

전자정부 표준프레임워크 개발환경 실습교재





1.테스트 구조

1. LAB 1-1 프로젝트 생성 실습
2. LAB 1-2 Code Generation 실습
3. LAB 1-3 테스트케이스 작성 및 수행 실습
4. LAB 1-4 공통컴포넌트 생성 및 조립도구 실습
5. LAB 1-5 템플릿 프로젝트 생성 실습
6. LAB 1-6 DBIO 실습(iBatis)
7. LAB 1-7 DBIO 실습(MyBatis)

LAB 1-1 프로젝트 생성 실습(1/2)

Step 1-1-00. 구현도구 eclipse 를 실행한다.

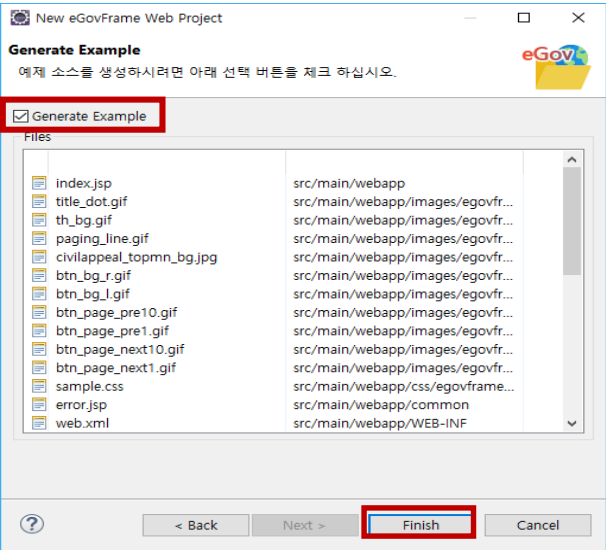
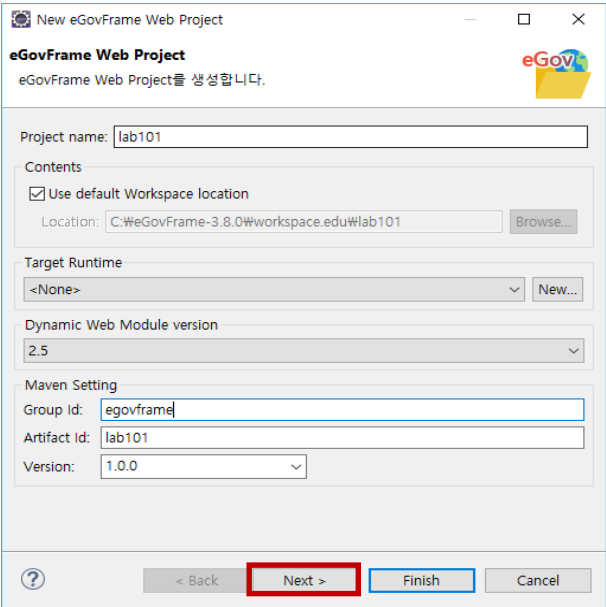
C:\WeGovFrame-3.8.0\weclipse (링크파일)

Step 1-1-01. eclipse 에서 eGovFrame>Start>New Web Project 메뉴를 선택한다.

Step 1-1-02.프로젝트 생성 위저드에서 아래와 같이 입력하고 Next 버튼을 클릭한다.

항목	입력내용	비고
Project name	lab101	수동입력
Target Runtime	<None>	자동입력
Dynamic Web Module Version	2.5	자동입력
Group Id	egovframe	수동입력
Artifact Id	lab101	자동입력
Version	1.0.0	자동입력

Step 1-1-03. Generate Example 항목을 체크하고 Finish 버튼을 클릭하여 프로젝트를 생성한다.



LAB 1-1 프로젝트 생성 실습(2/2)

Step 1-1-04. 이클립스에서 생성된 프로젝트 우 클릭 > Run As > Maven Install 을 클릭하여 Maven 을 실행한다.

Step 1-1-05. 데이터베이스를 설정을 확인한다.

(context-datasource.xml 설정 확인

```
<jdbc:embedded-database id="dataSource" type="HSQL">
```

```
<jdbc:script location="classpath:/db/sampledbsql"/>
```

```
</jdbc:embedded-database>
```

)

Step 1-1-06. 생성한 프로젝트를 실행하여 결과를 확인한다.

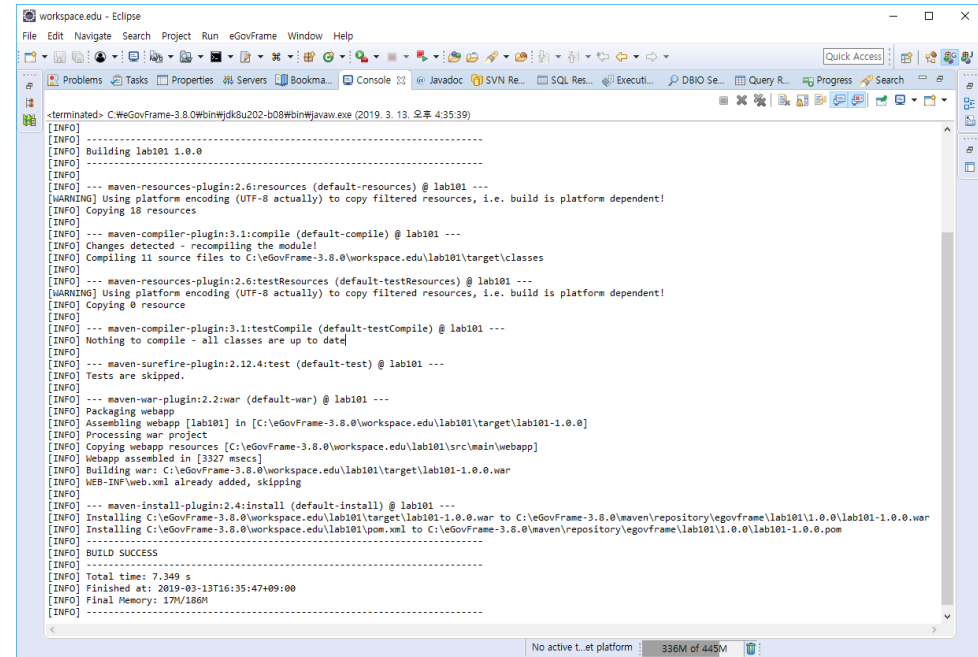
[Eclipse 이용]

lab101 우 클릭 > Run As > Run on Server 클릭 Finish 버튼 클릭

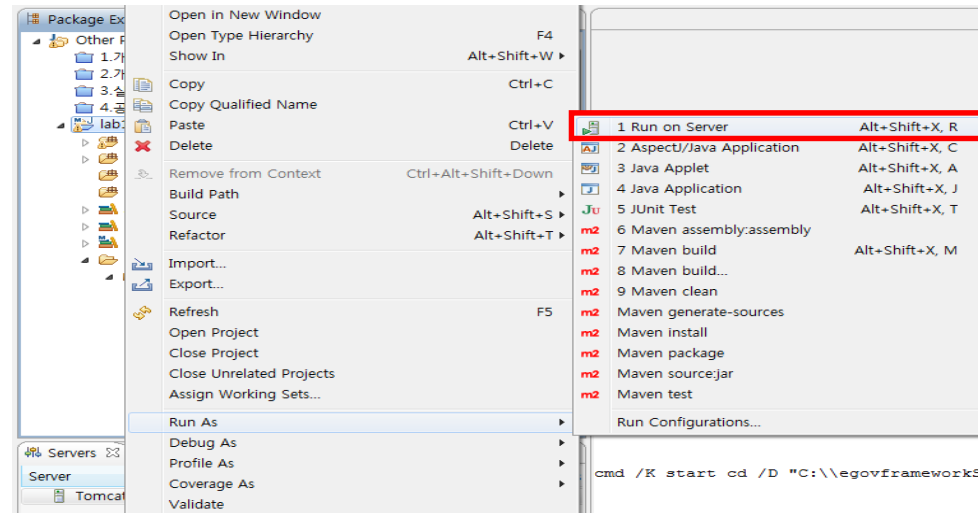
[오류발생시]

구현도구(eclipse) 재 기동, Maven Clean , Maven Install

실행 후 다시 Run On Server 실행

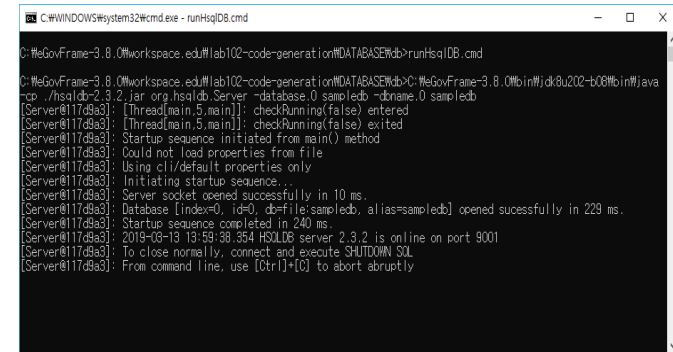


```
workspace.edu - Eclipse
File Edit Navigate Search Project Run eGovFrame Window Help
-terminated- C:\eGovFrame-3.8.0\bin\jdk8u202-b08\bin\javaw.exe (2019. 3. 13. 오후 4:35:39)
[INFO]
[INFO] Building lab101 1.0.0
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ lab101 ---
[WARNING] Using platform encoding (UTF-8 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] Copying 18 resources
[INFO]
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ lab101 ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 11 source files to C:\eGovFrame-3.8.0\workspace.edu\lab101\target\classes
[INFO]
[INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @ lab101 ---
[WARNING] Using platform encoding (UTF-8 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] Copying 0 resource
[INFO]
[INFO] --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ lab101 ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ lab101 ---
[INFO] Tests are skipped.
[INFO]
[INFO] --- maven-war-plugin:2.2:war (default-war) @ lab101 ---
[INFO] Packaging webapp
[INFO] Assembling webapp [lab101] in [C:\eGovFrame-3.8.0\workspace.edu\lab101\target\lab101-1.0.0]
[INFO] Processing war project
[INFO] Copying webapp resources [C:\eGovFrame-3.8.0\workspace.edu\lab101\src\main\webapp]
[INFO] Webapp assembled in [3327 msecs]
[INFO] Building war: C:\eGovFrame-3.8.0\workspace.edu\lab101\target\lab101-1.0.0.war
[INFO] WEB-INF\web.xml already added, skipping
[INFO]
[INFO] --- maven-install-plugin:2.4:install (default-install) @ lab101 ---
[INFO] Installing C:\eGovFrame-3.8.0\workspace.edu\lab101\target\lab101-1.0.0.war to C:\eGovFrame-3.8.0\maven\repository\egovframe\lab101\1.0.0\lab101-1.0.0.war
[INFO] Installing C:\eGovFrame-3.8.0\workspace.edu\lab101\pom.xml to C:\eGovFrame-3.8.0\maven\repository\egovframe\lab101\1.0.0\lab101-1.0.0.pom
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 7.349 s
[INFO] Finished at: 2019-03-13T16:35:47+09:00
[INFO] Final Memory: 17M/186M
[INFO]
```



LAB 1-2 Code Generation 실습(1/5)

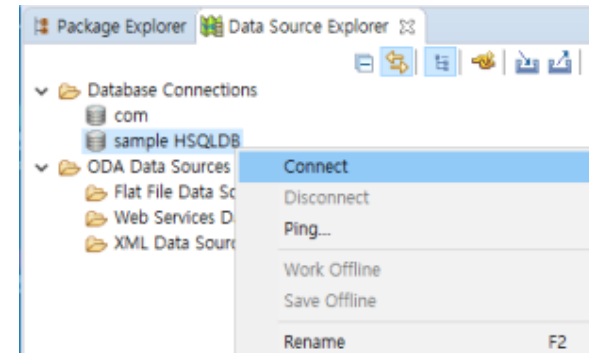
Step 1-2-01. lab102-code-generation 프로젝트를 오픈한다.



```
C:\Windows\system32\cmd.exe - runHsqlDB.cmd
C:\eGovFrame-3.8.0\workspace\edu\lab102-code-generation\DATABASEdb>runHsqlDB.cmd
C:\eGovFrame-3.8.0\workspace\edu\lab102-code-generation\DATABASEdb>C:\eGovFrame-3.8.0\bin\jdk8u202-b08\bin\java
-cp ./hsqldb-2.3.2.jar org.hsqldb.Server -database.0 sampledb -dbname.0 sampledb
[Server@0117d8a3]: [Thread:main.5.main]: checkRunning(false) entered
[Server@0117d8a3]: [Thread:main.5.main]: checkRunning(false) exited
[Server@0117d8a3]: Startup sequence initiated from main() method
[Server@0117d8a3]: Could not load properties from file
[Server@0117d8a3]: Using cli/default properties only
[Server@0117d8a3]: Initiating startup sequence...
[Server@0117d8a3]: Server socket opened successfully in 10 ms.
[Server@0117d8a3]: Database [index=0, id=0, db=file:sampledb, alias=sampledb] opened successfully in 229 ms.
[Server@0117d8a3]: Startup sequence completed in 240 ms.
[Server@0117d8a3]: 2018-08-18 19:59:38.354 HSQLDB server 2.3.2 is online on port 9001
[Server@0117d8a3]: to close normally, connect and execute SHUTDOWN SQL
[Server@0117d8a3]: From command line, use [Ctrl]+[C] to abort abruptly
```

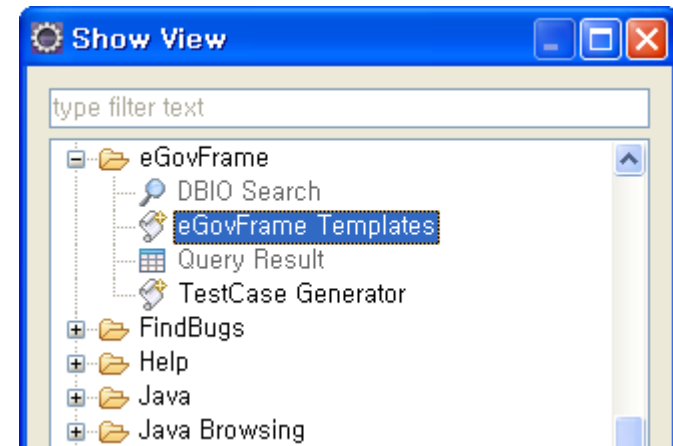
Step 1-2-02. Package Explorer에서 생성된 lab102-code-generation 의 데이터베이스를 실행한다.

(DATABASE > db 마우스우클릭 path tools > Command Line Shell 선택, 커맨드 창에서 runHsqlDB.cmd 실행)



Step 1-2-03. Data Source Explorer 에서 HSQLDB에 Connect 한다.

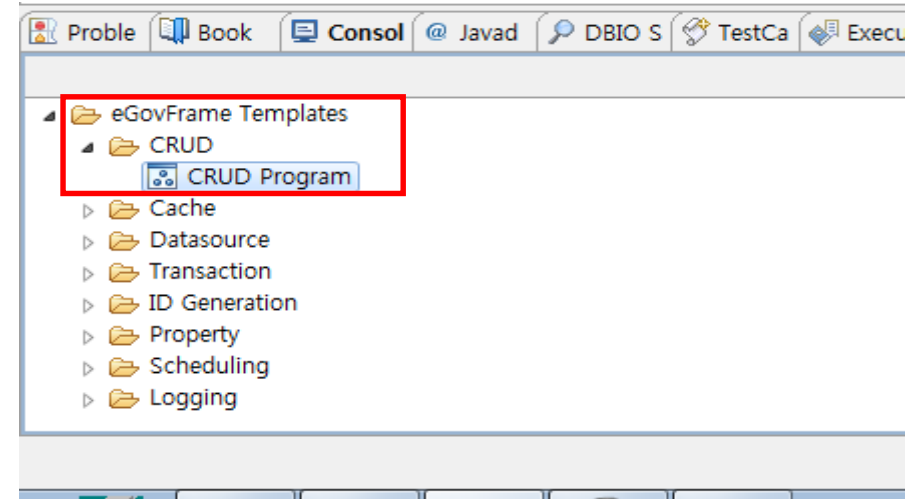
Step 1-2-04. 이클립스 Window > Show View > Other... 를 선택하여 Show View 창을 연다.



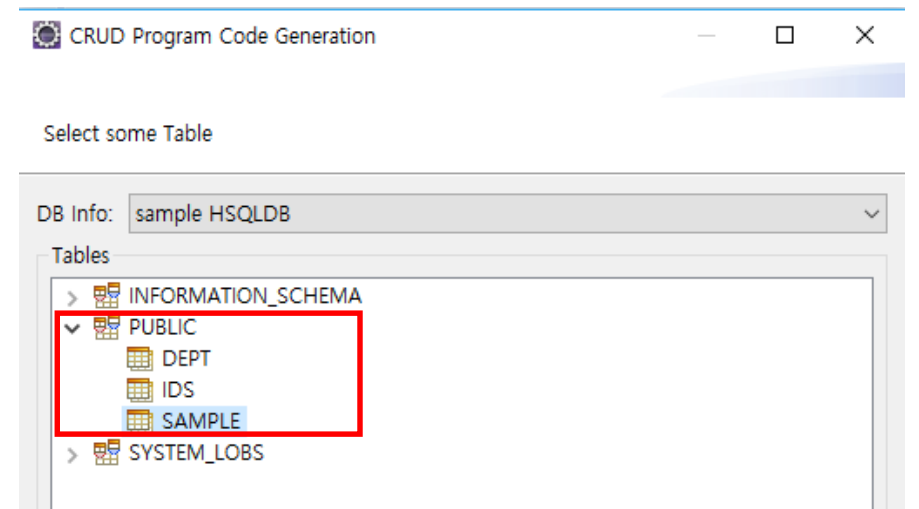
프로젝트를 선택한 상태에서, 대화창에서 eGoveFramework > eGovFrame Templates 를 더블클릭한다.

LAB 1-2 Code Generation 실습(2/5)

Step 1-2-05. lab102-code-generation 프로젝트를 선택한 상태에서 eGovFrame Templates 뷰에서 " eGovFrame Templates > CRUD > CRUD Program" 을 더블클릭 한다.



Step 1-2-06. DB Info에서 HSQLDB를 선택하고, PUBLIC > SAMPLE 테이블을 선택한 후 NEXT를 클릭한다.



LAB 1-2 Code Generation 실습(3/5)

Step 1-2-07. 소스코드 자동생성 디렉토리 정보를 입력하고 Finish 버튼을 클릭한다.

CRUD Program Code Generation

Input resource information

Author : 홍길동

Create Date : 0000/00/00

DataAccess

Create DataAccess: ☒

Resource(SQLMap) Folder: /lab102-code-generation/src/main/resources/egovframework/sqlmap/example

Browse

Resource(Mapper) Folder: /lab102-code-generation/src/main/resources/egovframework/sqlmap/example

Browse

DAO Package: egovframework.example.sample.service.impl

Browse

Mapper Package: egovframework.example.sample.service.impl

Browse

VO Package: egovframework.example.sample.service

Browse

Service

Create Service: ☒

Service Package: egovframework.example.sample.service

Browse

Service Impl Package: egovframework.example.sample.service.impl

Browse

Web

Create Web: ☒

Controller Package: egovframework.example.sample.web

Browse

JSP Folder: /lab102-code-generation/src/main/webapp/WEB-INF/jsp/egovframework/example

Browse

?

< Back

Next >

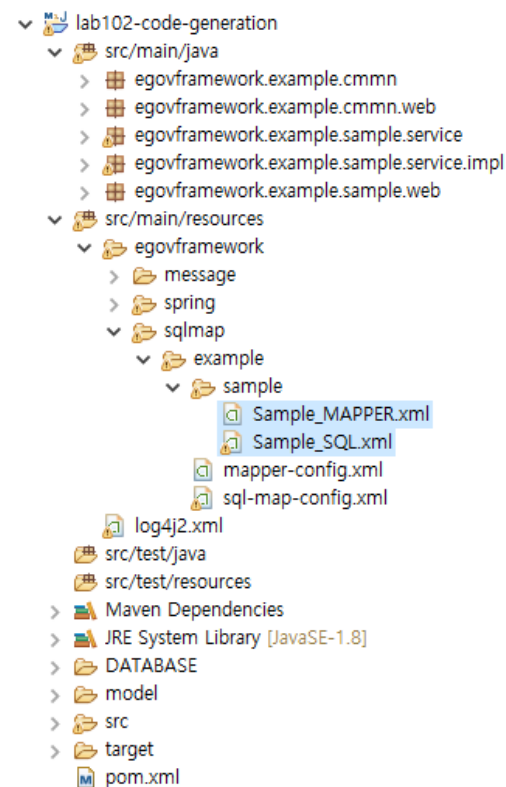
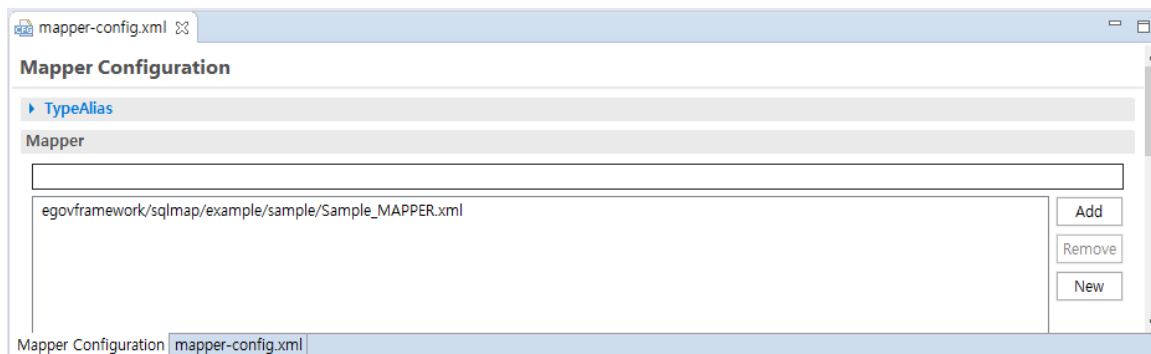
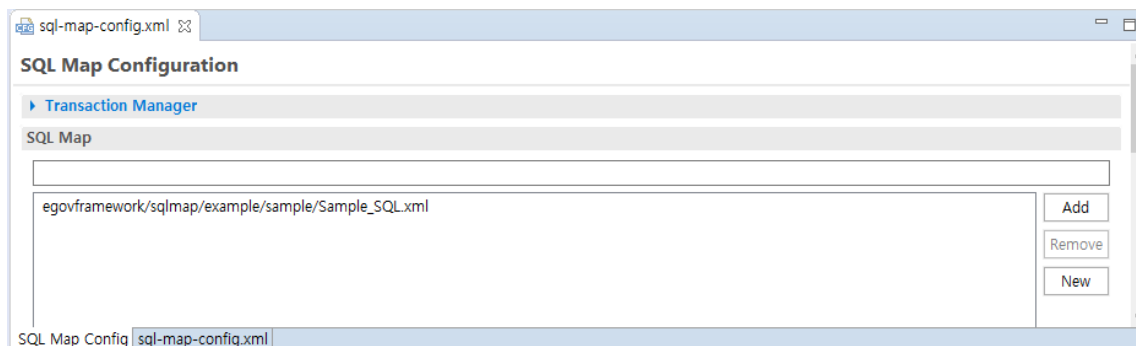
Finish

Cancel

LAB 1-2 Code Generation 실습(4/5)

Step 1-2-08. [iBatis] src/main/resources 에서 egovframework.sqlmap.example 패키지의 sql-map-config.xml 파일을 열고
생성된 Sample_SQL.xml 파일을 추가되어 있는지 확인한다.

