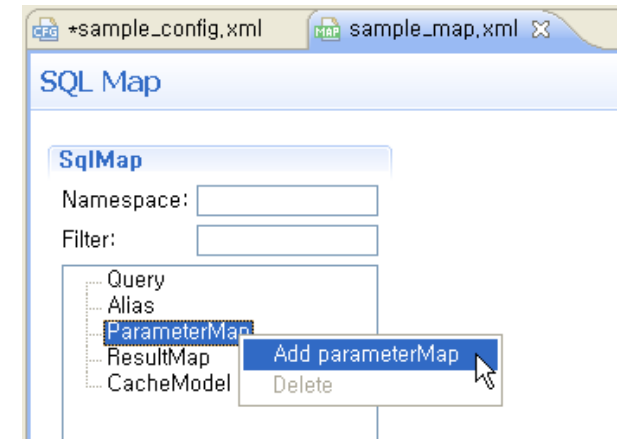
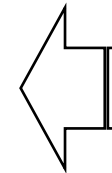
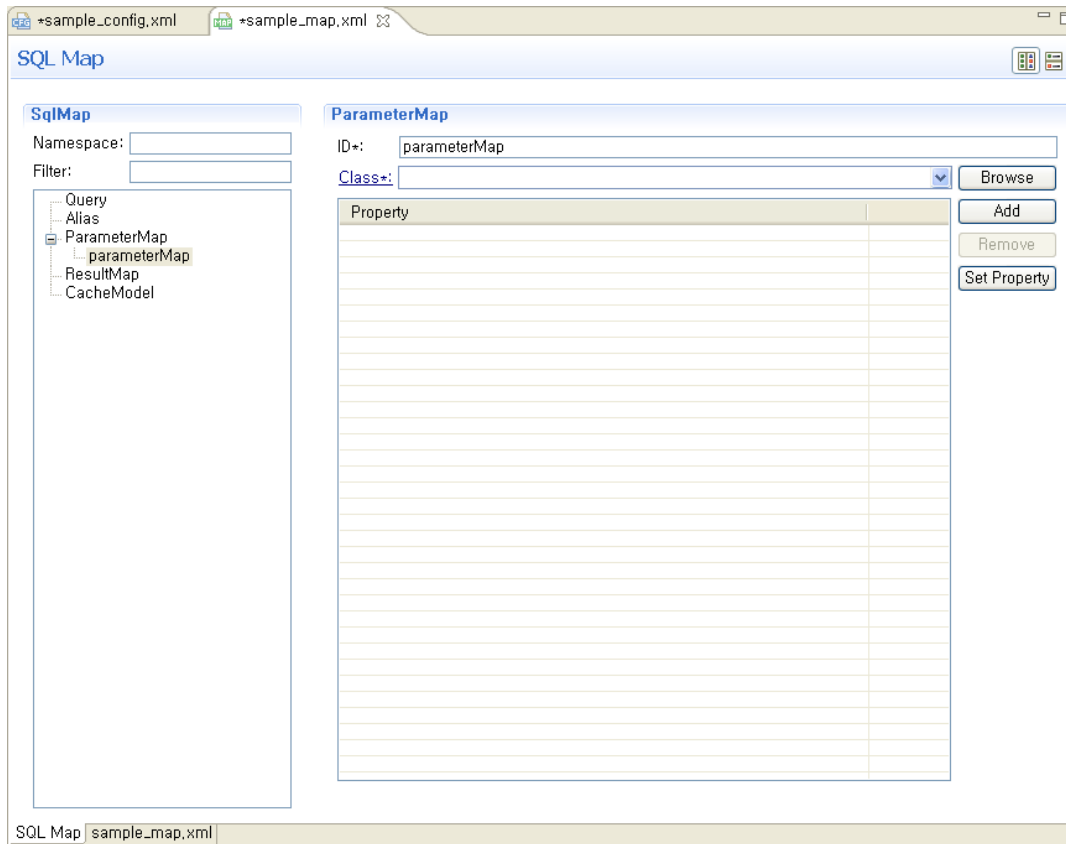
## - 결과 화면(SqlMap Editor)



