



박 경 태

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고급 자바 프로그래밍
: STS를 이용한 Spring 프로그래밍

Mybatis 프레임워크 시작하기

1.1 Mybatis 프레임워크 2가지 특징

- **한 두 줄의 자바 코드로 DB 연동을 처리한다는 것**

- XML 파일에 저장된 SQL 명령어를 대신 실행하고 실행 결과를 VO 자바 객체에 자동으로 매핑시켜 줌. ➔ 데이터매퍼(Data Mapper)라고 함

- **SQL 명령어를 자바 코드에서 분리하여 XML파일에 따로 관리한다는 것**

- 만약 SQL 명령어가 DAO 같은 자바 클래스에 저장되면 SQL 명령어만 수정하는 상황에서도 자바 클래스를 다시 컴파일해야 한다.
- SQL 명령어들을 한 곳에 모아서 관리하기도 쉽지 않다.
- 결국, SQL 명령어에 대한 통합 관리를 위해서라도 자바 소스에서 SQL을 분리하는 게 매우 중요함.

XML파일 분리의 예

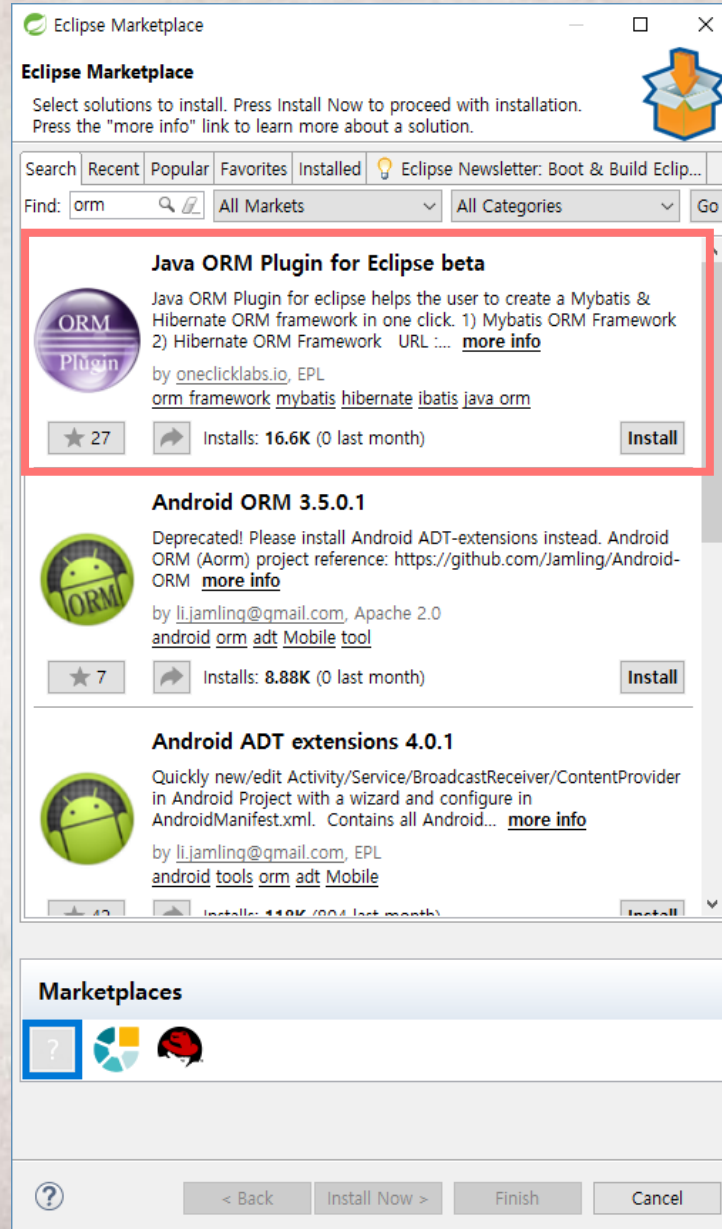
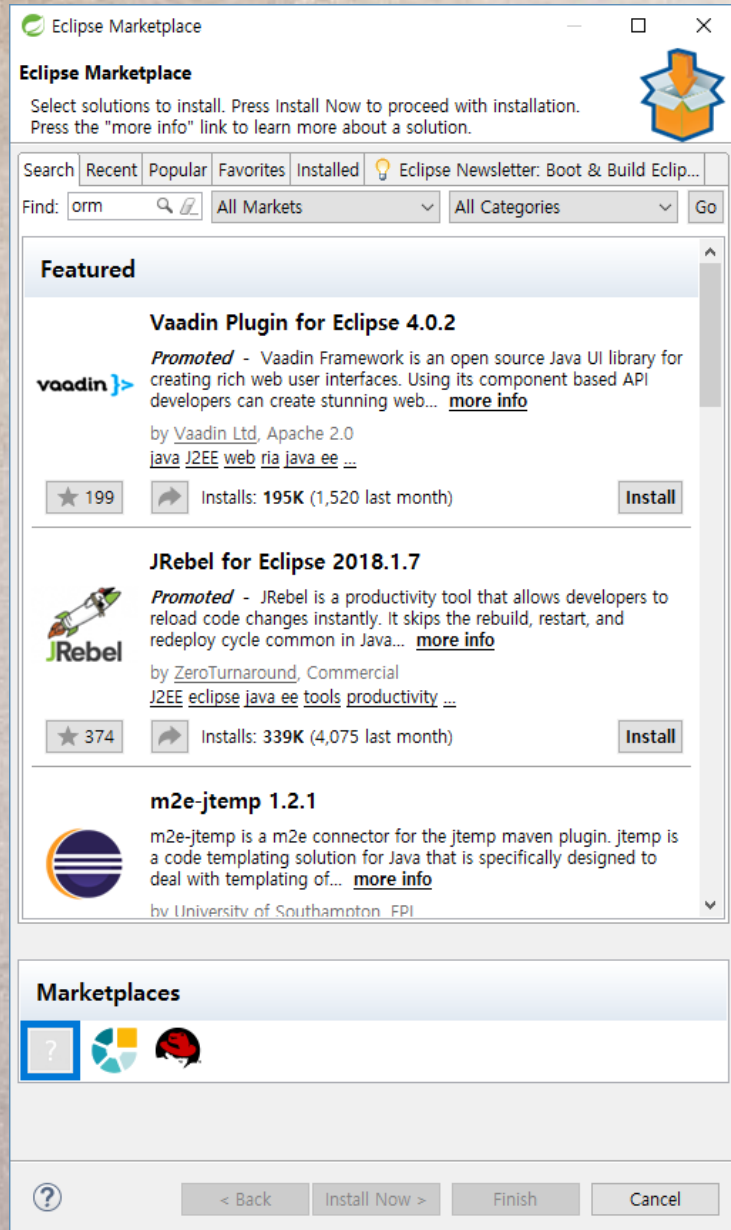
```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE mapper
  PUBLIC "-//mybatis.org//DTD Config 3.0//EN"
  "http://mybatis.org/dtd/mybatis-3-mapper.dtd">

<mapper namespace="kr.ac.inje.comsi.board.BoardVO">

  <select id="getBoardList" resultType="kr.ac.inje.comsi.board.BoardVO" >
    select * from board
  </select>

</mapper>
```


1.2 ORM 플러그인 설치 → 제대로 다운로드가 안 됨 π π



1.3 라이브러리 추가 – Maven Dependency(pom.xml파일)

The screenshot shows the Maven IDE interface with the 'Dependencies' tab selected. The 'BroadWeb/pom.xml' file is open. The 'Dependencies' list on the left includes:

- spring-context : \${org.springframework-version}
- spring-webmvc : \${org.springframework-version}
- aspectjweaver : \${org.aspectj-version}
- slf4j-api : \${org.slf4j-version}
- jcl-over-slf4j : \${org.slf4j-version} [runtime]
- slf4j-log4j12 : \${org.slf4j-version} [runtime]
- log4j : 1.2.15 [runtime]
- javax.inject : 1
- servlet-api : 2.5 [provided]
- jsp-api : 2.1 [provided]
- jstl : 1.2
- junit : 4.7 [test]
- h2 : 1.4.197
- commons-dbcp2 : 2.1.1
- spring-jdbc : 4.3.15.RELEASE

The 'Add...' button is highlighted with a red box. The 'Dependency Management' tab on the right is empty. The bottom status bar shows the following tabs: Overview, Dependencies, Dependency Hierarchy, Effective POM, and pom.xml.