[MyBatis] src/main/resources 에서 egovframework.sqlmap.example 패키지의 mapper-config.xml 파일을 열고 생성된
Sample_MAPPER.xml 파일을 추가되어 있는지 확인한다.



LAB 1-2 Code Generation 실습(5/5)

Step 1-2-09. 생성한 프로젝트를 실행한다.

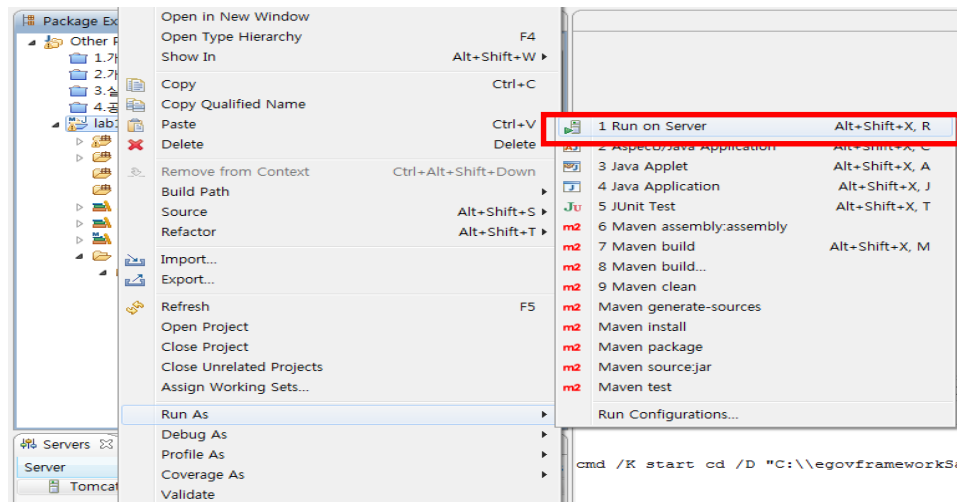
[Eclipse 이용]

lab102-code-generation > Run As > Run on Server 클릭

Finish 버튼 클릭

[오류발생시]

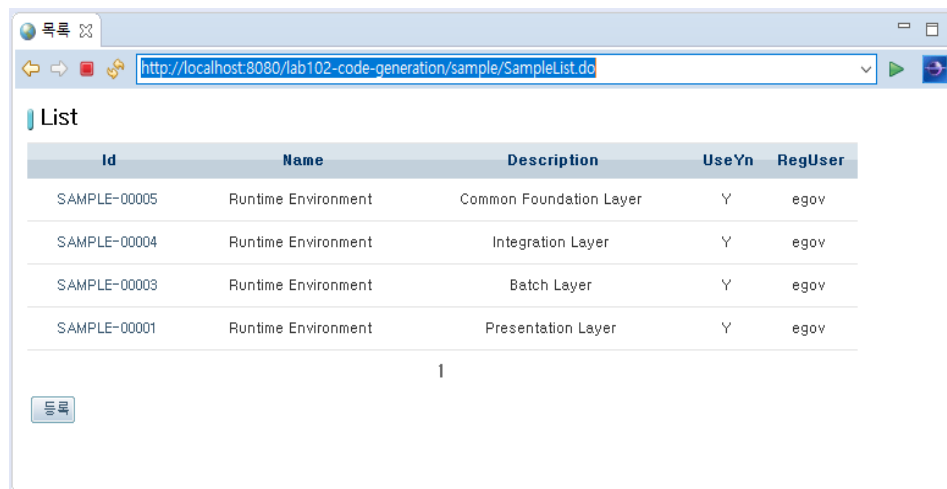
Maven Clean , Maven Install 실행 후 다시 Run On Server 실행



Step 1-2-10. 웹 브라우저를 통하여 생성한 소스의 기능을 확인한다.

[접속 URL]

<http://localhost:8080/lab102-code-generation/sample/SampleList.do>



LAB 1-3 테스트케이스 작성 및 수행 실습(1/2)

Step 1-1-01. 구현도구에서 File>Import.. 메뉴를 선택한다.

Step 1-1-02. Import wizard에서 General>Existing Projects into Workspace 를 선택한다.

Step 1-1-03. Import Projects에서 select archive file 항목을 선택하고 제공한 egovgettingstarted.zip 파일을 지정한다.

Step 1-4-04. lab103 > src/test/java > egovframework.guide.helloworld > HelloWorldServiceTest.java를 spring test를 활용하여 다음과 같이 수정한다.

```
package egovframework.guide.helloworld;

import static org.junit.Assert.assertEquals;
import javax.annotation.Resource;

import org.junit.Test;
import org.junit.runner.RunWith;
import org.springframework.test.context.ContextConfiguration;
import org.springframework.test.context.junit4.SpringJUnit4ClassRunner;

@RunWith(SpringJUnit4ClassRunner.class)
@ContextConfiguration(locations={"/context-helloworld.xml"})

public class HelloWorldServiceTest {
    private HelloWorldService helloworld;

    @Resource(name="helloworld")
    public void setHelloWorld(HelloWorldService hello) {
        this.helloworld = hello;
    }

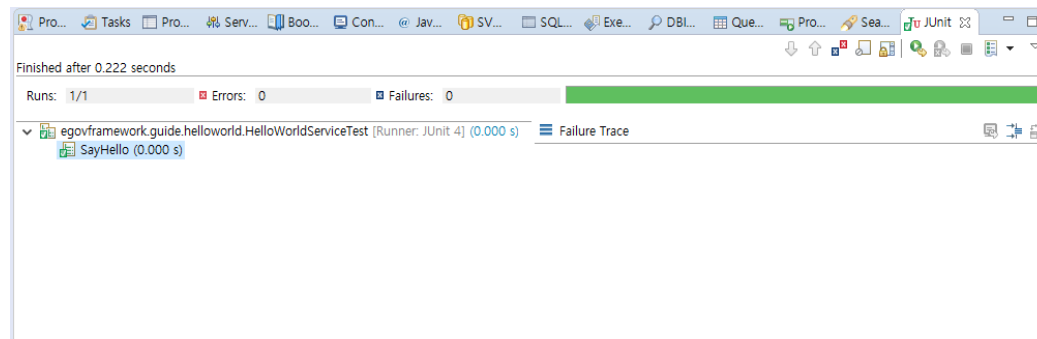
    @Test
    public void SayHello() {
        assertEquals( "Hello eGovFrame!!!", helloworld.sayHello() );
    }
}
```

LAB 1-3 테스트케이스 작성 및 수행 실습(2/2)

Step 1-4-05. 작성한 테스트 케이스를 실행하여 결과를 확인한다.

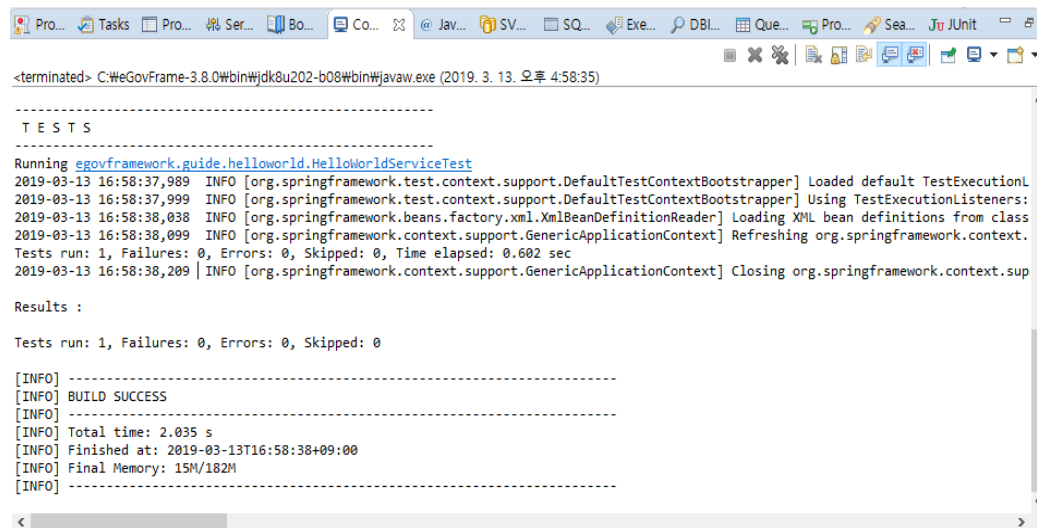
[jUnit 이용]

lab103 > Run As > jUnit Test 실행



[Maven 이용]

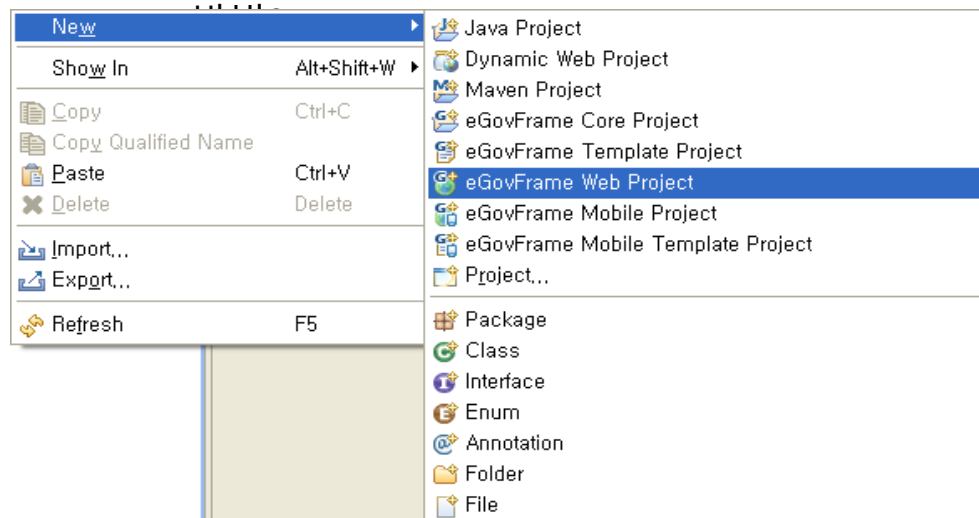
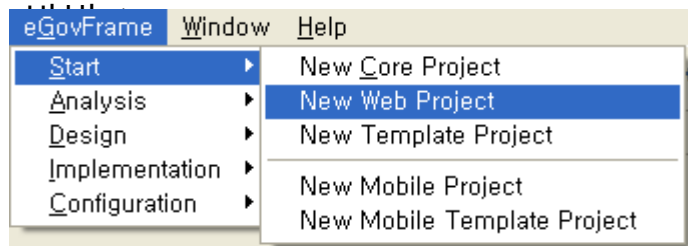
lab103 > Run As > Maven test 실행



LAB 1-4 공통컴포넌트 생성 및 조립도구 실습 (1/10)

❑ Step 1-4-01 - Project 생성(1/4)

- 전제조건 : eGovFrame Perspective 실행(별첨1. eGovFrame Perspective 실행 참조)
- 방법1 : Eclipse Menu > eGovFrame > Start > New Web Project 선택
- 방법2 : Package Explorer > 마우스 오른쪽 버튼 클릭 > New > eGovFrame Web Project 선택



LAB 1-4 공통컴포넌트 생성 및 조립도구 실습 (2/10)

❑ Step 1-4-01 - Project 생성(2/4)

- 프로젝트 정보 입력

* 프로젝트 생성 시 Generate Example 은 선택하지 않도록 한다.

(선택한 경우에는 Example에 해당하는 Table을 테스트DB에 생성 필요)

항목	입력내용	비고
Project name	lab104	수동입력
Target Runtime	<None>	자동입력
Dynamic Web Module Version	2.5	자동입력
Group Id	egovframe	수동입력
Artifact Id	lab104	자동입력
Version	1.0.0	자동입력

New eGovFrame Web Project

eGovFrame Web Project
eGovFrame Web Project를 생성합니다.

Project name: lab104

Contents
☒ Use default Workspace location
Location: C:\WeGovFrame-3.8.0\workspace\edu\lab104 Browse...

Target Runtime
<None> New...

Dynamic Web Module version
2.5

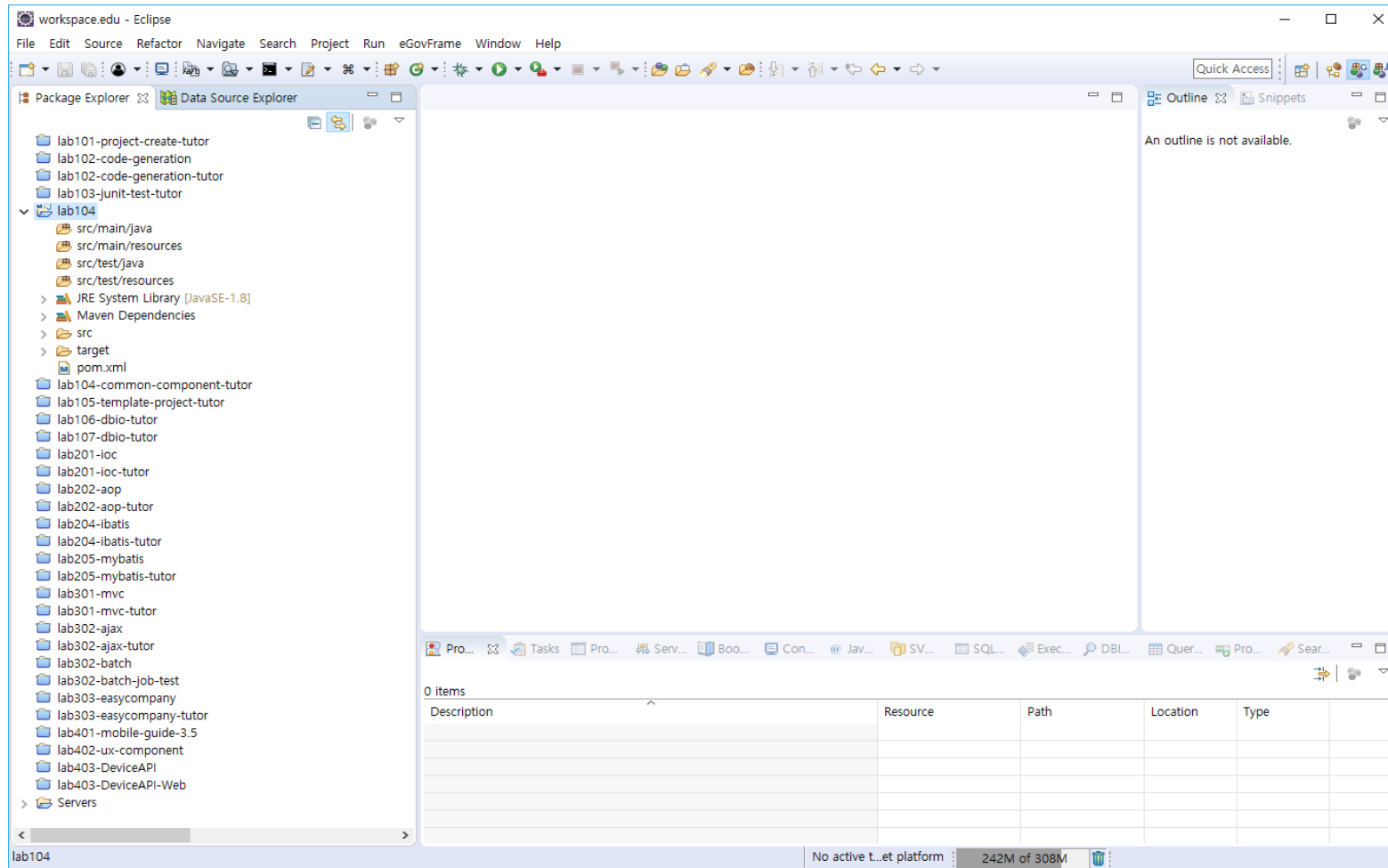
Maven Setting
Group Id: egovframe
Artifact Id: lab104
Version: 1.0.0

? < Back Next > Finish Cancel

LAB 1-4 공통컴포넌트 생성 및 조립도구 실습 (3/10)

❑ Step 1-4-01 - Project 생성(3/4)

- 프로젝트 생성 결과 확인



LAB 1-4 공통컴포넌트 생성 및 조립도구 실습 (4/10)

❑ Step 1-4-01 – Database Connection 생성(4/4)

- 실습용으로 배포된 MySql DB를 실행

실행방법 : mysql설치폴더(C:\WeGovFrame-3.8.0\bin\mysql-5.6.21) > startup.bat 실행

종료방법 : mysql설치폴더(C:\WeGovFrame-3.8.0\bin\mysql-5.6.21) > stop.bat 실행

- Eclipse Menu > Window > Show View > Data Source Explore

- (참조 : 04.[참고]개발환경_실습교재 별첨2. Database Connection 생성)

항목	정보
Database	com
username	com
password	com01
포트	3306

New Connection Profile

Specify a Driver and Connection Details

Select a driver from the drop-down and provide login details for the connection.