## 4. DBIO 실습 (11/16)

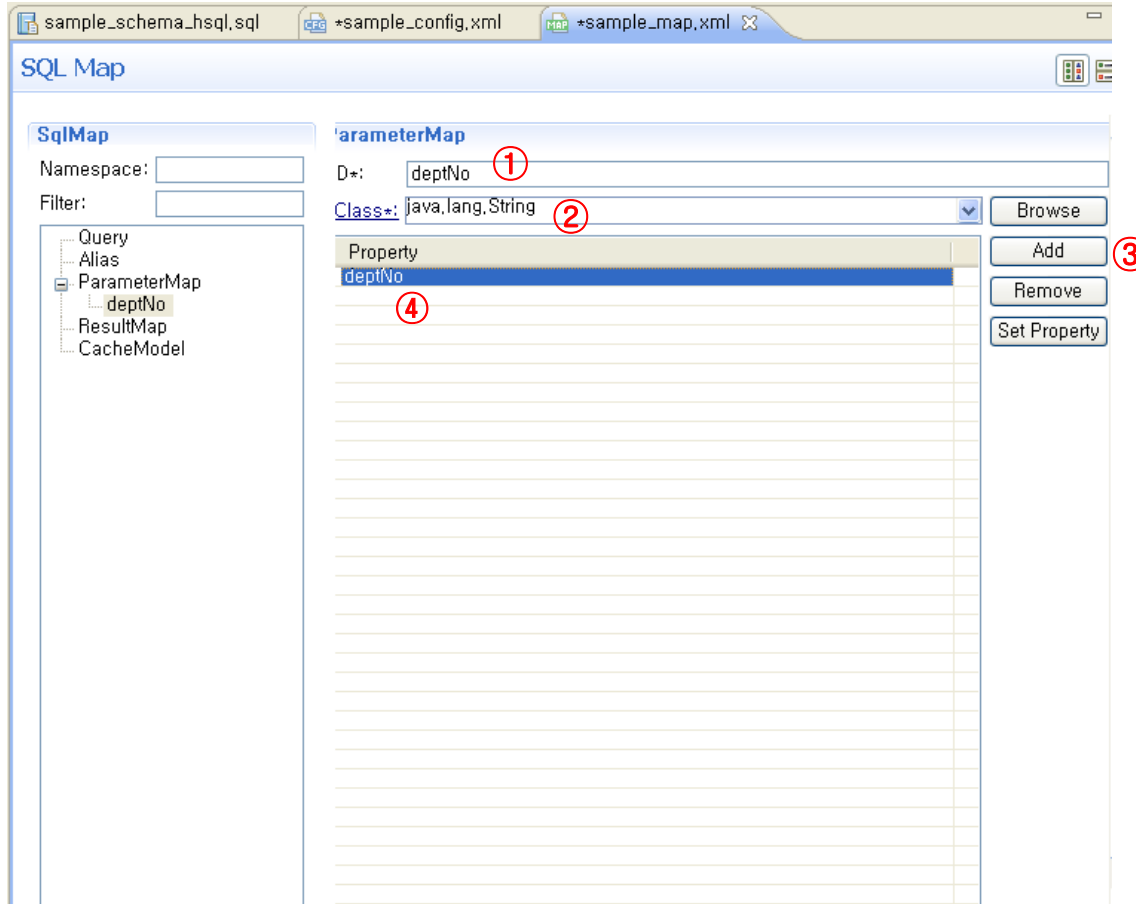
### □ Parameter Map 작성

- SqlMap Editor > SqlMap Tree > ParameterMap Branch 선택 > 마우스 오른 버튼 > Add parameterMap 메뉴