To manage your transitive dependency exclusions, please use the [Dependency Hierarchy](#) page.

Select Dependency

Group Id: *org.mybatis

Artifact Id: *mybatis

Version: 3.4.1

Scope: compile

Enter groupId, artifactId or sha1 prefix or pattern (*):

Index downloads are disabled, search results may be incomplete.

Search Results:

OK Cancel

Group Id: org.mybatis
Artifact Id: mybatis
Version: 3.4.1

Select Dependency

Group Id: *

Artifact Id: *

Version: Scope:

Enter groupId, artifactId or sha1 prefix or pattern (*):

⚠ Index downloads are disabled, search results may be incomplete.

Search Results:

?

OK Cancel

Group Id: org.mybatis
Artifact Id: mybatis-spring
Version: 1.3.0

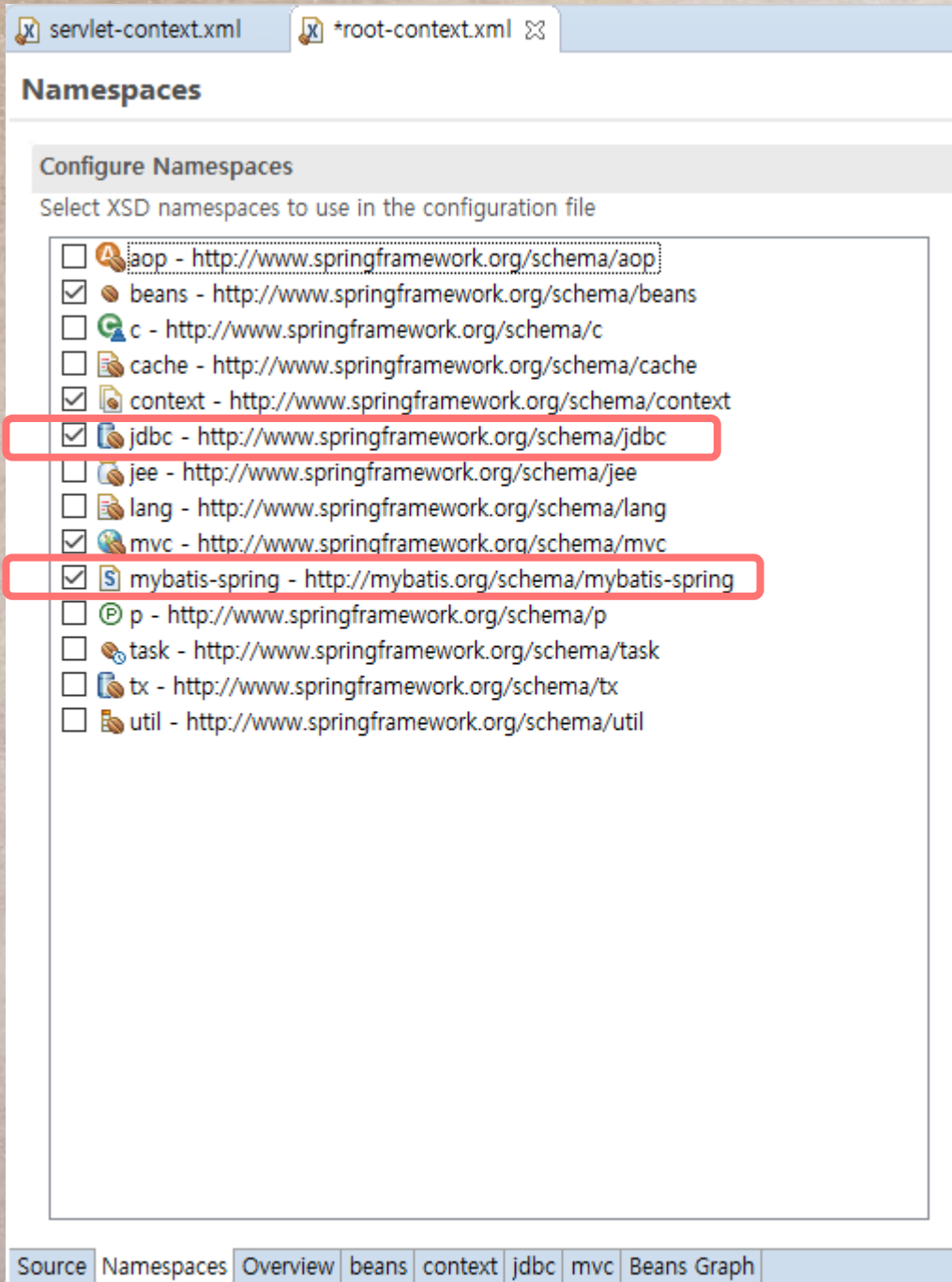
> src/test/resources

▼ Maven Dependencies

- > spring-context-4.3.15.RELEASE.jar - C:\Users\Kyungtae\m2\repository\org\springframework\spring-context\4.3.15.RELEASE.jar
- > spring-aop-4.3.15.RELEASE.jar - C:\Users\Kyungtae\m2\repository\org\springframework\spring-aop\4.3.15.RELEASE.jar
- > spring-beans-4.3.15.RELEASE.jar - C:\Users\Kyungtae\m2\repository\org\springframework\spring-beans\4.3.15.RELEASE.jar
- > spring-core-4.3.15.RELEASE.jar - C:\Users\Kyungtae\m2\repository\org\springframework\spring-core\4.3.15.RELEASE.jar
- > spring-expression-4.3.15.RELEASE.jar - C:\Users\Kyungtae\m2\repository\org\springframework\spring-expression\4.3.15.RELEASE.jar
- > spring-webmvc-4.3.15.RELEASE.jar - C:\Users\Kyungtae\m2\repository\org\springframework\spring-webmvc\4.3.15.RELEASE.jar
- > spring-web-4.3.15.RELEASE.jar - C:\Users\Kyungtae\m2\repository\org\springframework\spring-web\4.3.15.RELEASE.jar