Drivers: MySQL JDBC Driver

Properties

General Optional

Database: com

URL: jdbc:mysql://localhost:3306/com

User name: com

Password: ●●●●●

☒ Save password

☒ Connect when the wizard completes

☐ Connect every time the workbench is started

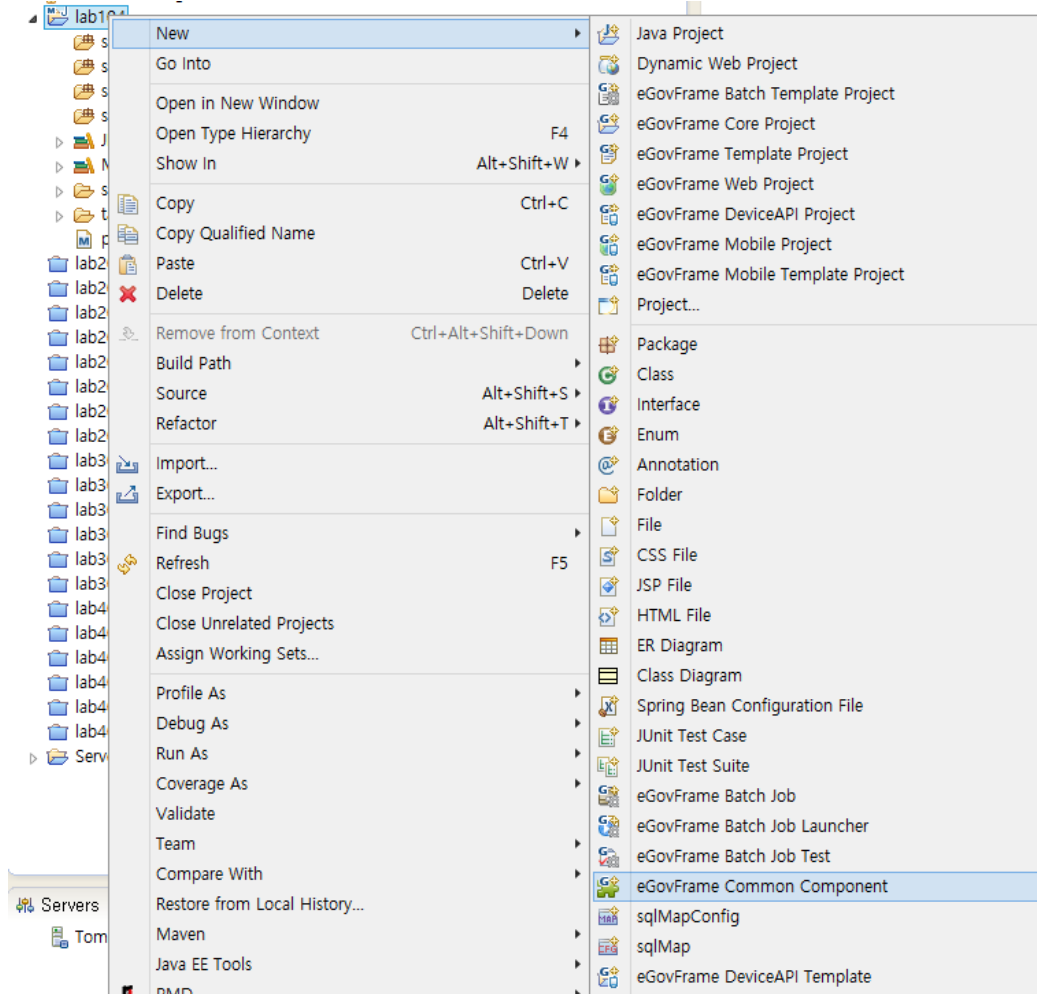
Test Connection

< Back Next > Finish Cancel

LAB 1-4 공통컴포넌트 생성 및 조립도구 실습 (5/10)

□ Step 1-4-02 - 공통컴포넌트 생성 위저드 실행(1/5)

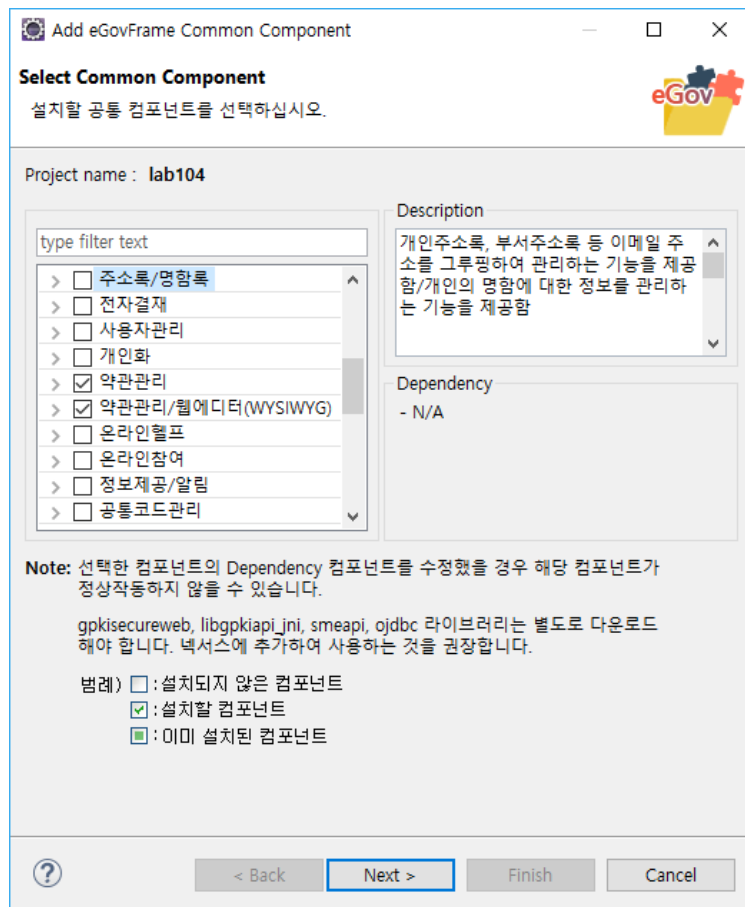
- 프로젝트 선택 마우스 우클릭 > New > eGovFrame Common Component 선택



LAB 1-4 공통컴포넌트 생성 및 조립도구 실습 (6/10)

❑ Step 1-4-02 - 공통컴포넌트 생성 위저드 실행(2/5)

- 공통 컴포넌트 목록 중 설치하고자 하는 컴포넌트를 선택하고 **Next**를 클릭
- 선택한 컴포넌트를 확인하고 테이블 설치여부를 선택 (실습 예제로 "사용자 DB에 생성" 선택)



Add eGovFrame Common Component

Select Common Component
설치할 공통 컴포넌트를 선택하십시오.

Project name : lab104

type filter text

- > ☐ 주소록/명함록
- > ☐ 전자결재
- > ☐ 사용자관리
- > ☐ 개인화
- > ☒ 약관관리
- > ☒ 약관관리/웹에디터(WYSIWYG)
- > ☐ 온라인헬프
- > ☐ 온라인참여
- > ☐ 정보제공/알림
- > ☐ 공통코드관리

Description
개인주소록, 부서주소록 등 이메일 주소를 그룹핑하여 관리하는 기능을 제공함/개인의 명함에 대한 정보를 관리하는 기능을 제공함

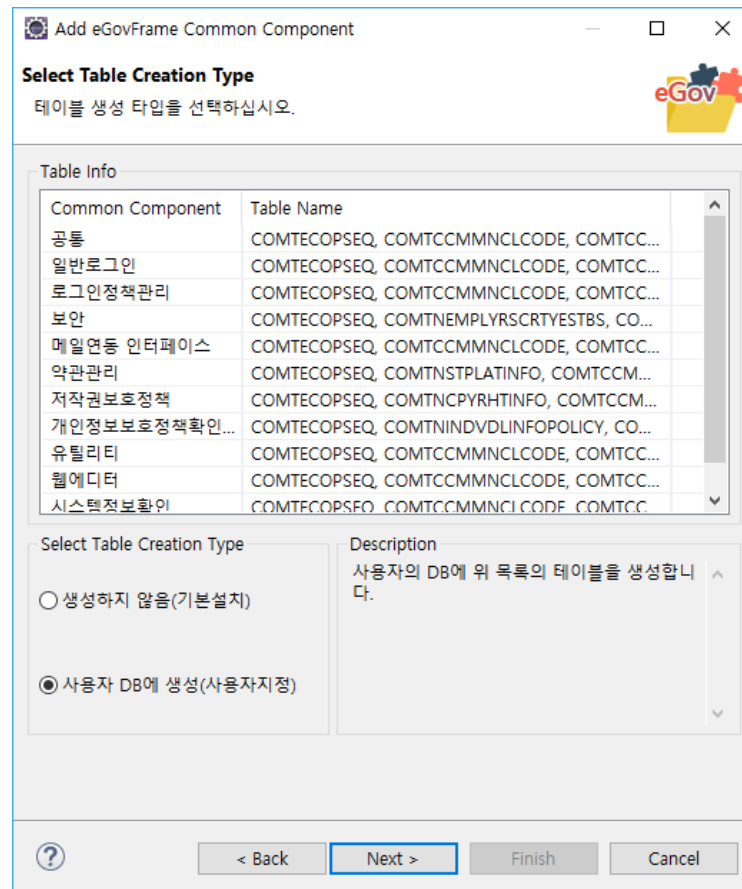
Dependency
- N/A

Note: 선택한 컴포넌트의 Dependency 컴포넌트를 수정했을 경우 해당 컴포넌트가 정상작동하지 않을 수 있습니다.

gpkisecureweb, libgpkapi_jni, smeapi, ojdbc 라이브러리는 별도로 다운로드 해야 합니다. 넥서스에 추가하여 사용하는 것을 권장합니다.

범례) ☐ : 설치되지 않은 컴포넌트
☒ : 설치할 컴포넌트
☒ : 이미 설치된 컴포넌트

< Back **Next >** Finish Cancel



Add eGovFrame Common Component

Select Table Creation Type
테이블 생성 타입을 선택하십시오.

Table Info

Common Component	Table Name
공통	COMTECOPSEQ, COMTCCMMNCLCODE, COMTCC...
일반로그인	COMTECOPSEQ, COMTCCMMNCLCODE, COMTCC...
로그인정책관리	COMTECOPSEQ, COMTCCMMNCLCODE, COMTCC...
보안	COMTECOPSEQ, COMTNEMPLYRSCRTYESTBS, CO...
메일연동 인터페이스	COMTECOPSEQ, COMTCCMMNCLCODE, COMTCC...
약관관리	COMTECOPSEQ, COMTNSTPLATINFO, COMTCCM...
저작권보호정책	COMTECOPSEQ, COMTNCPYRHTINFO, COMTCCM...
개인정보보호정책확인...	COMTECOPSEQ, COMTNINDVDLINFOPOLICY, CO...
유틸리티	COMTECOPSEQ, COMTCCMMNCLCODE, COMTCC...
웹에디터	COMTECOPSEQ, COMTCCMMNCLCODE, COMTCC...
시스템정보확인	COMTECOPSEQ, COMTCCMMNCLCODE, COMTCC...

Select Table Creation Type

☐ 생성하지 않음(기본설치)

☒ 사용자 DB에 생성(사용자지정)

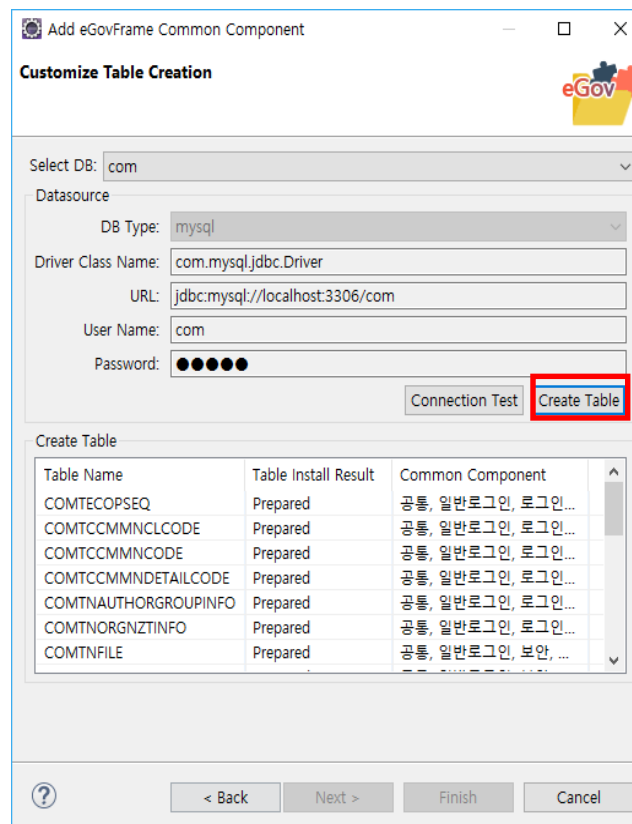
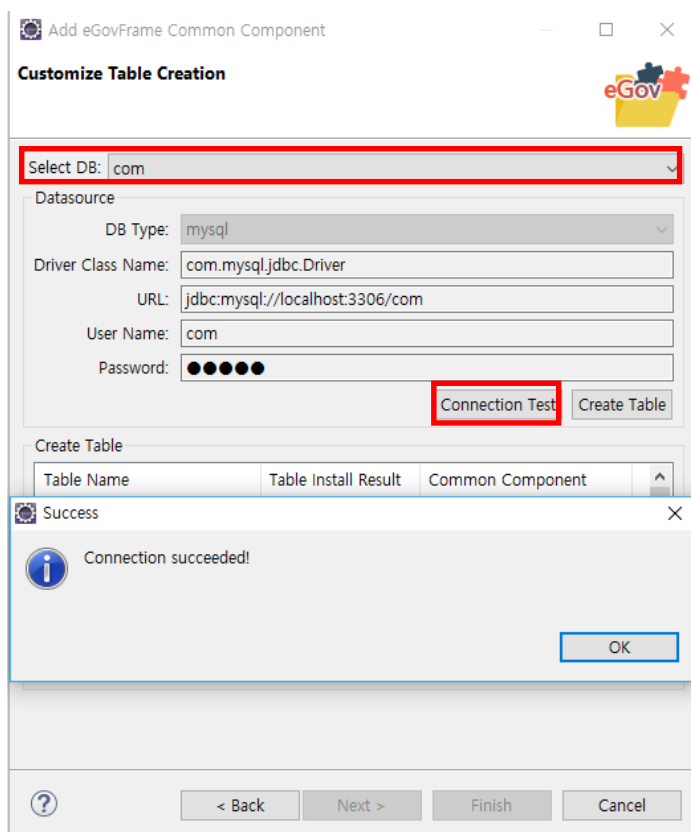
Description
사용자의 DB에 위 목록의 테이블을 생성합니다.

? < Back **Next >** Finish Cancel

LAB 1-4 공통컴포넌트 생성 및 조립도구 실습 (7/10)

❑ Step 1-4-02 - 공통컴포넌트 생성 위저드 실행(3/5)

- Data Source Explorer에 등록한 사용자의 DB 중 하나를 선택하고 Connection Test를 클릭
(별첨 2. Data Source Explorer 연결 방법 참조)
- Connection Test 이후에 활성화된 Create Table 버튼을 클릭



LAB 1-4 공통컴포넌트 생성 및 조립도구 실습 (8/10)

❑ Step 1-4-02 - 공통컴포넌트 생성 위저드 실행(4/5)

- Create Table을 정상적으로 완료한 후 **Finish**를 클릭
- web.xml 수정여부 "OK" 선택

Add eGovFrame Common Component

Customize Table Creation

Select DB: com

Datasource

DB Type: mysql

Driver Class Name: com.mysql.jdbc.Driver

URL: jdbc:mysql://localhost:3306/com

User Name: com

Password: ●●●●●

Connection Test Create Table

Create Table

Table Name	Table Install Result	Common Component
COMTECOPSEQ	Success	공통, 약관관리, 저작권보...
COMTCCMMNCLCODE	Success	공통, 약관관리, 저작권보...
COMTCCMMNCODE	Success	공통, 약관관리, 저작권보...
COMTCCMMNDETAILCODE	Success	공통, 약관관리, 저작권보...
COMTNAUTHORGROUPINFO	Success	공통, 약관관리, 저작권보...
COMTNORGNZTINFO	Success	공통, 약관관리, 저작권보...
COMTNFILE	Success	공통, 약관관리, 저작권보...

< Back Next > **Finish** Cancel

Add eGovFrame Common Component

Customize Table Creation

Select DB: com

Datasource

DB Type: mysql

Driver Class Name: com.mysql.jdbc.Driver

URL: jdbc:mysql://localhost:3306/com

User Name: com

Password: ●●●●●

Connection Test Create Table

Create Table

confirm

web.xml 파일을 수정하시겠습니까?

수정하시면 기존 파일은 backup 되며,
공통컴포넌트용 web.xml 샘플 파일이 생성됩니다.

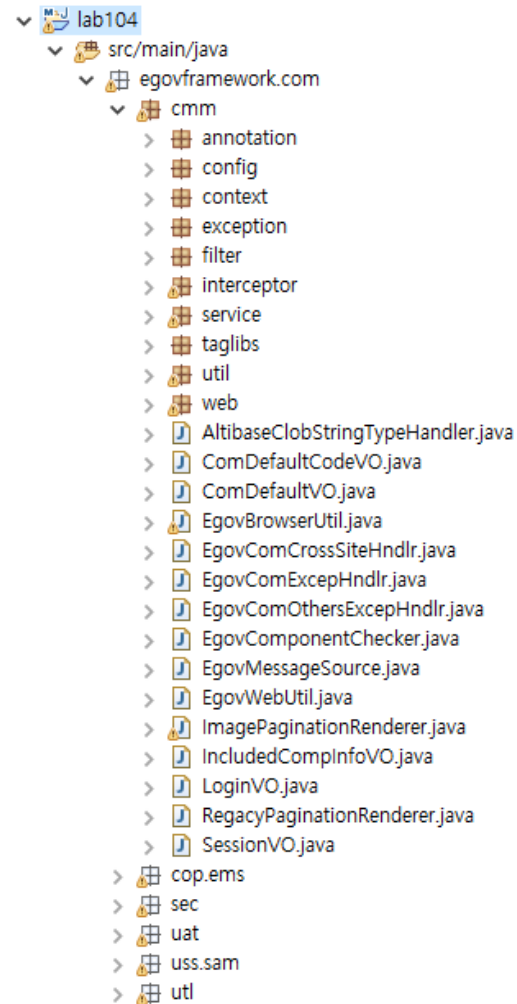
OK Cancel

< Back Next > Finish Cancel

LAB 1-4 공통컴포넌트 생성 및 조립도구 실습 (9/10)

□ Step 1-4-02 - 공통컴포넌트 생성 위저드 실행(5/5)

- 생성된 소스 확인



LAB 1-4 공통컴포넌트 생성 및 조립도구 실습 (10/10)

❑ Step 1-4-03 - 생성된 공통컴포넌트 확인

- 별첨3. 서버 설정 (Tomcat) 참조

eGovFrame 공통 컴포넌트

http://localhost:8080/lab104/

eGovFrame 전자정부 표준프레임워크 공통컴포넌트 VERSION 3.8

사용자디렉토리/통합인증
10. 로그인
30. 로그인정책관리

보안
60. 권한관리

협업
360. 메일발송
361. 발송메일내역

사용자지원
490. 약관관리
500. 저작권보호정책
510. 개인정보보호정책확인

약관관리 목록

--선택하세요--

조회 등록

번호	약관명	약관내용	등록일
1	인터넷이용약관	개인정보의 수집 및 이용목적-개인회원	2019-03-13
2	인터넷이용약관	개인정보의 수집 및 이용목적-기업회원	2019-03-13

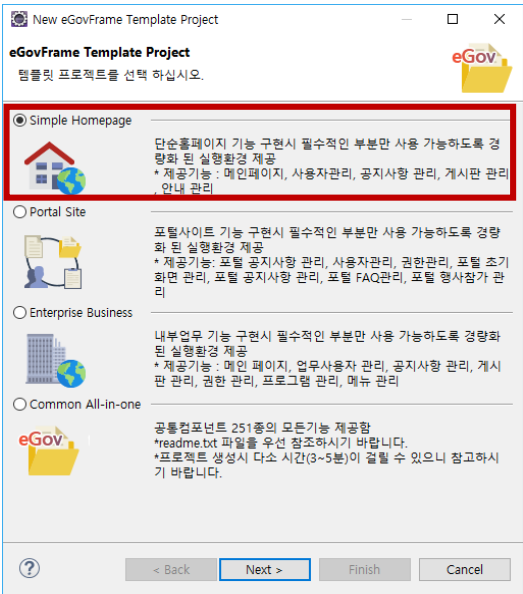
1

Copyright(c)2018 eGovframework. All right reserved.

LAB 1-5 템플릿 프로젝트 생성 실습(1/2)

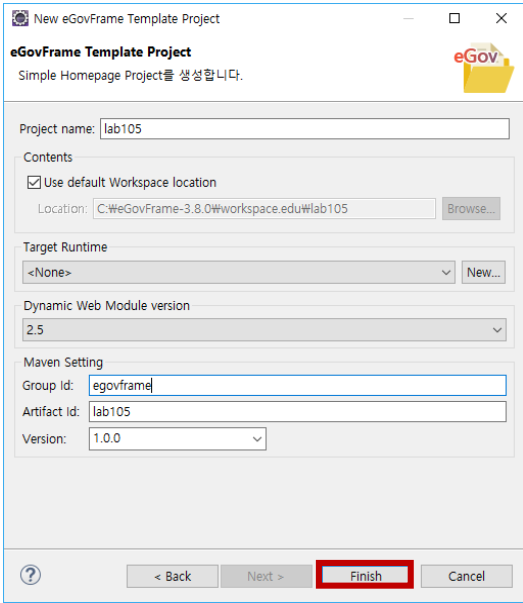
Step 1-5-01. 구현도구에서 eGovFrame>Start>New Template Project 메뉴를 선택한다.

Step 1-5-02. eGovFrame Template Project 위저드에서 Simple Project를 선택한다.



Step 1-5-03. eGovFrame Template Project에서 아래와 같이 입력하고 Finish버튼을 클릭한다.

항목	입력내용	비고
Project name	lab105	수동입력
Target Runtime	<None>	자동입력
Dynamic Web Module Version	2.5	자동입력
Group Id	egovframe	수동입력
Artifact Id	lab105	자동입력
Version	1.0.0	자동입력



LAB 1-5 템플릿 프로젝트 생성 실습(2/2)

Step 1-5-04. 이클립스에서 Run As > Maven Install 을 클릭하여 Maven 을 실행한다.

Step 1-5-05. 생성한 프로젝트를 실행하여 결과를 확인한다.

[Eclipse 이용]

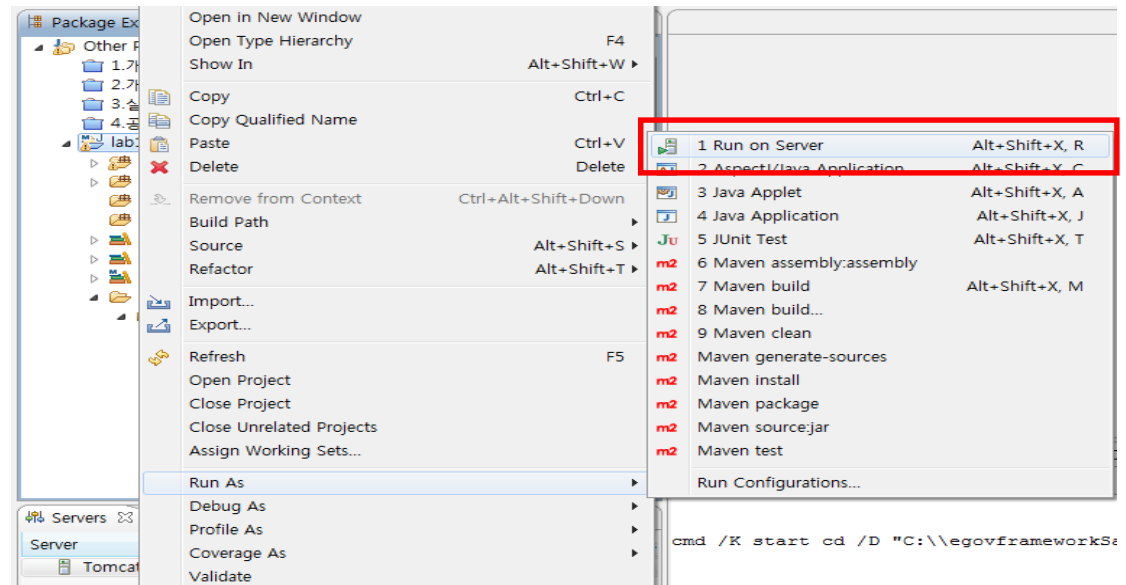
lab105 > Run As > Run on Server 클릭

Finish 버튼 클릭

[오류발생시]

구현도구(eclipse) 재기동, Maven Clean , Maven Install 실행 후

다시 Run On Server 실행



LAB 1-6 DBIO 실습(iBatis)(1/20)

❑ DBIO 사용방법을 설치부터 활용까지 간략하게 훑어본다.