## 4. DBIO 실습 (12/16)

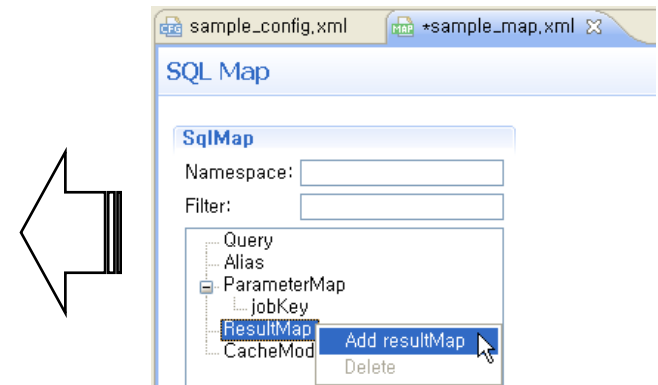
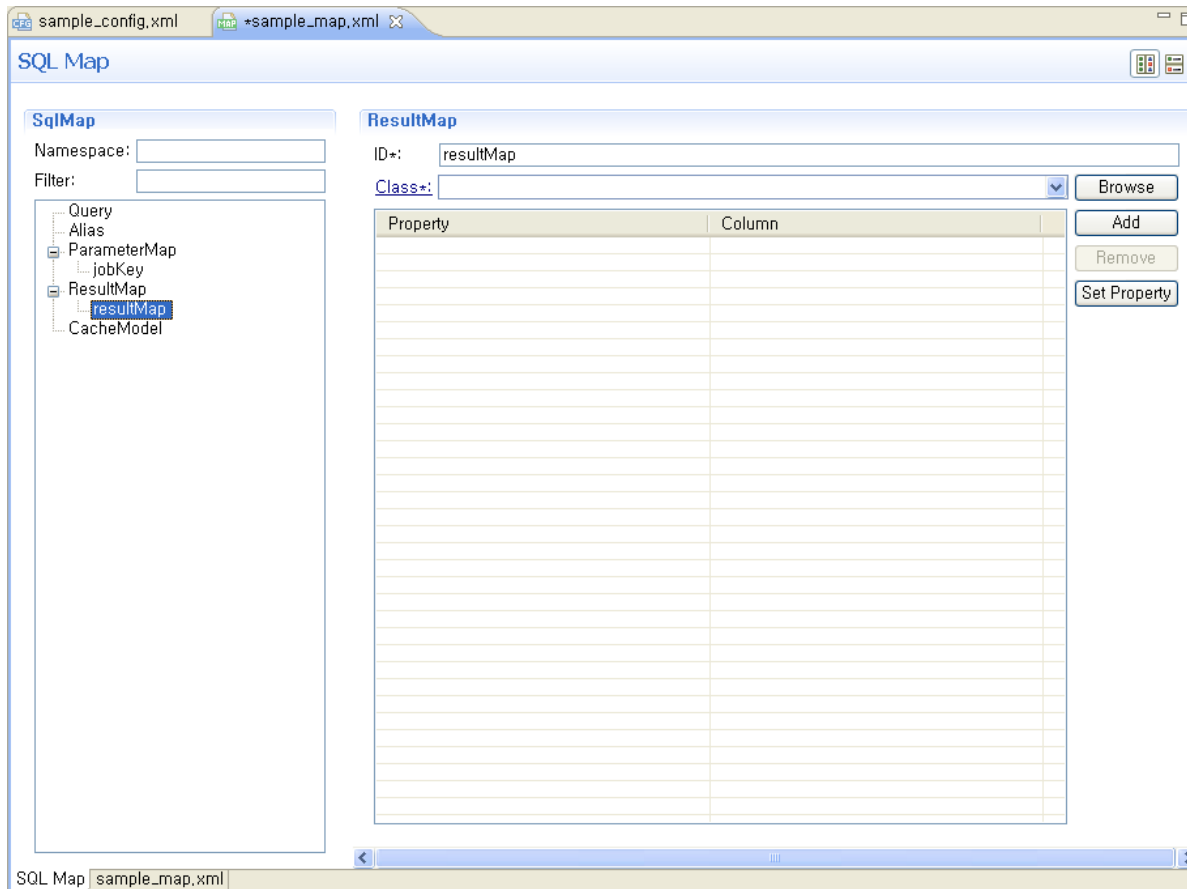
- ID 변경
- Class 선택
- 매개변수 추가