- > aspectjweaver-1.6.10.jar - C:\Users\Kyungtae\m2\repository\org\aspectj\aspectjweaver\1.6.10.jar
- > slf4j-api-1.6.6.jar - C:\Users\Kyungtae\m2\repository\org\slf4j\slf4j-api\1.6.6.jar
- > jcl-over-slf4j-1.6.6.jar - C:\Users\Kyungtae\m2\repository\org\slf4j\jcl-over-slf4j\1.6.6.jar
- > slf4j-log4j12-1.6.6.jar - C:\Users\Kyungtae\m2\repository\org\slf4j\slf4j-log4j12\1.6.6.jar
- > log4j-1.2.15.jar - C:\Users\Kyungtae\m2\repository\log4j\log4j\1.2.15.jar
- > javax.inject-1.jar - C:\Users\Kyungtae\m2\repository\javax\inject\javax.inject\1.jar
- > servlet-api-2.5.jar - C:\Users\Kyungtae\m2\repository\javax\servlet\servlet-api\2.5.jar
- > jsp-api-2.1.jar - C:\Users\Kyungtae\m2\repository\javax\servlet\jsp\jsp-api\2.1.jar
- > jstl-1.2.jar - C:\Users\Kyungtae\m2\repository\javax\servlet\jstl\jstl\1.2.jar
- > junit-4.7.jar - C:\Users\Kyungtae\m2\repository\junit\junit\4.7.jar
- > h2-1.4.197.jar - C:\Users\Kyungtae\m2\repository\com\h2database\h2\1.4.197.jar
- > commons-dbcp2-2.1.1.jar - C:\Users\Kyungtae\m2\repository\org\apache\commons\commons-dbcp2\2.1.1.jar
- > commons-pool2-2.4.2.jar - C:\Users\Kyungtae\m2\repository\org\apache\commons\commons-pool2\2.4.2.jar
- > commons-logging-1.2.jar - C:\Users\Kyungtae\m2\repository\commons-logging\commons-logging\1.2.jar
- > spring-jdbc-4.3.15.RELEASE.jar - C:\Users\Kyungtae\m2\repository\org\springframework\spring-jdbc\4.3.15.RELEASE.jar
- > spring-tx-4.3.15.RELEASE.jar - C:\Users\Kyungtae\m2\repository\org\springframework\spring-tx\4.3.15.RELEASE.jar
- > mybatis-3.4.1.jar - C:\Users\Kyungtae\m2\repository\org\mybatis\mybatis\3.4.1.jar
- > mybatis-spring-1.3.0.jar - C:\Users\Kyungtae\m2\repository\org\mybatis\mybatis-spring\1.3.0.jar