❑ 실습 순서

1. DB실행

2. DBIO 실습

- eGovFrame Perspective 실행

- Project 생성

- SqlMapConfig 파일 생성

- SqlMap 파일 생성

- SqlMap 파일 편집

 - 1. Parameter Map 작성

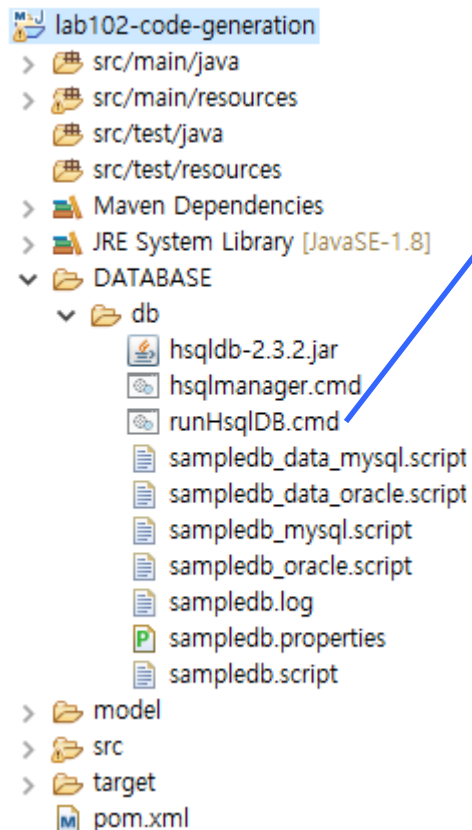
 - 2. Result Map 작성

 - 3. Query 작성

3. Query 테스트

LAB 1-6 DBIO 실습(iBatis)(2/20)

❑ 제공된 Lab의 DATABASE의 db폴더에 있는 runHsqlDB를 실행하여 DB를 실행



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

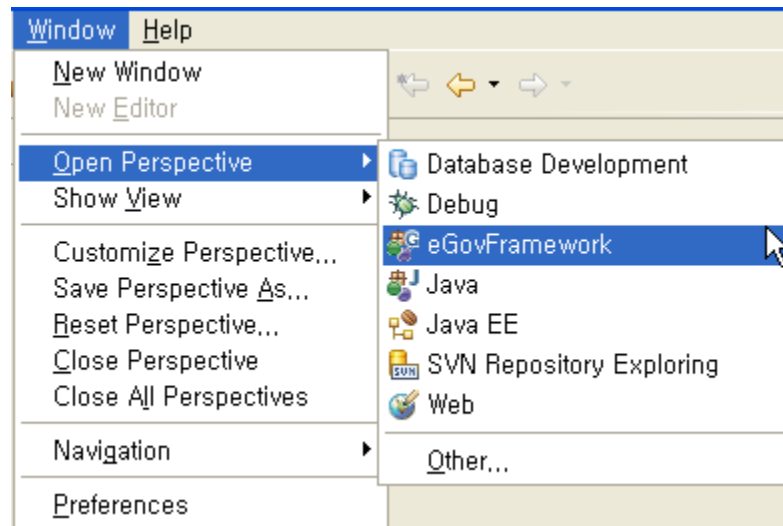
C:\WeGovFrame-3.8.0\workspace.edu\lab102-code-generation\DATABASE\db>runHsqlDB.cmd