## 4. DBIO 실습 (13/16)

### □ Result Map 작성

- SqlMap Editor > SqlMap Tree > ResultMap Branch 선택 > 마우스 오른 버튼 > Add resultMap 메뉴



## 4. DBIO 실습 (14/16)

- ID 변경
- Class 선택
- 속성 추가

The screenshot shows the SQL Map IDE interface with the following components:

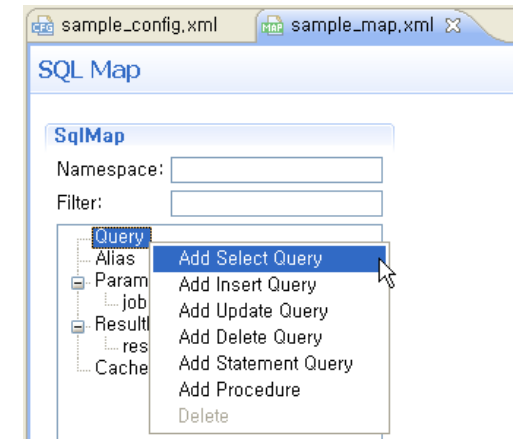
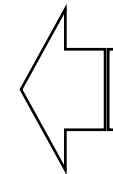
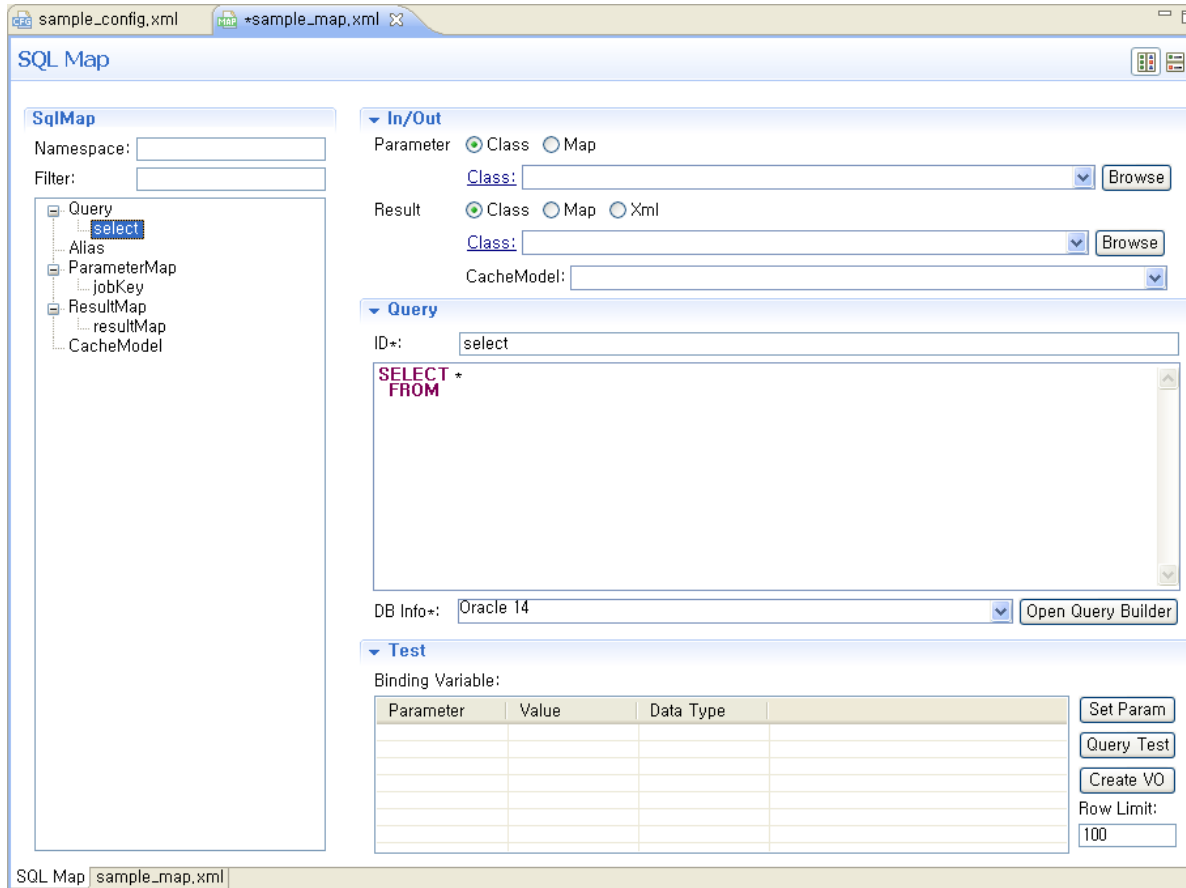
- SqlMap** section: Namespace and Filter input fields.
- ResultMap** section: ID\* field set to "resultMap" (1), Class\* dropdown set to "java.lang.String" (2), and an "Add" button (3).
- Property Table**: A table with columns "Property" and "Column". The first row contains "deptName" (4) and "DEPT\_NO".
- Buttons**: "Browse", "Add", "Remove", and "Set Property" buttons.
- Left Panel**: A tree view showing a project structure with folders for "Query", "ParameterMap", "ResultMap", and "CacheModel". The "ResultMap" folder is expanded, showing a "resultMap" sub-item.