> JRE System Library [JavaSE-1.6]

mybatis-3.4.1.jar
mybatis-spring-1.3.0.jar



root-context.xml 파일

- Namespace 항목 추가하기
 - jdbc
 - mybatis-spring

root-context.xml 수정-DataSource 추가

servlet-context.xml root-context.xml applicationContext.xml

```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <beans xmlns="http://www.springframework.org/schema/beans"
3     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4     xmlns:context="http://www.springframework.org/schema/context"
5     xmlns:mvc="http://www.springframework.org/schema/mvc"
6     xmlns:mybatis-spring="http://mybatis.org/schema/mybatis-spring"
7     xmlns:jdbc="http://www.springframework.org/schema/jdbc"
8     xsi:schemaLocation="http://www.springframework.org/schema/jdbc http://www.springframework.org/schema/jdbc/spring-jdbc-4.3.xsd
9         http://www.springframework.org/schema/mvc http://www.springframework.org/schema/mvc/spring-mvc-4.3.xsd
10        http://mybatis.org/schema/mybatis-spring http://mybatis.org/schema/mybatis-spring-1.2.xsd
11        http://www.springframework.org/schema/beans http://www.springframework.org/schema/beans/spring-beans-4.3.xsd
12        http://www.springframework.org/schema/context http://www.springframework.org/schema/context/spring-context-4.3.xsd">
13
14     <context:component-scan base-package="kr.ac.inje.comsi.board"></context:component-scan>
15
16     <bean id="dataSource" class="org.springframework.jdbc.datasource.DriverManagerDataSource">
17         <property name="driverClassName" value="org.h2.Driver"></property>
18         <property name="url" value="jdbc:h2:D:/workspace/h2db/db"></property>
19         <property name="username" value="sa"></property>
20         <property name="password" value=""></property>
21     </bean>
22
23 </beans>
24
25
```