C:\WeGovFrame-3.8.0\workspace.edu\lab102-code-generation\DATABASE\db>C:\WeGovFrame-3.8.0\bin\jdk8u202-b08\bin\java
-cp ./hsqldb-2.3.2.jar org.hsqldb.Server -database.0 sampledb -dbname.0 sampledb
[Server@117d9a3]: [Thread[main,5,main]]: checkRunning(false) entered
[Server@117d9a3]: [Thread[main,5,main]]: checkRunning(false) exited
[Server@117d9a3]: Startup sequence initiated from main() method
[Server@117d9a3]: Could not load properties from file
[Server@117d9a3]: Using cli/default properties only
[Server@117d9a3]: Initiating startup sequence...
[Server@117d9a3]: Server socket opened successfully in 10 ms.
[Server@117d9a3]: Database [index=0, id=0, db=file:sampledb, alias=sampledb] opened successfully in 229 ms.
[Server@117d9a3]: Startup sequence completed in 240 ms.
[Server@117d9a3]: 2019-03-13 13:59:38.354 HSQLDB server 2.3.2 is online on port 9001
[Server@117d9a3]: To close normally, connect and execute SHUTDOWN SQL
[Server@117d9a3]: From command line, use [Ctrl]+[C] to abort abruptly
```

LAB 1-6 DBIO 실습(iBatis)(3/20)

❑ eGovFrame Perspective 실행

- Eclipse Menu > Window > Open Perspective > eGovFrame

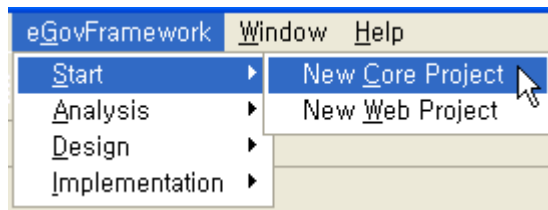


LAB 1-6 DBIO 실습(iBatis)(4/20)

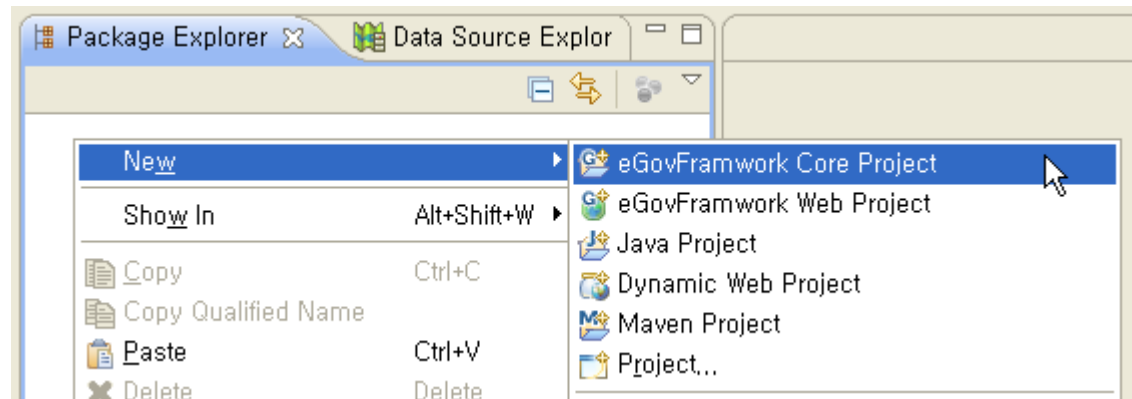
❑ Project 생성

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

방법 1

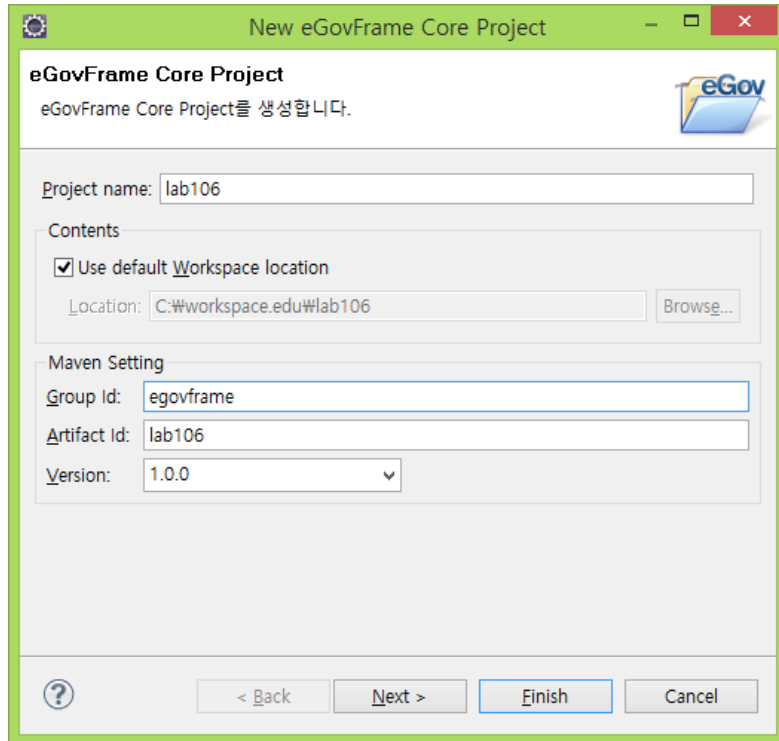


방법2



실습예제로 eGovFrame Core Project 선택

LAB 1-6 DBIO 실습(iBatis)(5/20)



New eGovFrame Core Project

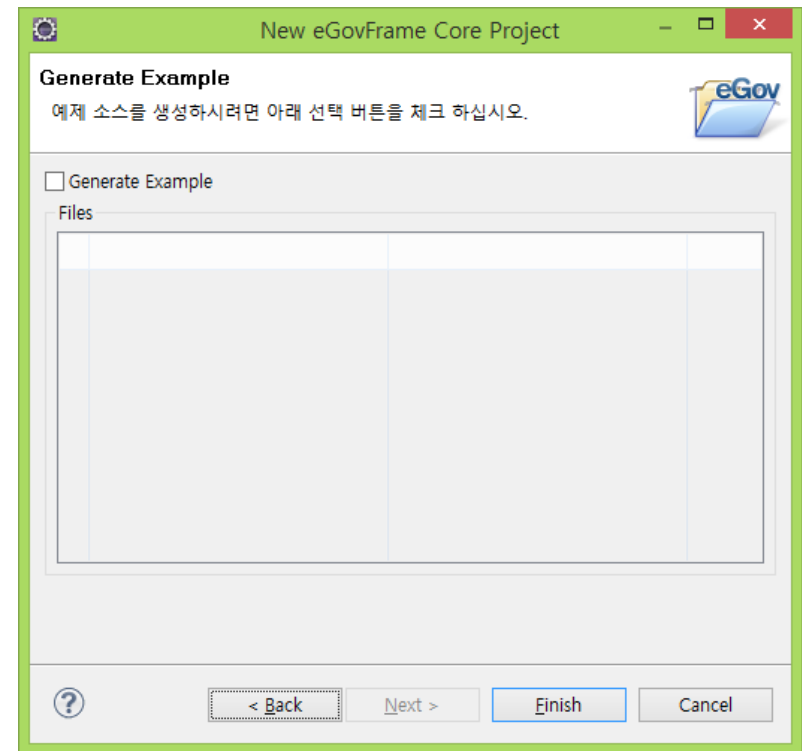
eGovFrame Core Project
eGovFrame Core Project를 생성합니다.

Project name: lab106

Contents
☒ Use default Workspace location
Location: C:\workspace\edu\lab106 Browse...

Maven Setting
Group Id: egovframe
Artifact Id: lab106
Version: 1.0.0

? < Back Next > Finish Cancel



New eGovFrame Core Project

Generate Example
예제 소스를 생성하시려면 아래 선택 버튼을 체크 하십시오.

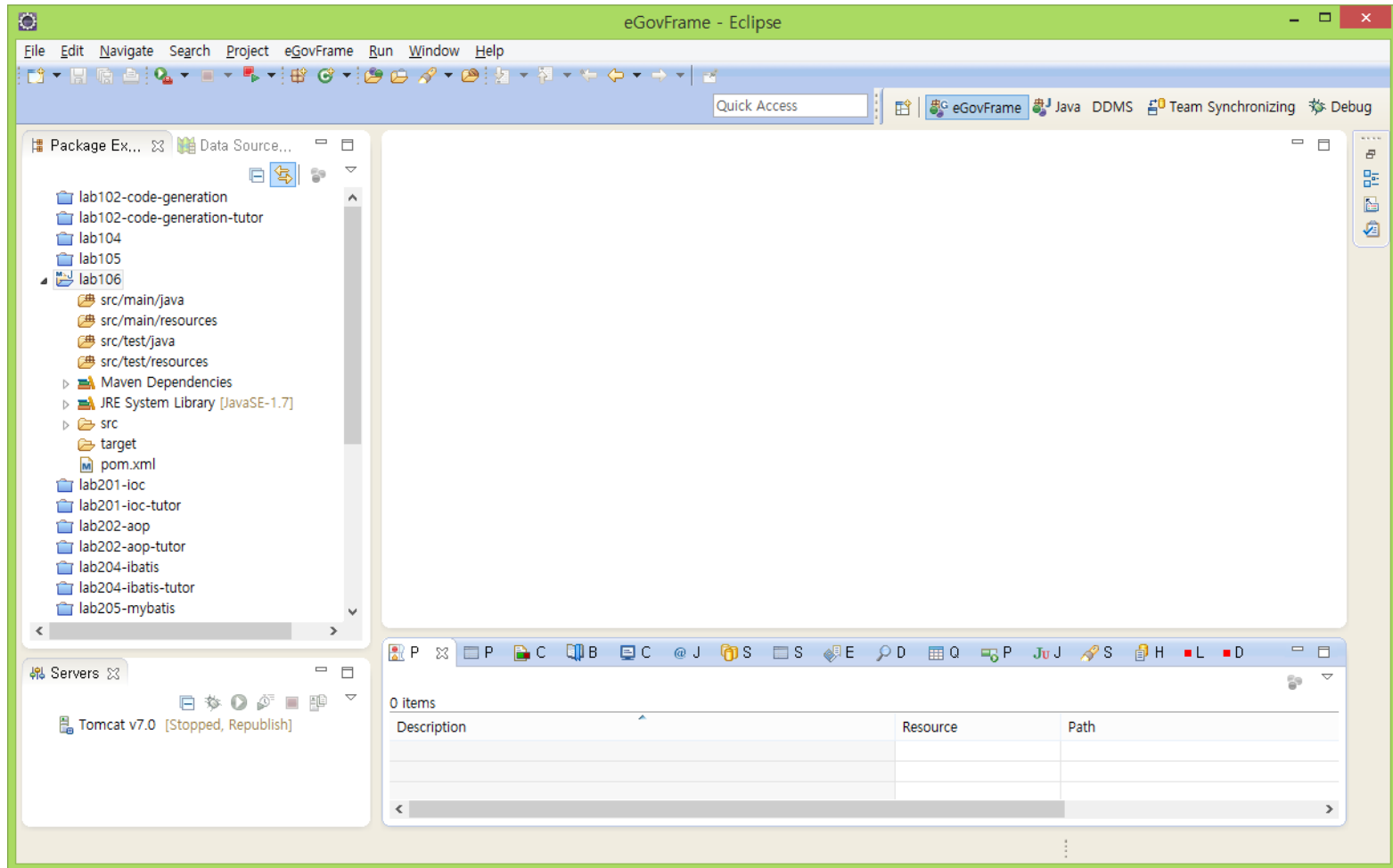
☐ Generate Example

Files

? < Back Next > Finish Cancel

LAB 1-6 DBIO 실습(iBatis)(6/20)

- 결과

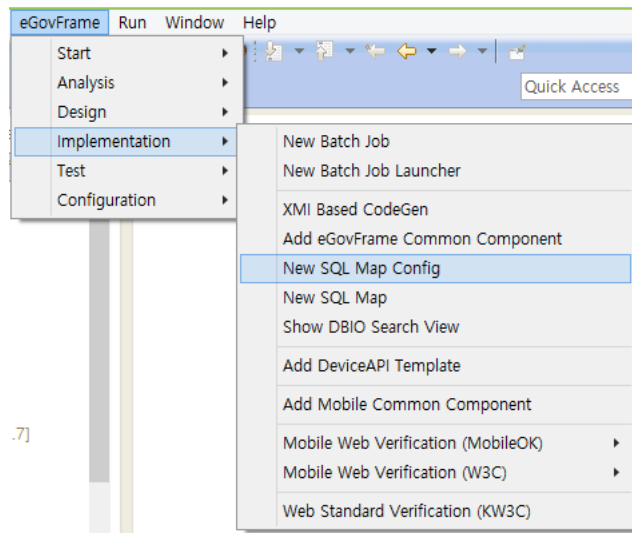


LAB 1-6 DBIO 실습(iBatis)(7/20)

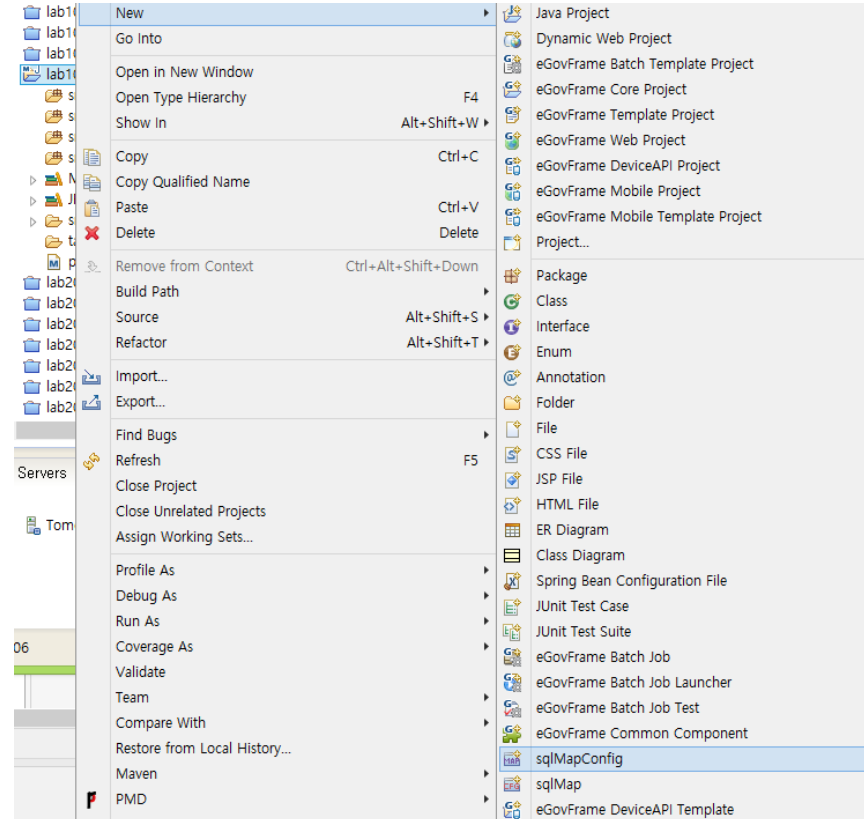
❑ SqlMapConfig 파일 생성

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

방법 1

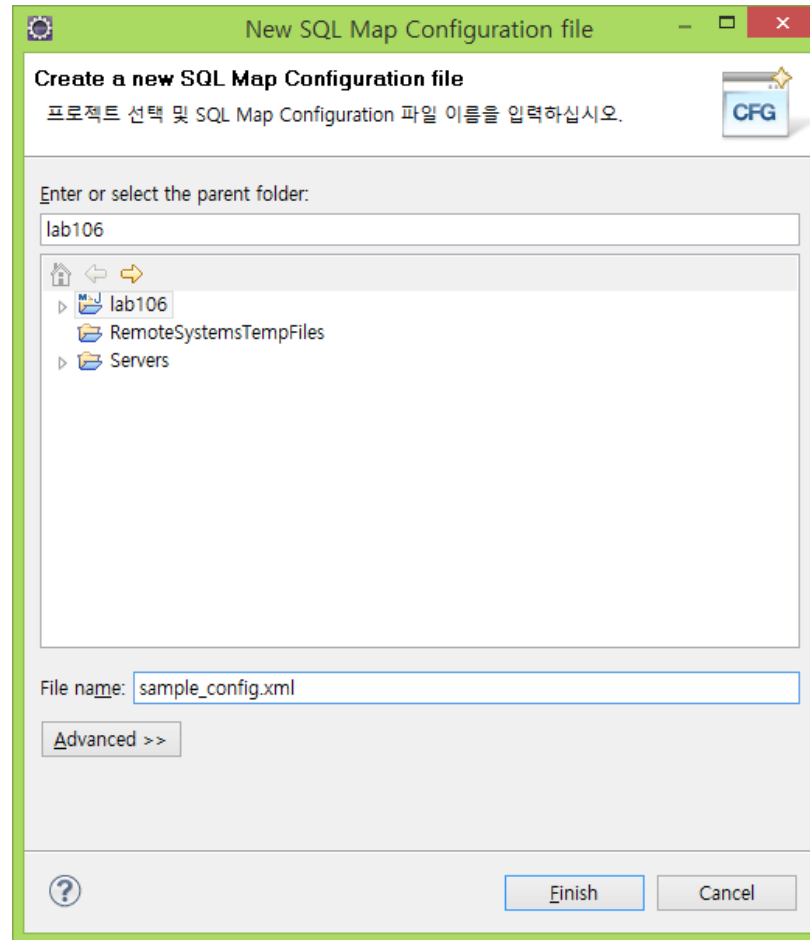


방법2



LAB 1-6 DBIO 실습(iBatis)(8/20)

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



LAB 1-6 DBIO 실습(iBatis)(9/20)

– 결과화면(SqlMapConfig Editor)

The screenshot shows the Eclipse IDE interface with the following components:

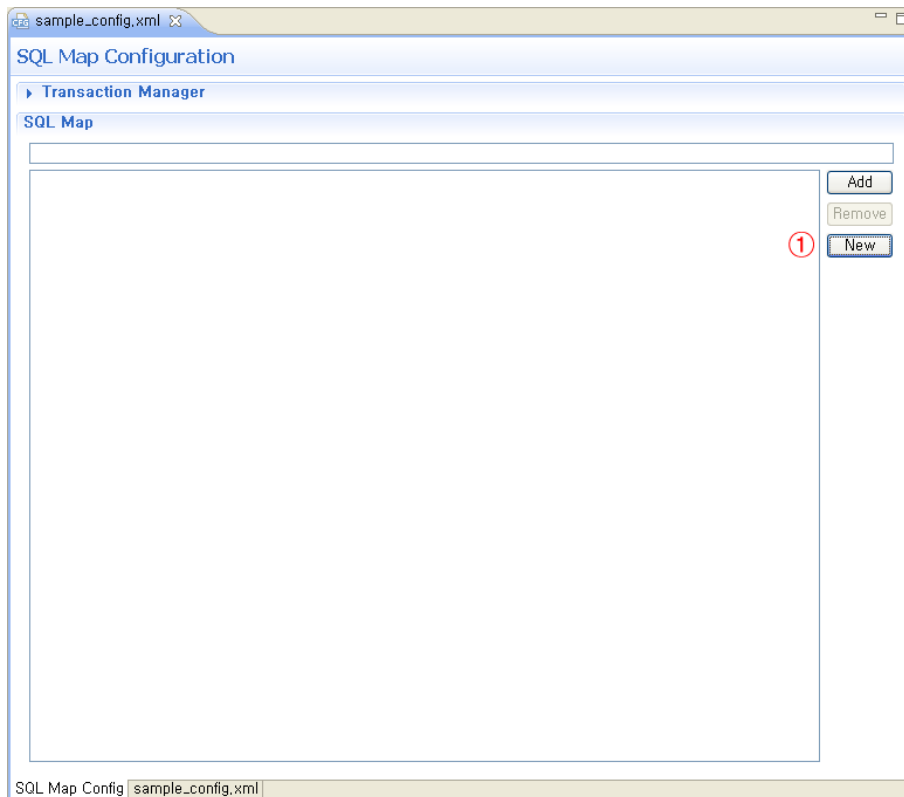
- Package Explorer:** Displays the project structure. The 'lab106' project is selected, showing sub-packages like 'src/main/java', 'src/main/resources', 'src/test/java', and 'src/test/resources'. Other projects listed include 'lab102-code-generation', 'lab104', 'lab105', 'lab201-ioc', 'lab202-aop', 'lab204-ibatis', 'lab205-mybatis', 'lab301-mvc', 'lab302-ajax', 'lab303-easycompany', 'lab401-mobile-guide', 'lab402-ux-component', 'lab403-Device', and 'lab403-DeviceWeb'.
- Data Source Explorer:** Empty.
- SQL Map Configuration Editor:** The main editor shows the 'sample_config.xml' file. It has a 'Transaction Manager' section and a 'SQL Map' section. The 'SQL Map' section is currently empty.
- Bottom Status Bar:** Shows 'Writable'.
- Bottom Console:** Shows '0 items'.

LAB 1-6 DBIO 실습(iBatis)(10/20)

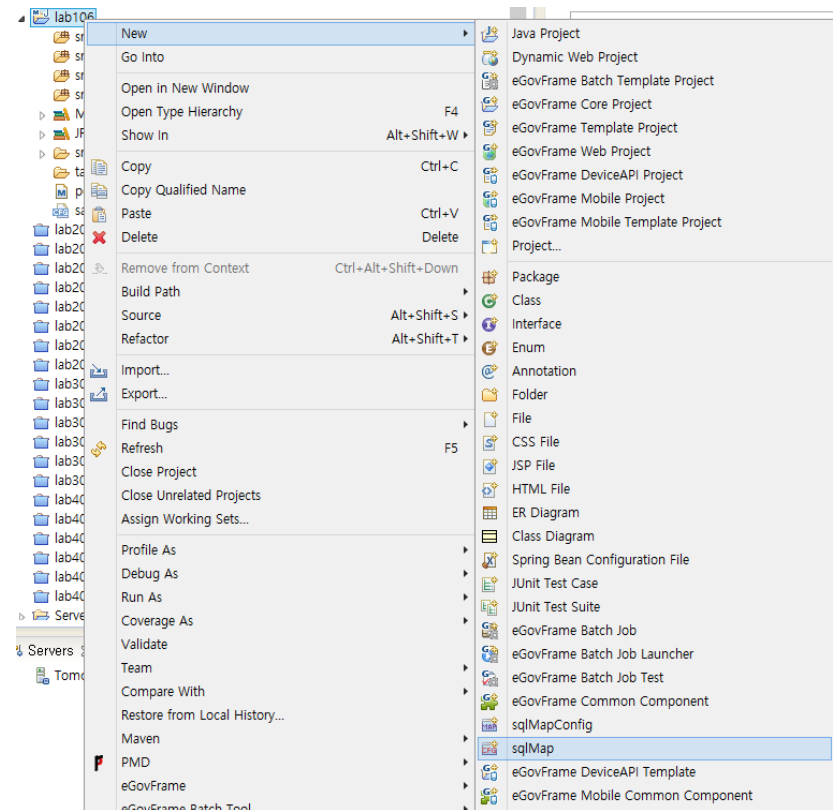
❑ SqlMap 파일 생성

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

방법1

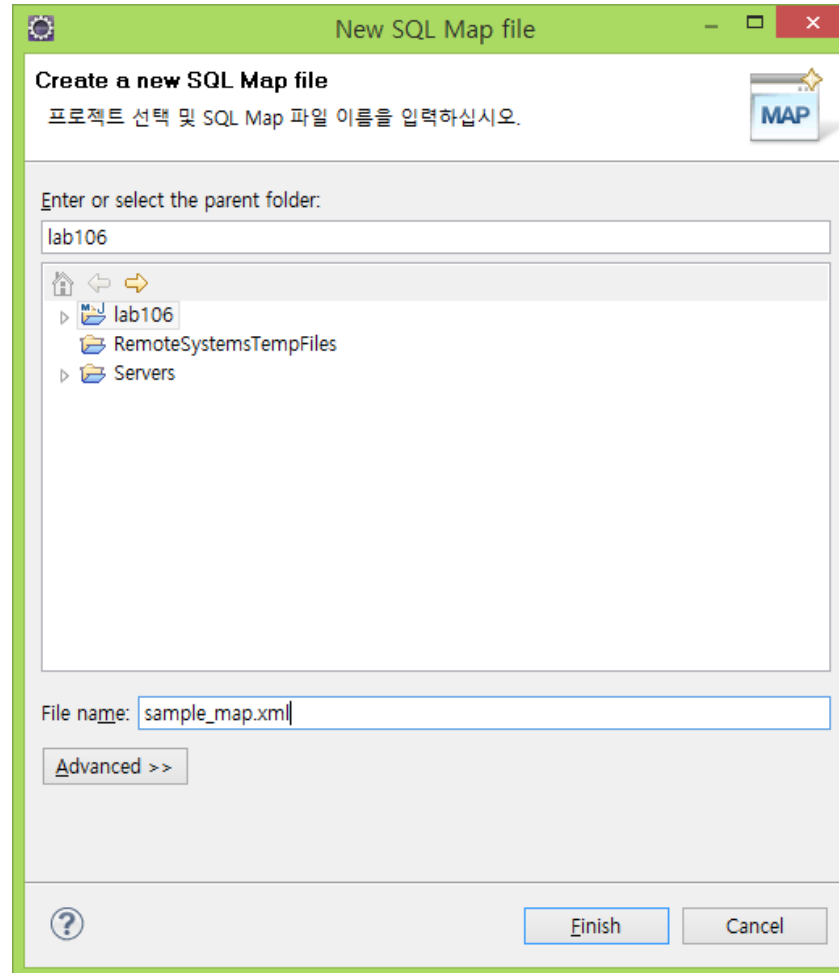


방법2



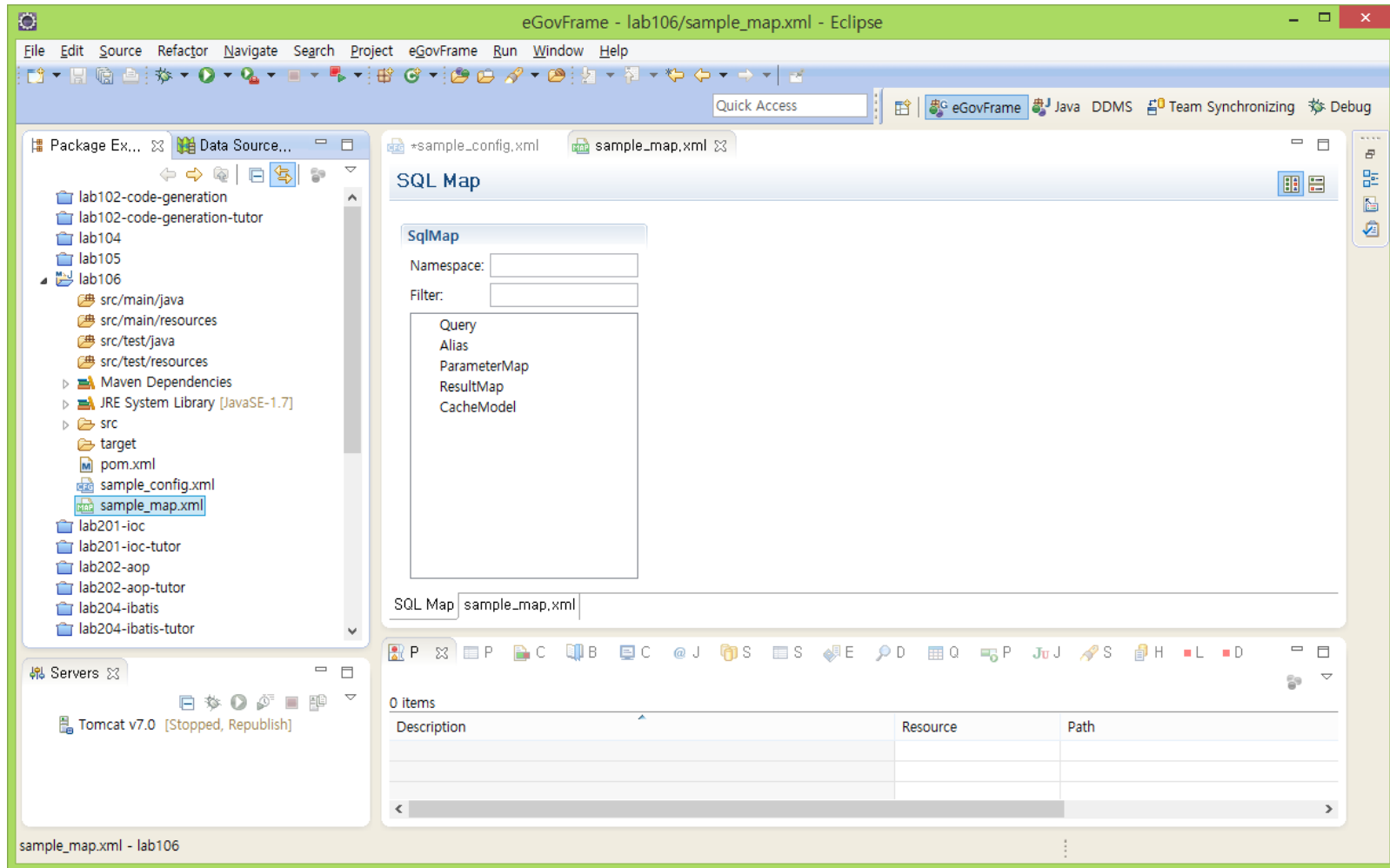
LAB 1-6 DBIO 실습(iBatis)(11/20)

- 파일 저장 폴더 선택
- 파일명 입력



LAB 1-6 DBIO 실습(iBatis)(12/20)

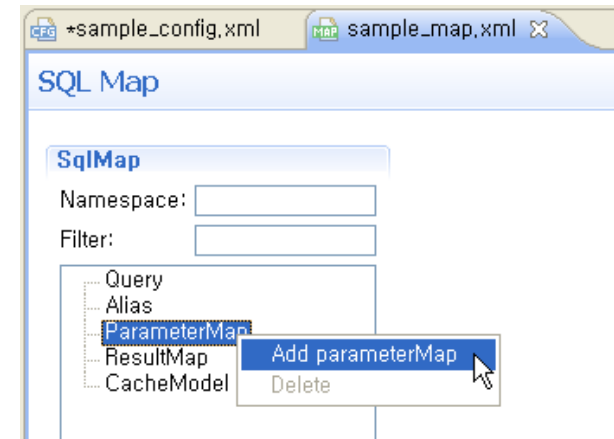
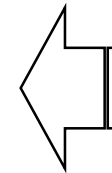
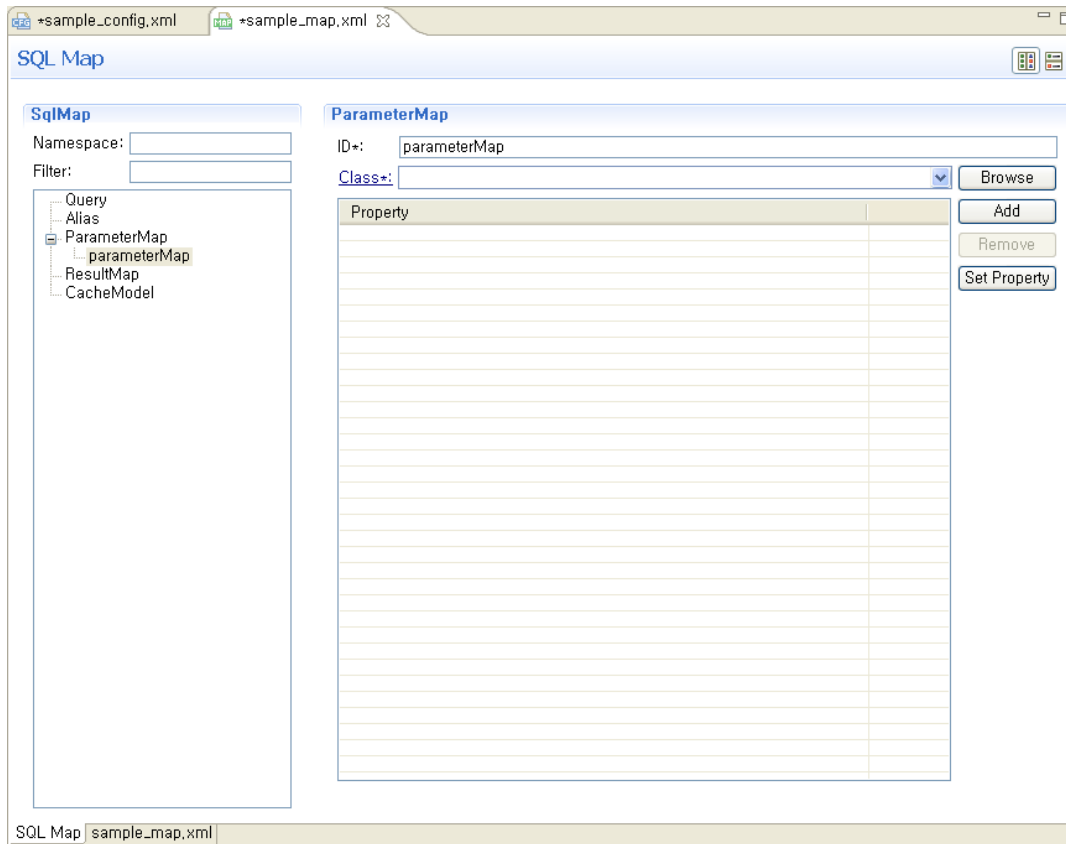
- 결과 화면(SqlMap Editor)



LAB 1-6 DBIO 실습(iBatis)(13/20)

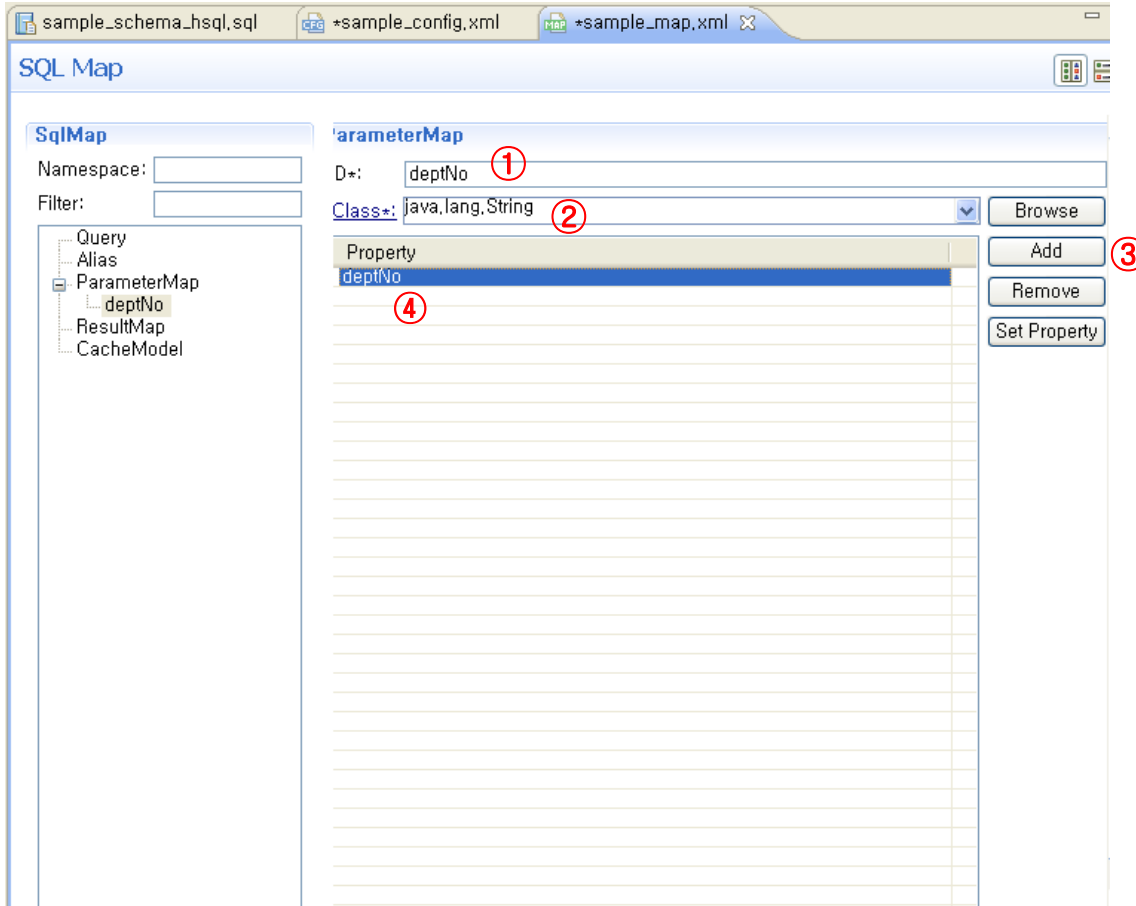
❑ Parameter Map 작성

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



LAB 1-6 DBIO 실습(iBatis)(14/20)

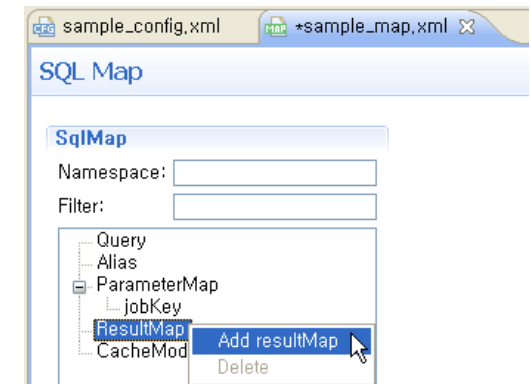
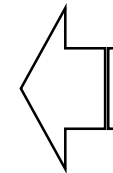
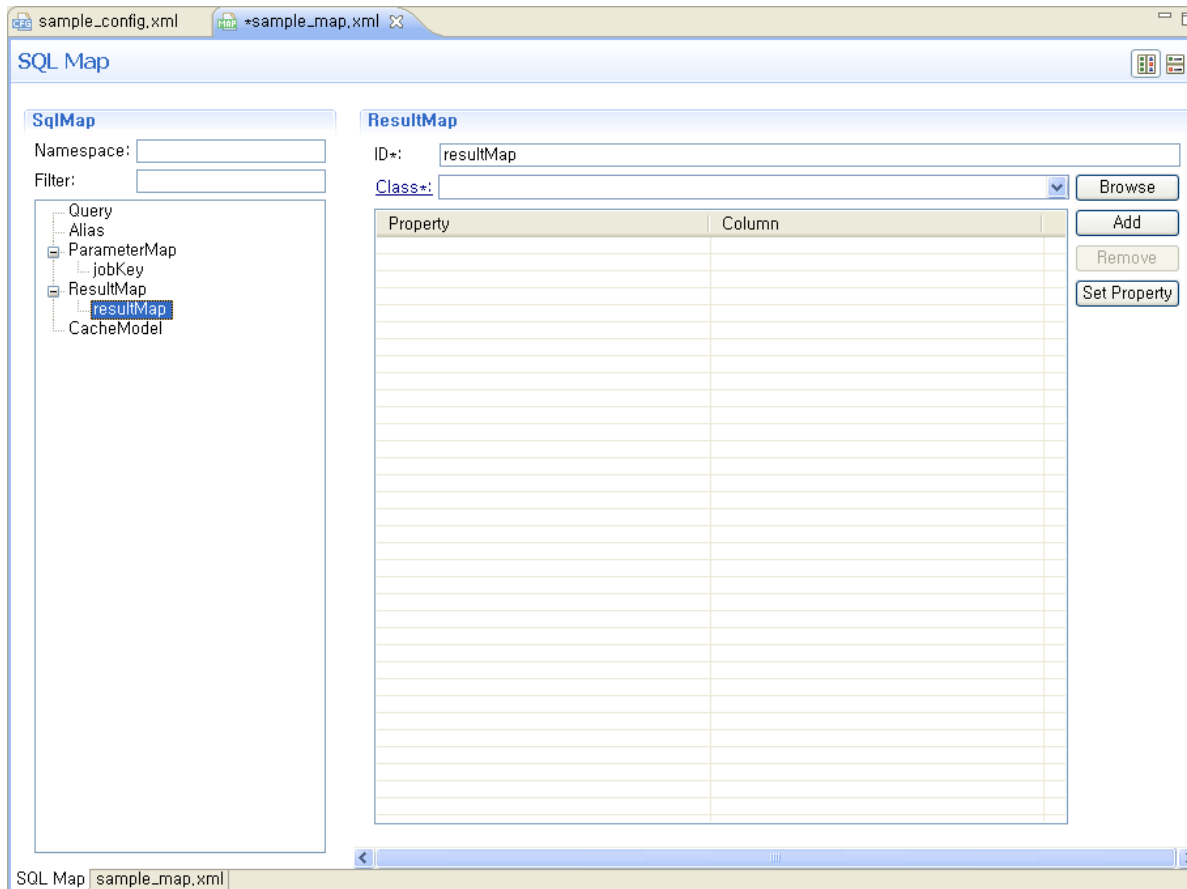
- ID 변경 : deptNo
- Class 선택 : java.lang.String
- 매개변수 추가



LAB 1-6 DBIO 실습(iBatis)(15/20)

❑ Result Map 작성

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



LAB 1-6 DBIO 실습(iBatis)(16/20)

- ID 변경 : resultMap
- Class 선택 : java.lang.String
- 속성 추가 : (Property : deptName / Column : DEPT_NAME)

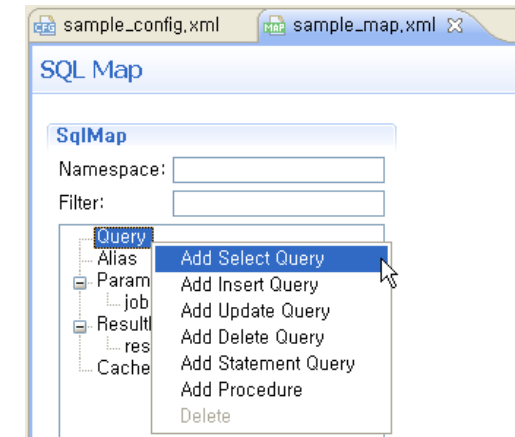
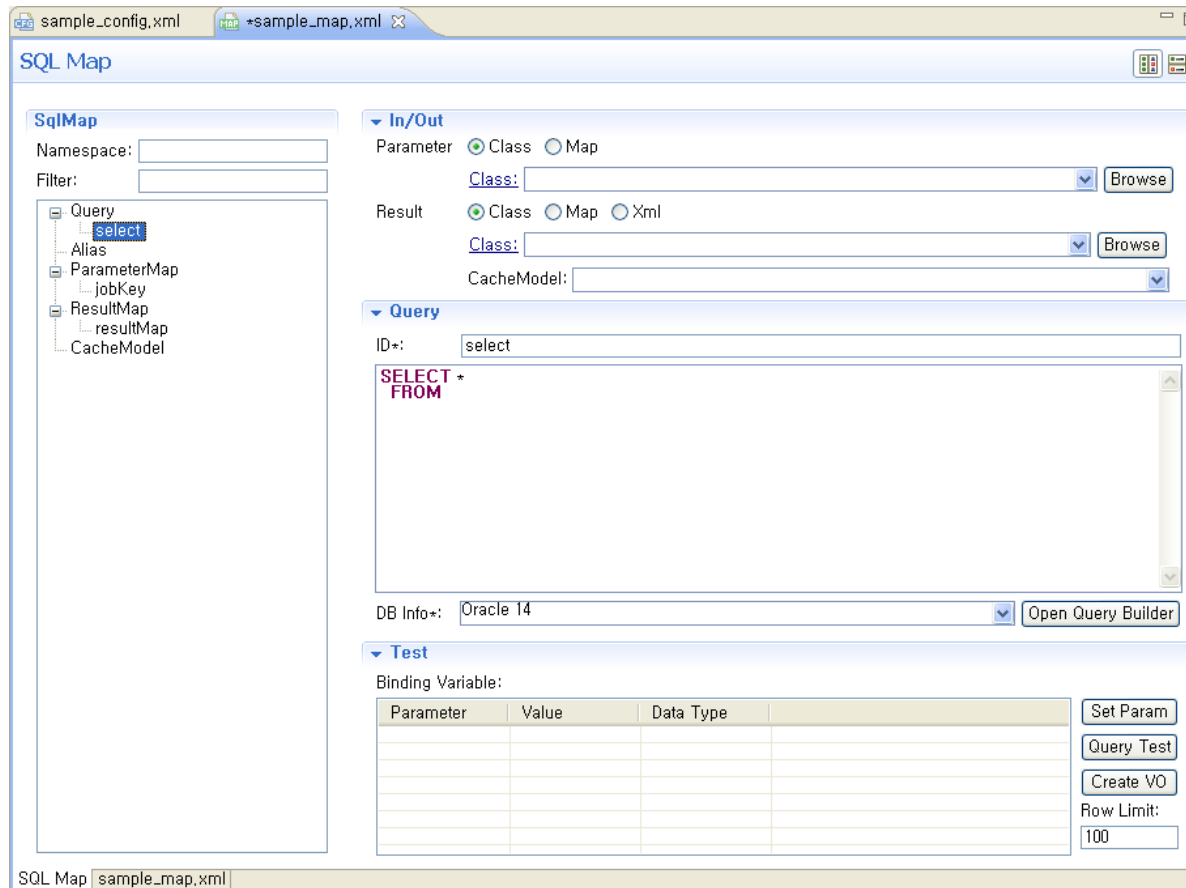
The screenshot shows the iBatis SQL Map configuration tool. The top bar displays two tabs: *sample_config.xml and *sample_map.xml. The main window is titled "SQL Map". On the left, there is a "SqlMap" panel with a tree view showing the project structure: Query, Alias, ParameterMap (containing parameterMap), ResultMap (containing resultMap), and CacheModel. The "resultMap" item is selected. The main area is divided into two sections: "SqlMap" and "ResultMap". The "ResultMap" section contains the following fields: "ID*" with the value "resultMap" (circled in red with a 1), and "Class*" with the value "java.lang.String" (circled in red with a 2). Below these fields is a table with two columns: "Property" and "Column". The first row of the table has "deptName" in the "Property" column (circled in red with a 4) and "DEPT_NAME" in the "Column" column. To the right of the table is a vertical toolbar with buttons: "Add" (circled in red with a 3), "Remove", and "Set Property".

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

LAB 1-6 DBIO 실습(iBatis)(17/20)

❑ Query 작성

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



LAB 1-6 DBIO 실습(iBatis)(18/20)

- ID 변경 : selectDept

- Query 작성 :

DB Info : hsqldb 선택

[Open Query Builder] – 쿼리 생성 (SELECT * FROM PUBLIC.DEPT)

- Parameter 입력 : Map (deptNo)

- Result 입력 : Map (resultMap)

- Query Test

sample_schema_hsql.sql *sample_config.xml *sample_map.xml

SQL Map

SqlMap

Namespace:

Filter:

- Query
 - selectDept
 - Alias
- ParameterMap
 - deptNo
- ResultMap
 - resultMap
- CacheModel

In/Out

Parameter ☐ Class ☒ Map ③

Map: deptNo

Result ☐ Class ☒ Map ☐ Xml

Map: resultMap

CacheModel:

Query

ID*: selectDept ①

SELECT DEPT_NAME
FROM DEPT WHERE DEPT_NO = #deptNo#

DB Info*: New HSQLDB ②

Test

Binding Variable:

Parameter	Value	Data Type

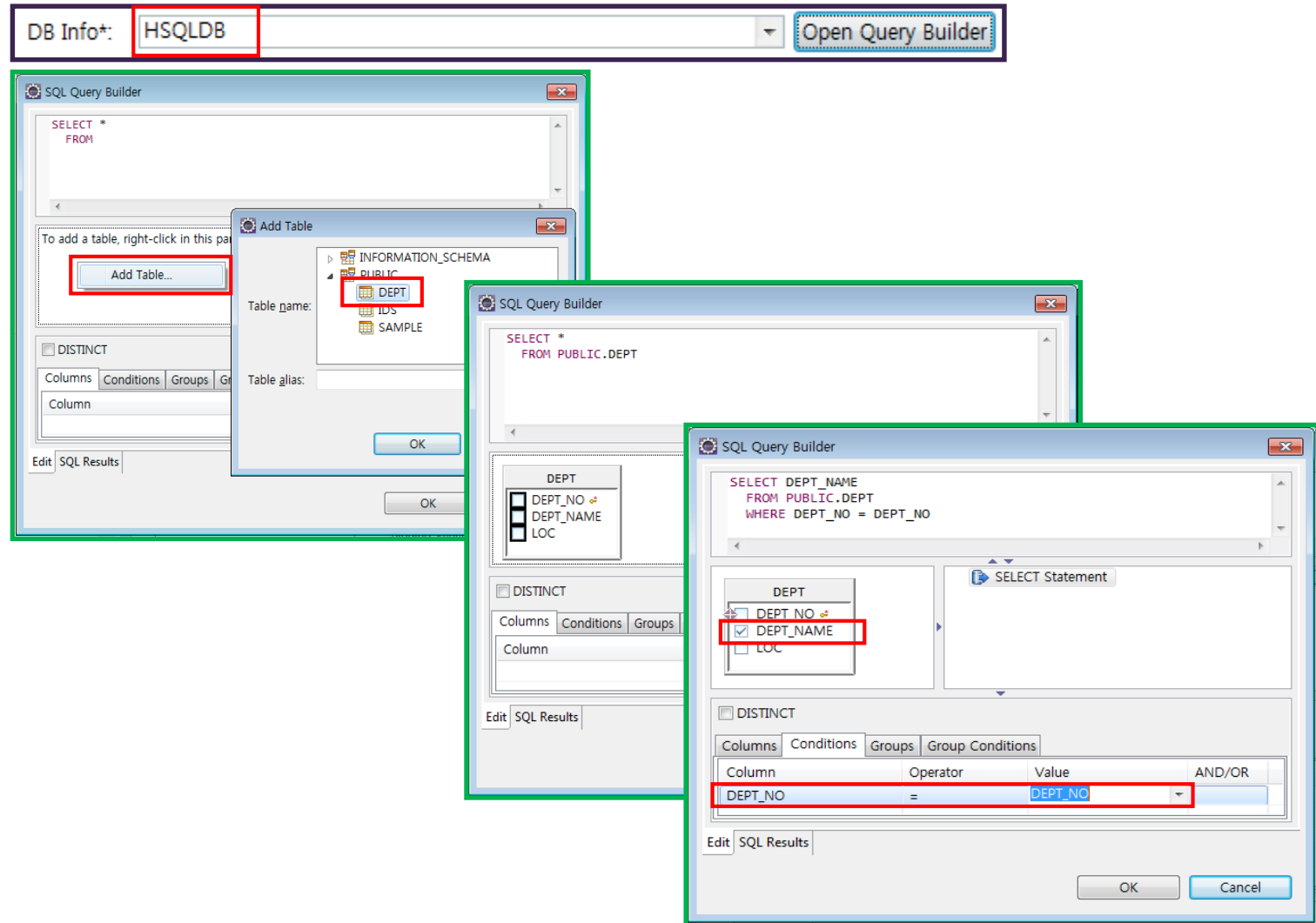
④

Row Limit: 100

LAB 1-6 DBIO 실습(iBatis)(19/20)

❑ Query 테스트

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



LAB 1-6 DBIO 실습(iBatis)(20/20)

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

- SqlMap** panel on the left showing a tree view with `selectDept` selected.
- In/Out** panel with `Parameter` set to `Map` and `Result` set to `Map`.
- Query** panel showing the SQL query: `SELECT DEPT_NAME FROM DEPT WHERE DEPT_NO = #deptNo#`.
- Test** panel with a `Binding Variable` table and buttons for `Set Param`, `Query Test`, and `Create VO`.
- DB Info** dropdown set to `New HSQLDB`.
- Row Limit** set to `100`.
- Results** panel at the bottom showing the output: `DEPT_NAME` and `ACCOUNTING`.

Red annotations highlight the following steps:

- ① `DB Info` dropdown menu.
- ② `Set Param` button.
- ③ `Value` column in the `Binding Variable` table.
- ④ `Query Test` button.

A red arrow points from the `Query Test` button to the `ACCOUNTING` result, with the text **결과확인** (Check Result).

테스트 가능 Query 형태는 홈페이지 (<http://www.egovframe.go.kr>)의 개발 환경 가이드 참조

LAB 1-7 DBIO 실습(MyBatis)(1/18)

❑ DBIO 사용방법을 설치부터 활용까지 간략하게 훑어본다.

❑ 실습 순서

1. DB실행

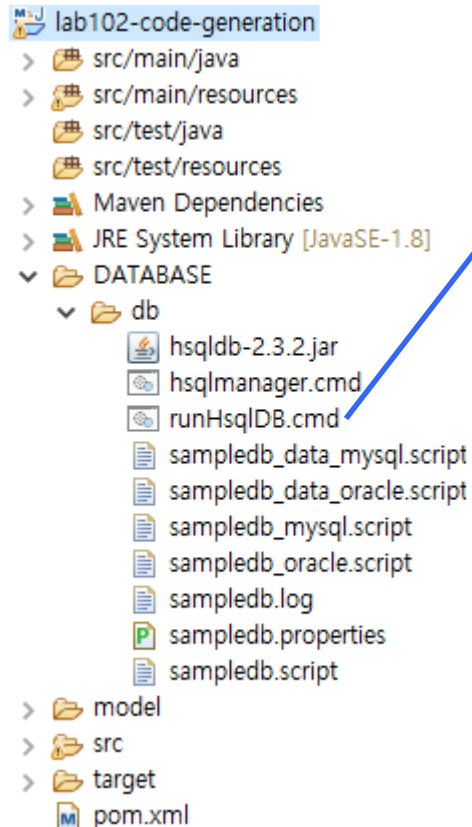
2. DBIO 실습

- eGovFrame Perspective 실행
- Project 생성
- Mapper Configuration 파일 생성
- Mapper 파일 생성
- Mapper 파일 편집
 1. Result Map 작성
 2. Query 작성

3. Query 테스트

LAB 1-7 DBIO 실습(MyBatis)(2/18)

❑ 제공된 Lab의 DATABASE의 db폴더에 있는 runHsqlDB를 실행하여 DB를 실행



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

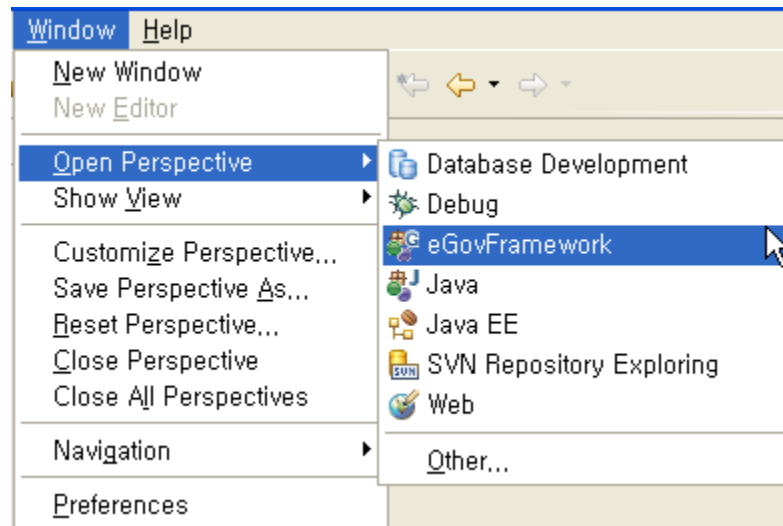
C:\WeGovFrame-3.8.0\workspace.edu\lab102-code-generation\DATABASE\db>runHsqlDB.cmd

C:\WeGovFrame-3.8.0\workspace.edu\lab102-code-generation\DATABASE\db>C:\WeGovFrame-3.8.0\bin\jdk8u202-b08\bin\java
-cp ./hsqldb-2.3.2.jar org.hsqldb.Server -database.0 sampledb -dbname.0 sampledb
[Server@117d9a3]: [Thread[main,5,main]]: checkRunning(false) entered
[Server@117d9a3]: [Thread[main,5,main]]: checkRunning(false) exited
[Server@117d9a3]: Startup sequence initiated from main() method
[Server@117d9a3]: Could not load properties from file
[Server@117d9a3]: Using cli/default properties only
[Server@117d9a3]: Initiating startup sequence...
[Server@117d9a3]: Server socket opened successfully in 10 ms.
[Server@117d9a3]: Database [index=0, id=0, db=file:sampledb, alias=sampledb] opened successfully in 229 ms.
[Server@117d9a3]: Startup sequence completed in 240 ms.
[Server@117d9a3]: 2019-03-13 13:59:38.354 HSQLDB server 2.3.2 is online on port 9001
[Server@117d9a3]: To close normally, connect and execute SHUTDOWN SQL
[Server@117d9a3]: From command line, use [Ctrl]+[C] to abort abruptly
```