Class 항목에 속성을 가진 Class를 선택할 경우 [Set Property] 버튼을 눌러 Property 테이블에 자동으로 속성을 채운다.

# 4. DBIO 실습 (15/16)

## □ Query 작성

- SqlMap Editor > SqlMap Tree > Query Branch 선택 > 마우스 오른 버튼 > Add Select Query 메뉴



## 4. DBIO 실습 (16/16)

- ID 변경
- Query 작성
- Parameter 입력
- Result 입력

The screenshot shows the SQL Map IDE interface with the following configuration:

- SqlMap**: Namespace and Filter fields are empty.
- In/Out**:
  - Parameter:  Class  Map (1)
  - Map: deptNo
  - Result:  Class  Map  Xml (2)
  - Map: resultMap
  - CacheModel: (empty)
- Query**:
  - ID\*: selectDept (3)
  - SQL: `SELECT DEPT_NAME FROM DEPT WHERE DEPT_NO = #deptNo#` (4)
  - DB Info\*: New HSQLDB
  - Open Query Builder button
- Test**:
  - Binding Variable: Table with columns Parameter, Value, Data Type.
  - Buttons: Set Param, Query Test, Create VO.
  - Row Limit: 100



## 5. Query 테스트

### □ Query 테스트

- DB 선택
- 바인딩 변수 설정
- 바인딩 변수값 입력
- 테스트 실시

# 5. Query 테스트

The screenshot shows the SQL Map IDE interface with the following components:

- SqlMap**: Namespace and Filter fields.
- In/Out**: Parameter type set to **Map** with value `deptNo`. Result type set to **Map** with value `resultMap`.
- Query**: ID is `selectDept`. SQL query is `SELECT DEPT_NAME FROM DEPT WHERE DEPT_NO = #deptNo#`.
- DB Info**: Set to `New HSQLDB` (marked with a red circle 1).
- Test**: Binding Variable table with columns `Parameter`, `Value`, and `Data Type`. The row for `deptNo` has a value (marked with a red circle 3) and data type `String`. Buttons `Set Param` (2) and `Query Test` (4) are visible.
- Results**: A table showing the result `ACCOUNTING` under the column `DEPT_NAME`. A red arrow points to this result with the text **결과확인**.

테스트 가능 Query 형태는 홈페이지(<http://www.egovframe.org>)의 개발환경 가이드 참조