각자의 h2database 파일 위치와 파일을 입력

SqlSessionFactory과 SqlSessionFactoryBean 빈 생성

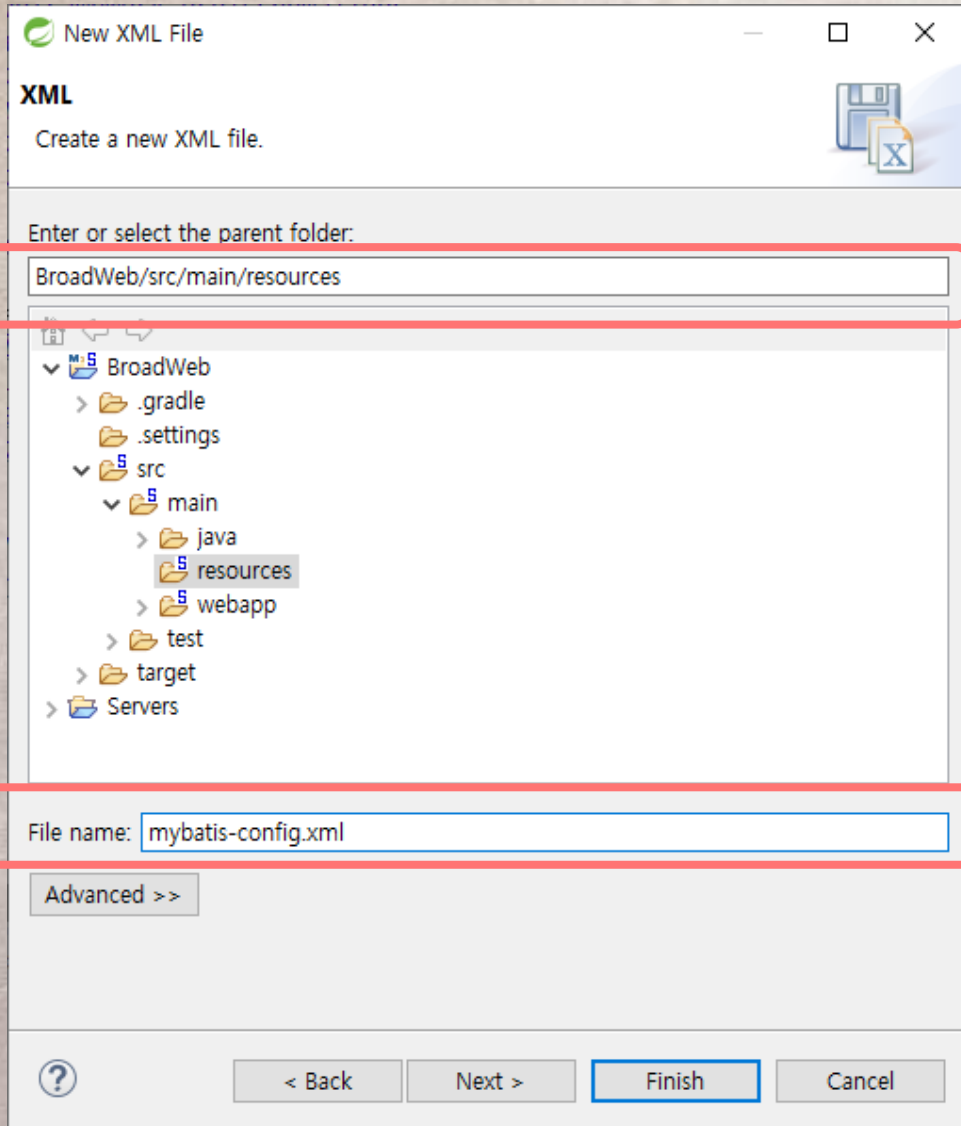
- MyBatis와 스프링 연동 작업의 핵심은 Connect를 생성하고, 처리하는 SqlSessionFactory의 존재.
 - SqlSessionFactory는 데이터베이스와의 연결과 SQL의 실행에 대한 모든 것을 가진 중요한 객체.
 - 스프링을 이용할 때는 SqlSessionFactory 를 생성해주는 특별한 객체를 설정할 때 SqlSessionFactoryBean이라는 클래스를 사용한다.
- ➔ 다음과 같이 root-context에 추가한다.

```
<bean id="dataSource" class="org.springframework.jdbc.datasource.DriverManagerDataSource">
    <property name="driverClassName" value="org.h2.Driver"></property>
    <property name="url" value="jdbc:h2:D:/workspace/h2db/db"></property>
    <property name="username" value="sa"></property>
    <property name="password" value=""></property>
</bean>
```

```
<bean id="sqlSessionFactory" class="org.mybatis.spring.SqlSessionFactoryBean">
    <property name="dataSource" ref="dataSource"></property>
</bean>
```


SQL Mapping 프레임워크

- MyBatis는 SQL Mapping 프레임워크로 별도의 설정파일을 가짐



BroadWeb/src/main/resources

mybatis-config.xml

mybatis-config.xml 수정

```
servlet-context.xml  root-context.xml  applicationContext.xml  mybatis-config.xml ✕
1  <?xml version="1.0" encoding="UTF-8"?>
2  <!DOCTYPE configuration PUBLIC "-//mybatis.org//DTD Config 3.0//EN"
3      "http://mybatis.org/dtd/mybatis-3-config.dtd">
4
5  <configuration>
6
7  </configuration>
8
9  |
```

root-context.xml에 mybatis-config.xml을 읽어들이도록 내용 추가

```
<bean id="sqlSessionFactory" class="org.mybatis.spring.SqlSessionFactoryBean">
  <!-- mybatis-config.xml 파일이 스프링 시작할 때, 같이 동작하도록 설정 -->
  <property name="configLocation" value="classpath:mybatis-config.xml"></property>
  <property name="dataSource" ref="dataSource"></property>
</bean>
```