LAB 1-7 DBIO 실습(MyBatis)(3/18)

❑ eGovFrame Perspective 실행

- Eclipse Menu > Window > Open Perspective > eGovFrame

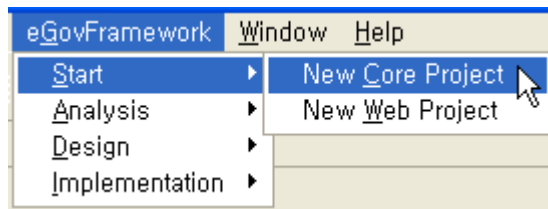


LAB 1-7 DBIO 실습(MyBatis)(4/18)

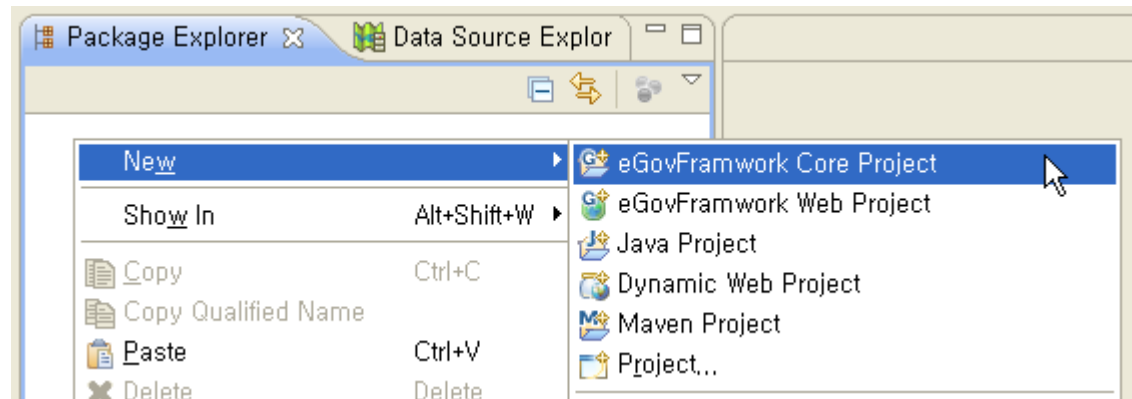
❑ Project 생성

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

방법 1

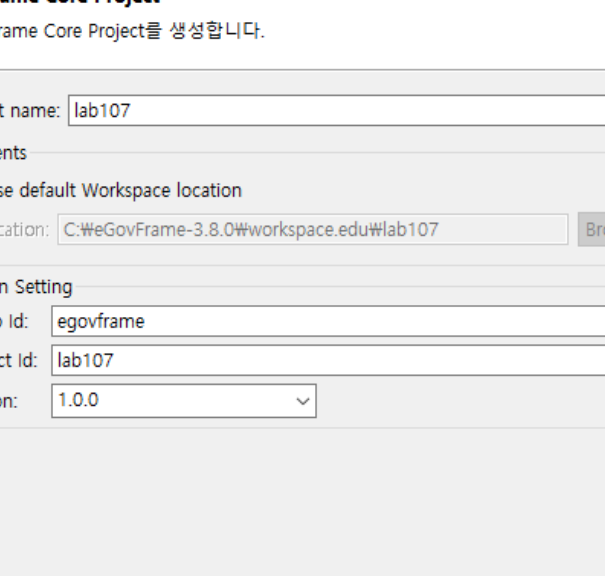


방법2



실습예제로 eGovFrame Core Project 선택

LAB 1-7 DBIO 실습(MyBatis)(5/18)



New eGovFrame Core Project

eGovFrame Core Project

eGovFrame Core Project를 생성합니다.

Project name: lab107

Contents

☒ Use default Workspace location

Location: C:\eGovFrame-3.8.0\workspace.edu\lab107 Browse...

Maven Setting

Group Id: egovframe

Artifact Id: lab107

Version: 1.0.0

Help < Back Next > Finish Cancel



New eGovFrame Core Project

Generate Example

예제 소스를 생성하시려면 아래 선택 버튼을 체크 하십시오.

☒ Generate Example

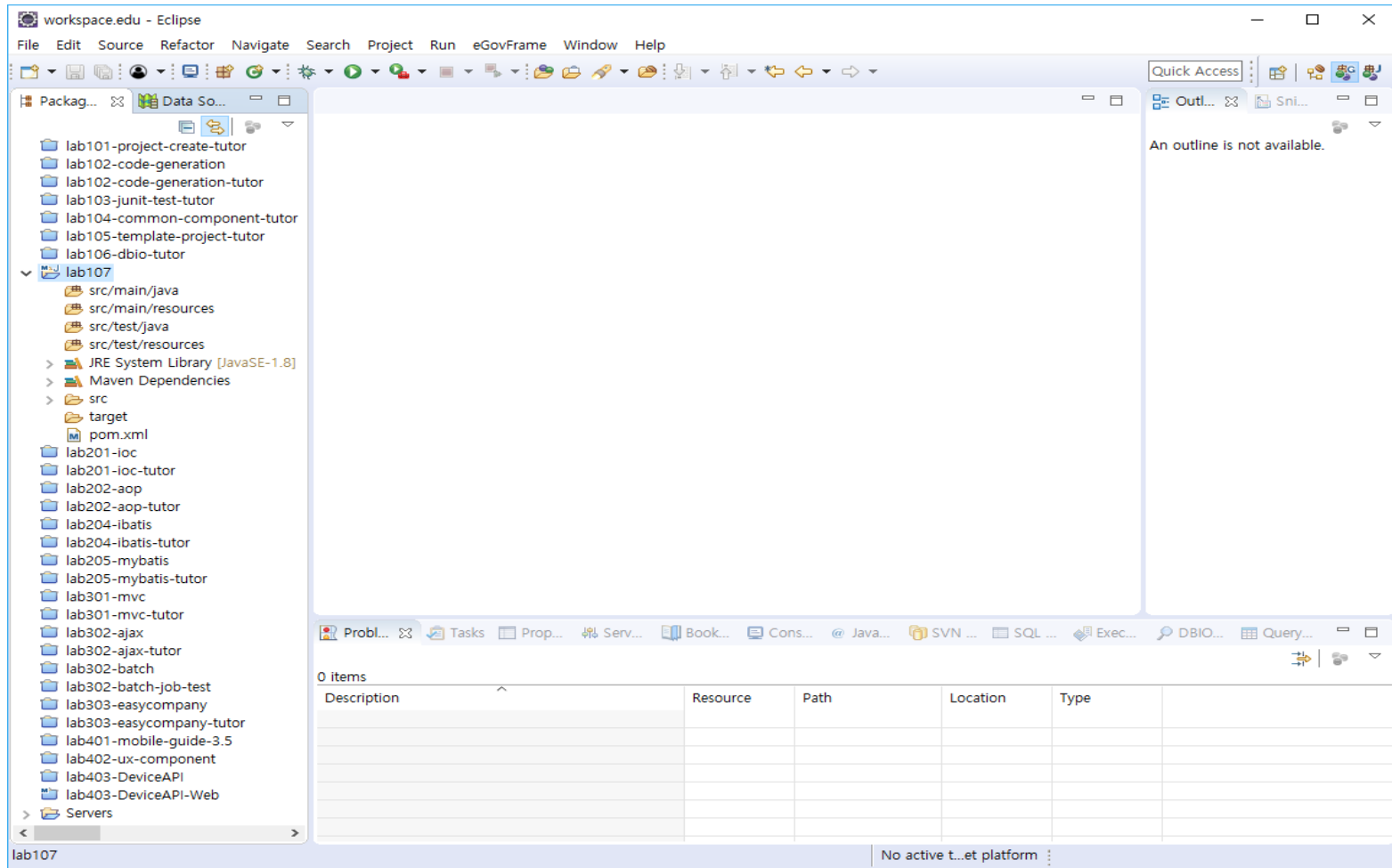
Files

File Name	File Type	File Size
-----------	-----------	-----------

< Back Next > Finish Cancel

LAB 1-7 DBIO 실습(MyBatis)(6/18)

- 결과

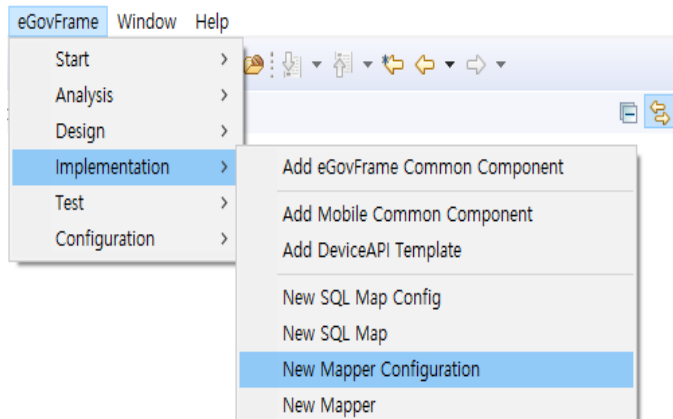


LAB 1-7 DBIO 실습(MyBatis)(7/18)

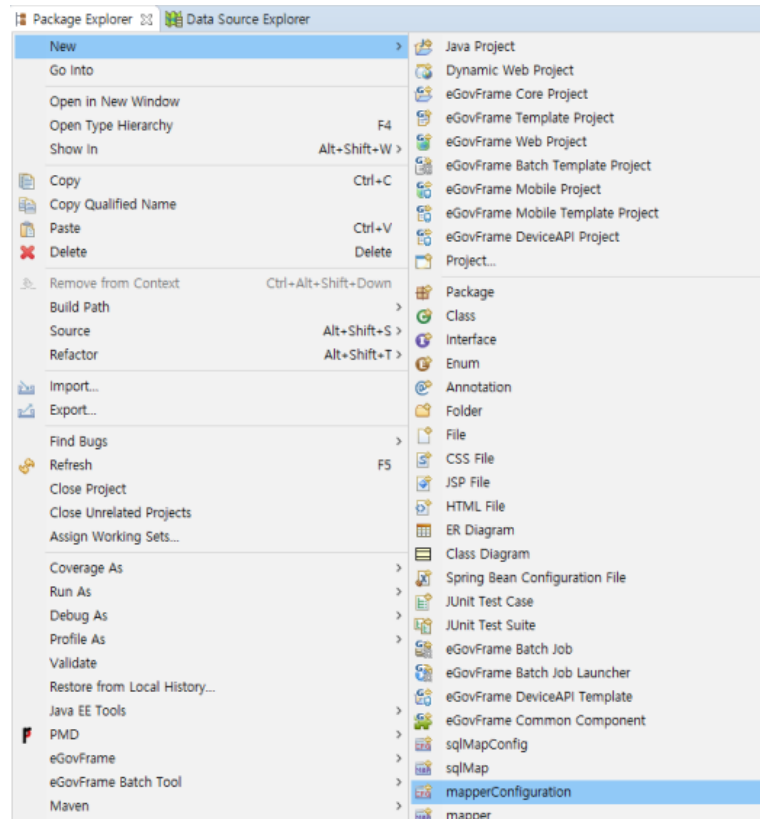
❑ Mapper Configuration 파일 생성

- 방법1 : Eclipse Menu > eGovFrame > Implementation > New Mapper Configuration
- 방법2 : Package Explorer > 마우스 오른쪽 버튼 클릭 > New > mapperConfiguration

방법 1

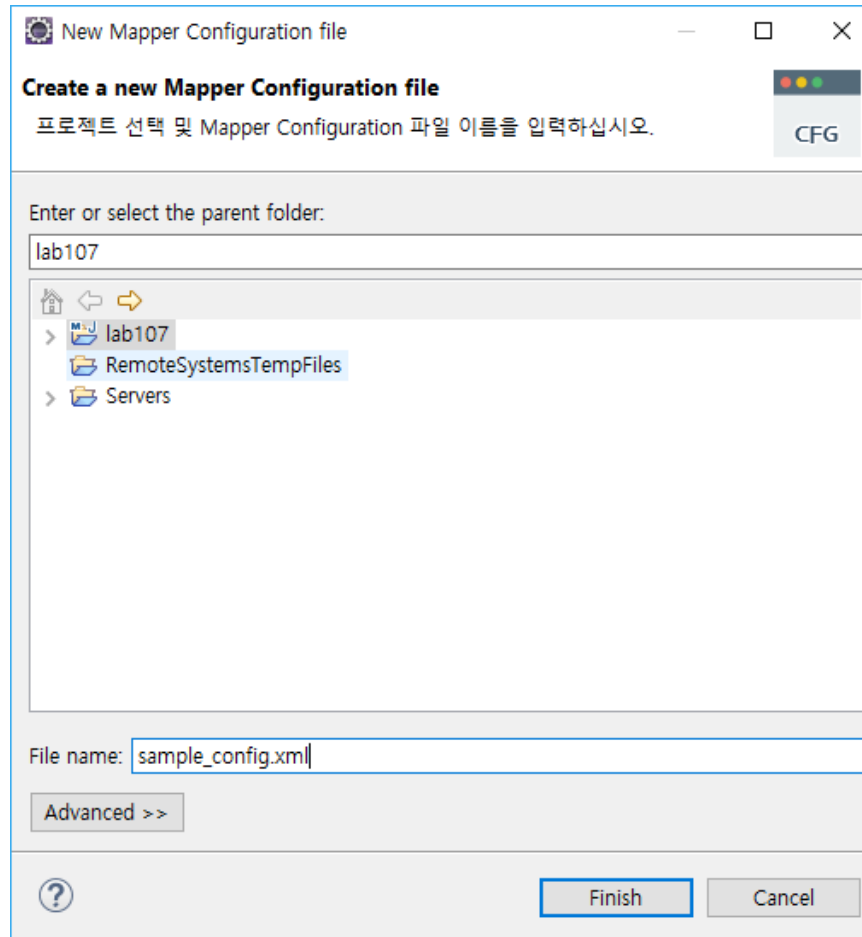


방법2



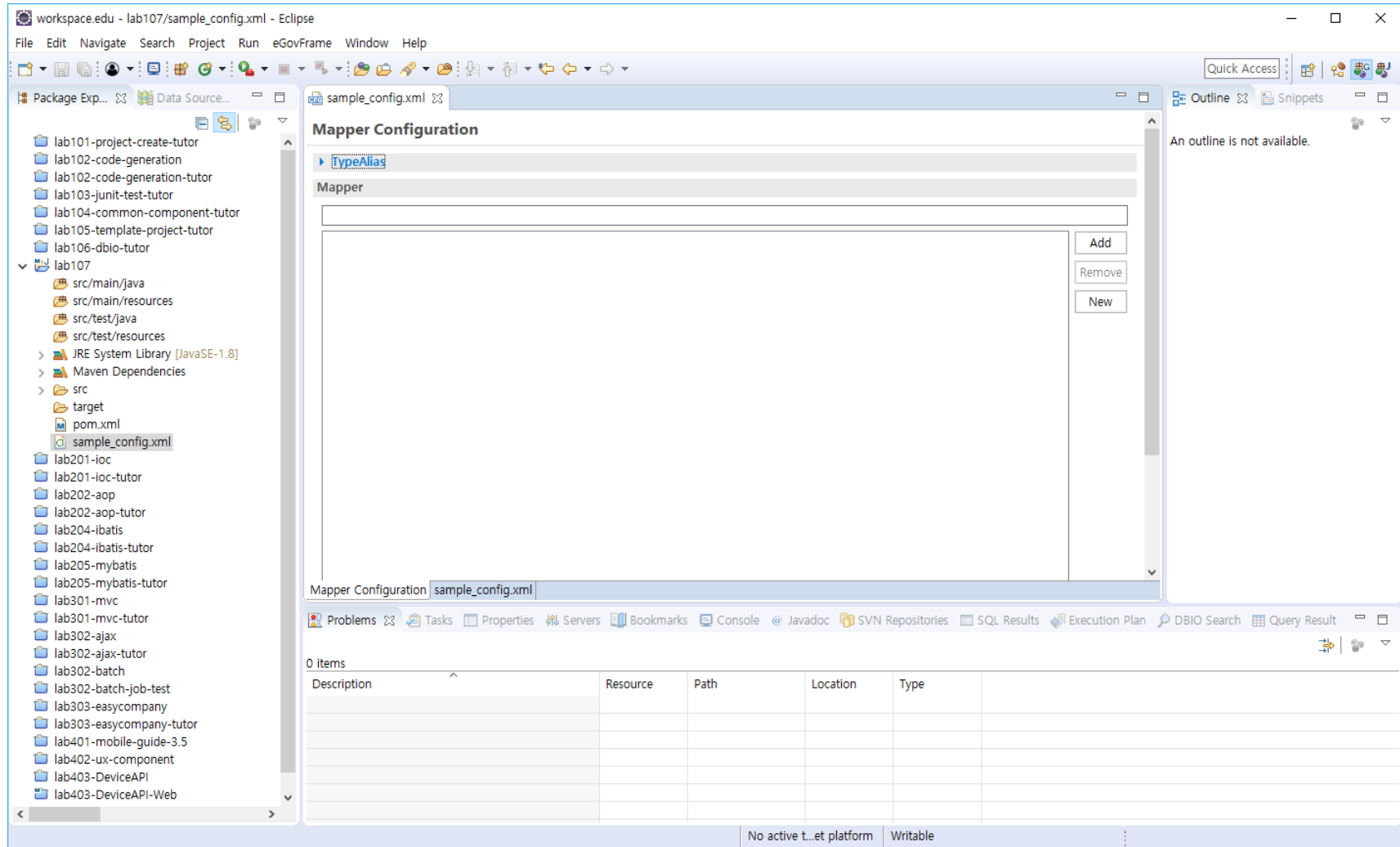
LAB 1-7 DBIO 실습(MyBatis)(8/18)

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



LAB 1-7 DBIO 실습(MyBatis)(9/18)

– 결과화면(Mapper Configuration Editor)

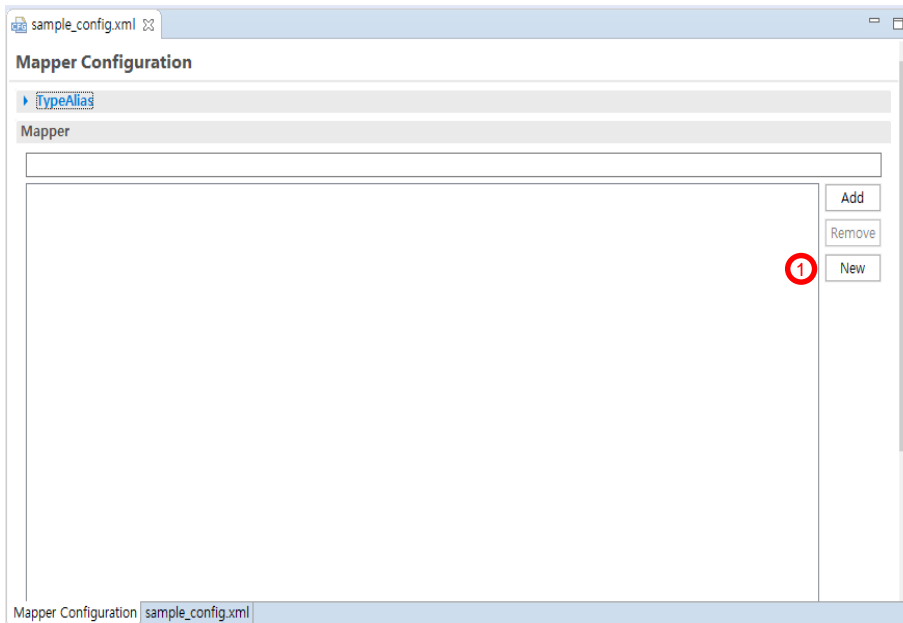


LAB 1-7 DBIO 실습(MyBatis)(10/18)

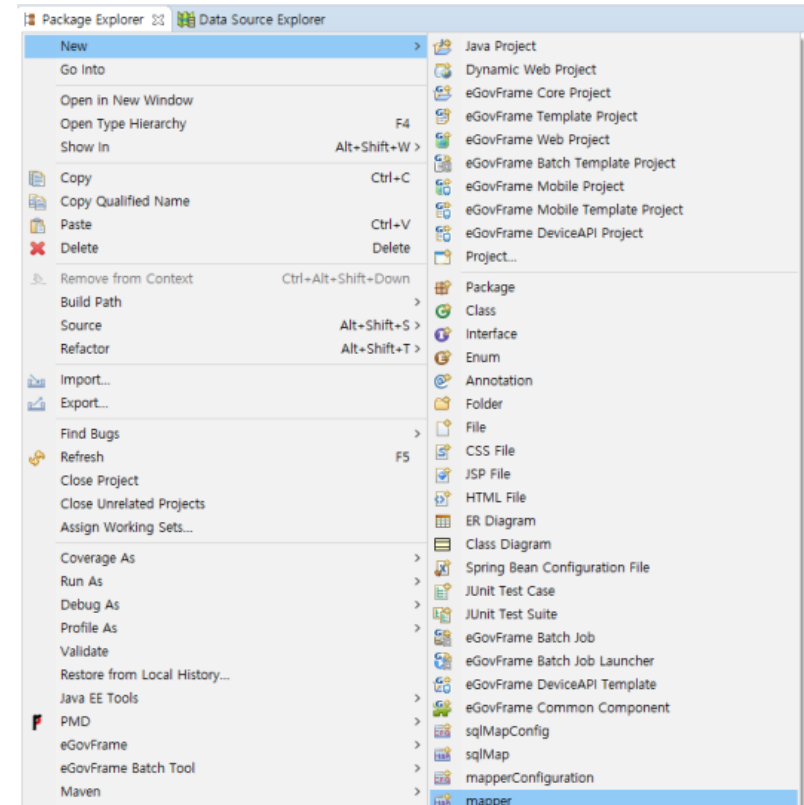
❑ Mapper 파일 생성

- 방법1 : Mapper Configuration Editor > New 버튼 클릭 (파일 생성과 동시에 Mapper 목록에 추가)
- 방법2 : Package Explorer > 마우스 오른쪽 버튼 클릭 > New > mapper

방법1

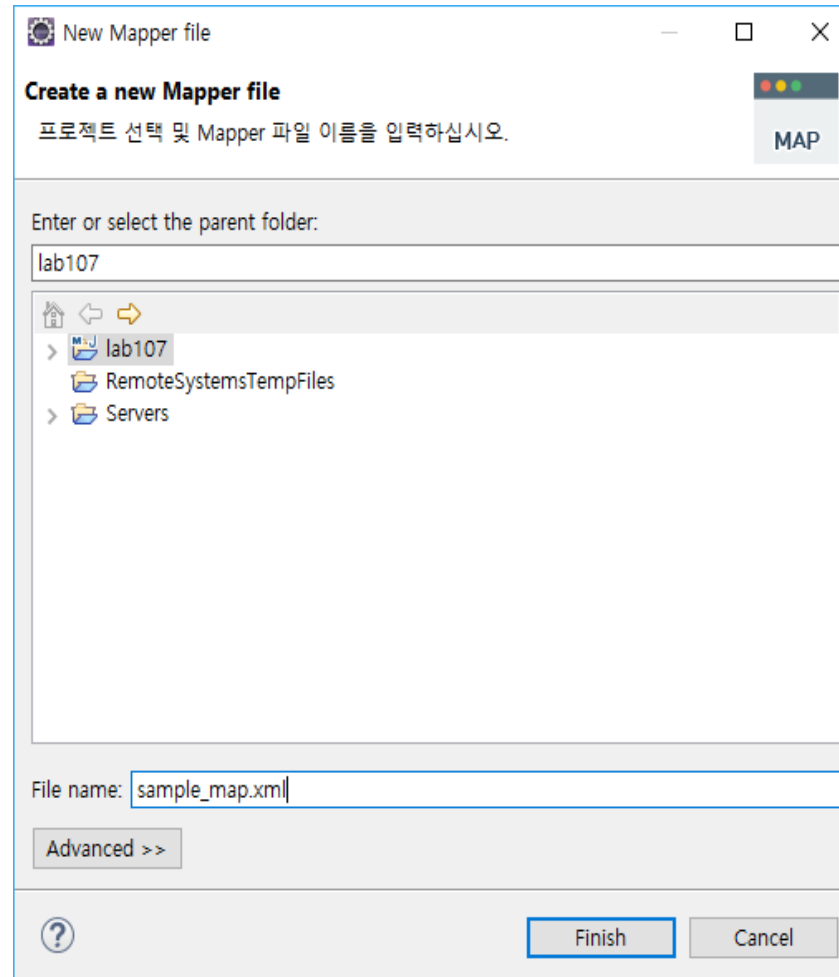


방법2



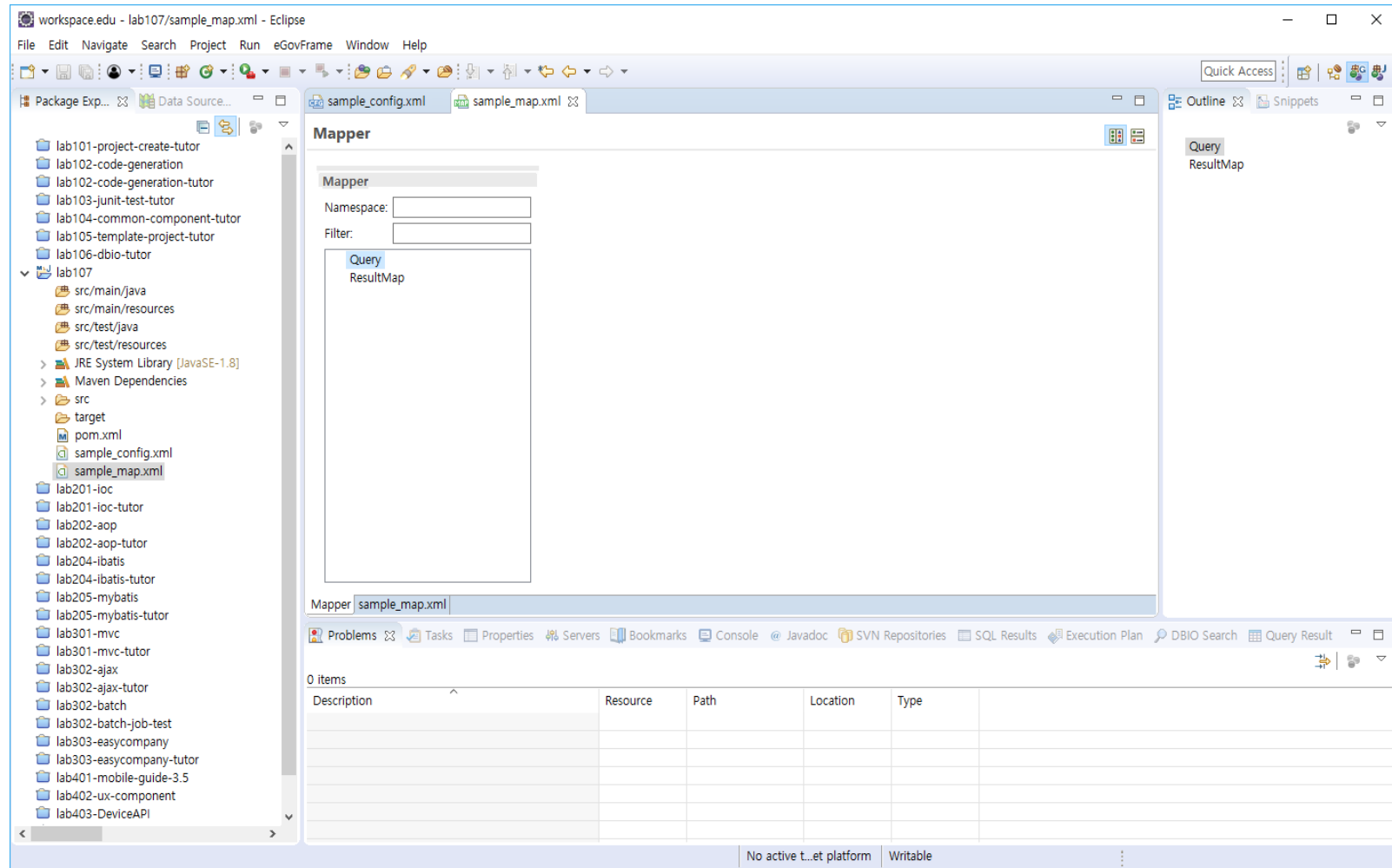
LAB 1-7 DBIO 실습(MyBatis)(11/18)

- 파일 저장 폴더 선택
- 파일명 입력



LAB 1-7 DBIO 실습(MyBatis)(12/18)

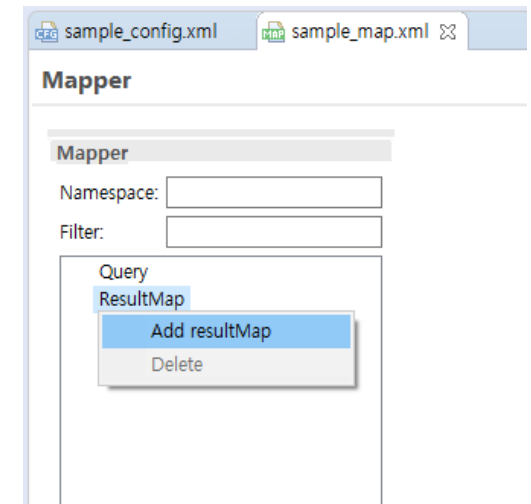
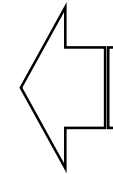
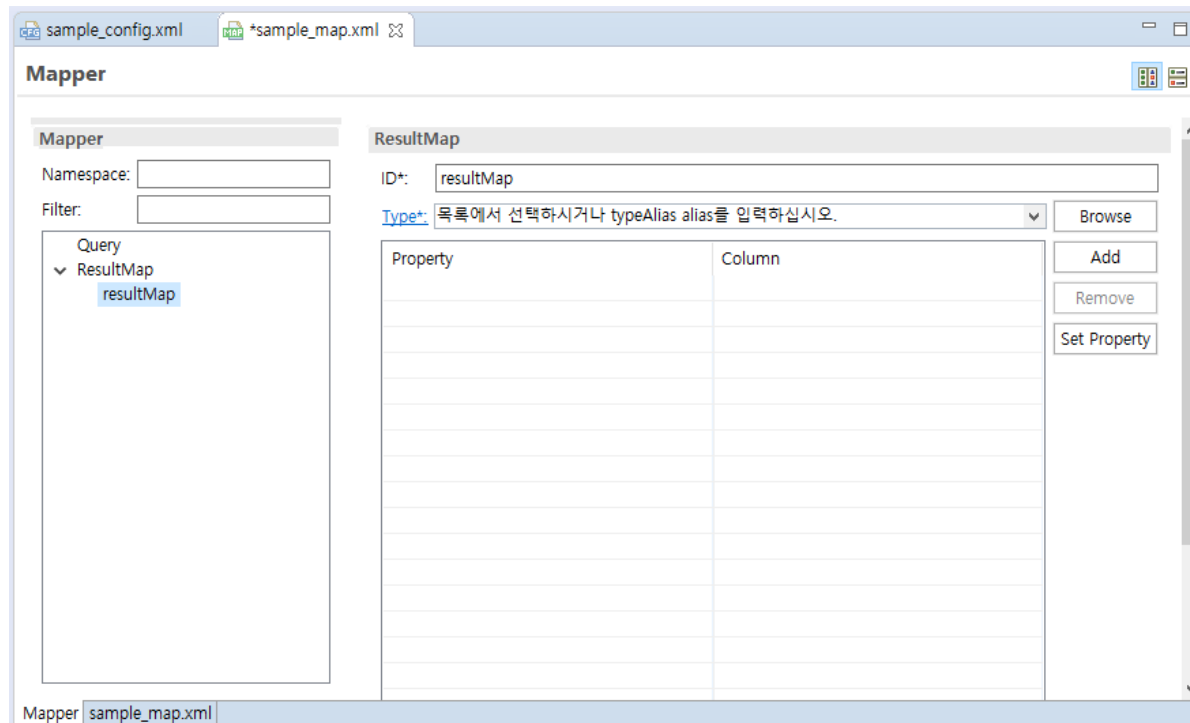
– 결과 화면(Mapper Editor)



LAB 1-7 DBIO 실습(MyBatis)(13/18)

❑ Result Map 작성

- Mapper Editor > Mapper Tree > ResultMap Branch 선택 > 마우스 오른쪽 버튼 > Add resultMap 메뉴



LAB 1-7 DBIO 실습(MyBatis)(14/18)

- ID 변경 : resultMap
- Type 선택 : java.lang.String
- 속성 추가 : (Property : deptName / Column : DEPT_NAME)

The screenshot shows the MyBatis IDE Mapper configuration window. The 'ResultMap' tab is active, displaying the configuration for a resultMap with ID 'resultMap' and Type 'java.lang.String'. A table lists the property 'deptName' mapped to the column 'DEPT_NAME'. The 'Set Property' button is visible on the right.

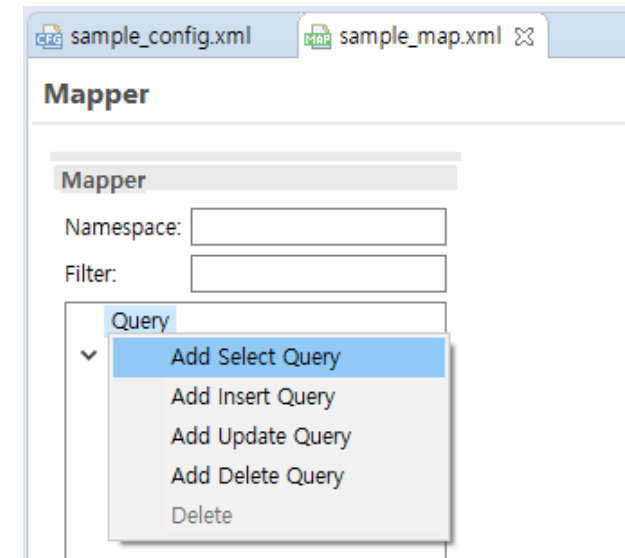
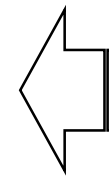
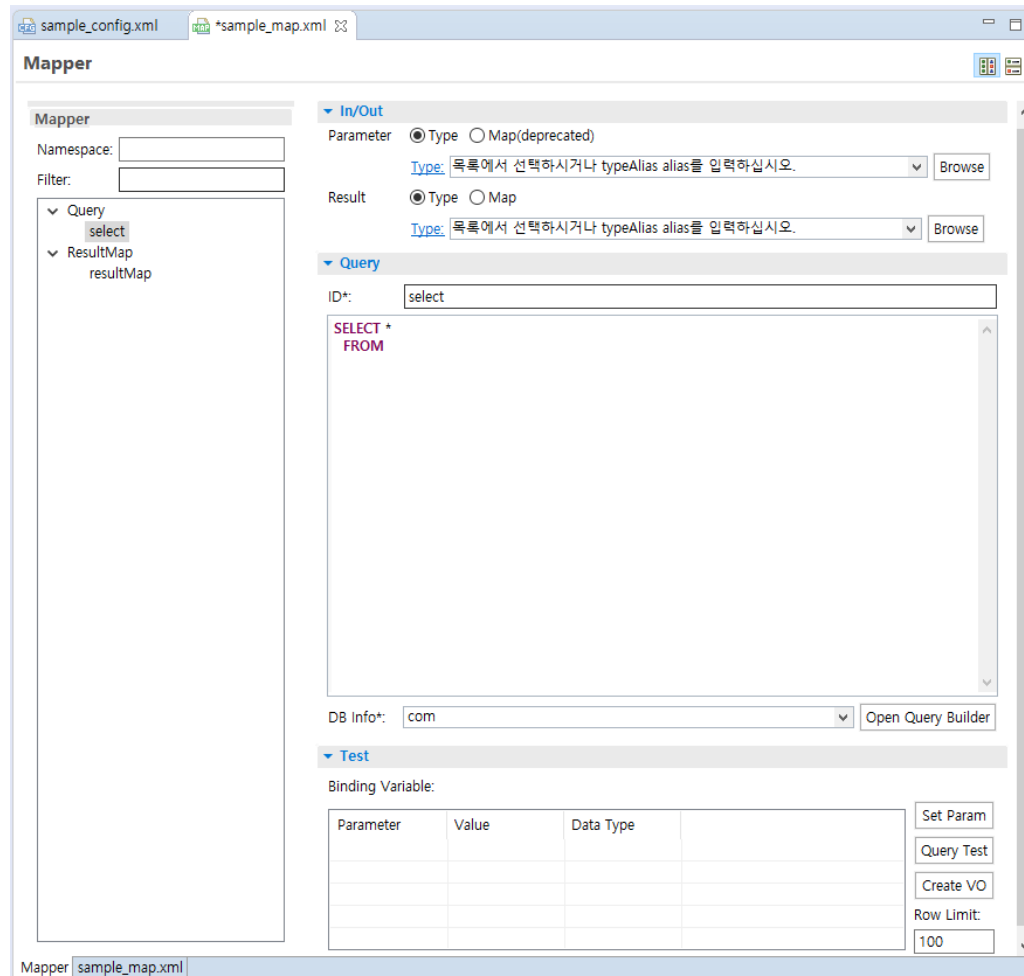
Property	Column
deptName	DEPT_NAME

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

LAB 1-7 DBIO 실습(MyBatis)(15/18)

❑ Query 작성

- Mapper Editor > Mapper Tree > Query Branch 선택 > 마우스 오른쪽 버튼 > Add Select Query 메뉴



LAB 1-7 DBIO 실습(MyBatis)(16/18)

- ID 변경 : selectDept

- Query 작성 :

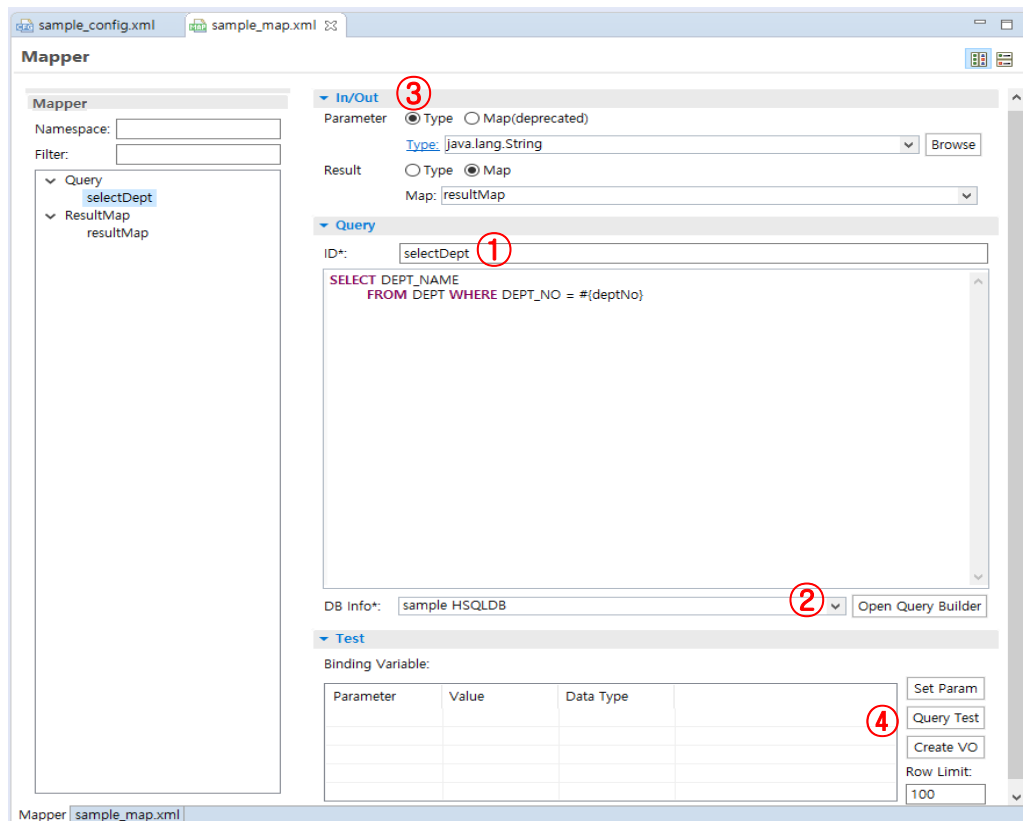
DB Info : hsqldb 선택

[Open Query Builder] – 쿼리 생성 (SELECT * FROM PUBLIC.DEPT)

- Parameter 입력 : Type (java.lang.String)

- Result 입력 : Map (resultMap)

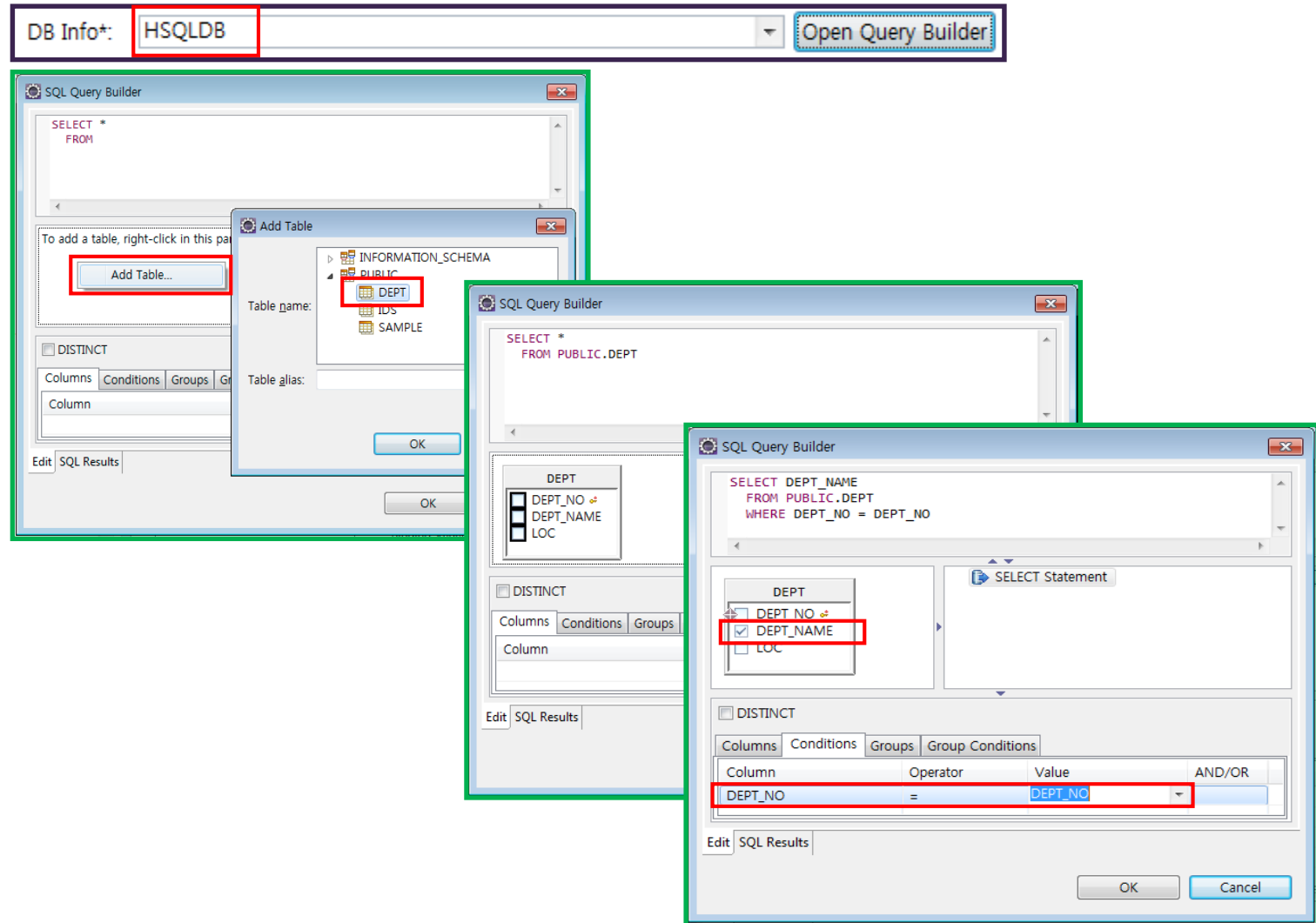
- Query Test



LAB 1-7 DBIO 실습(MyBatis)(17/18)

❑ Query 테스트

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



LAB 1-7 DBIO 실습(MyBatis)(18/18)

The screenshot shows the eGovFrame DBIO tool interface. The top bar displays two tabs: 'sample_config.xml' and 'sample_map.xml'. The main window is titled 'Mapper' and contains several sections:

- Mapper**: Includes fields for 'Namespace' and 'Filter', and a tree view showing 'Query' (with 'selectDept') and 'ResultMap' (with 'resultMap').
- In/Out**: Contains 'Parameter' (Type: ☒, Map(deprecated): ☐, Type: java.lang.String) and 'Result' (Type: ☐, Map: ☒, Map: resultMap).
- Query**: Shows the SQL query: `SELECT DEPT_NAME FROM DEPT WHERE DEPT_NO = #{deptNo}`. Below the query is a 'DB Info*' dropdown menu set to 'sample HSQLDB' (marked with a red circle 1) and an 'Open Query Builder' button.
- Test**: Contains a 'Binding Variable' table and buttons for 'Set Param' (2), 'Query Test' (4), and 'Create VO'. The 'Binding Variable' table has the following data:

Parameter	Value	Data Type
deptNo	10 (3)	String

Below the 'Test' section, there are buttons for 'Set Param', 'Query Test', 'Create VO', and a 'Row Limit' dropdown set to '100'. A red arrow points from the 'Query Test' button to the '결과확인' (Check Result) label in the bottom left corner. The bottom left corner also shows the result of the query: 'DEPT_NAME' and 'ACCOUNTING'.

테스트 가능 Query 형태는 홈페이지
(<http://www.egovframe.go.kr>)의 개발
환경 가이드 참조