1. pro04/pom.xml 의존성 라이브러리 추가

```
pro04 - pro04/pom.xml - Spring Tool Suite 3
 ile <u>E</u>dit <u>S</u>ource <u>N</u>avigate Search <u>P</u>roject <u>R</u>un <u>W</u>indow <u>H</u>elp
Q :
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■ Package Explorer 🛭
     log4idbc,log4i2.properties
                               154
                                            </dependency> -->

☑ logback.xm

                               155
      mybatis-config.xml
                                            <!-- 스프링 트랜잭션 라이브러리 -->
  1579
                                            <dependency>
    > # com.cj.myapp
  > # com.cj.myapp.mapper
> # src/test/resources
                               158
                                                <groupId>org.springframework
                               159
                                                 <artifactId>spring-tx</artifactId>
  Mayen Dependencies
                               160
                                                 <version>${org.springframework-version}</version>
   161
                                            </dependency>
                              162
```

2. pro04/src/main/webapp/WEB-INF/spring/root-context.xml 에 트랜잭션 객체 주입 설정

```
pro04 - pro04/src/main/webapp/WEB-INF/spring/root-context.xml - Spring Tool Suite 3
File Edit Source Refactor Navigate Search Project Run Window Help
Q :
             E % | 2 8 - E
                        ¹ Package Explorer ≅
    log4jdbc.log4j2.properties
                                   325
    mybatis-config.xml
                               </bean>
                         26

✓ 🥭 src/test/java

→ 🌐 com.cj.myapp
                               28⊜
    # com.cj.myapp.mapper
                         129
  ## src/test/resources
                         30
                                   <!-- mybatis 설정파일

    Maven Dependencies

        Max System Library [JavaSE-1.8]

                                   JUnit 4
                         32
                                   33
    ~ № webapp
                               <!-- SalSession 객체 주입 -->
                         35
      (= data
                               <bean id="sqlSession" class="org.mybatis.spring.SqlSessionTemplate" destroy-method="clearCache">
                        %36∈
     > 🍃 resources

• 🐸 WEB-INF
                         37
                                   <constructor-arg name="sqlSessionFactory" ref="sqlSessionFactory"></constructor-arg>
        classes
                        38
                                </bean>
       39
                               |
<!-- 트랜잭션 및 DB 패키지 방안 및 각 종 로깅과 보안 설정 -->
<bean id="transactionManager" class="org.springframework.jdbc.datasource.DataSourceTransactionManager">
           servlet-context.xml
                         41∋
         root-context.xml
                                  cproperty name="dataSource" ref="dataSource" />
                         42
         spring-security.xml
                         43
                               </bean>
         spring-servlet.xml
                         44

→ board

                               <!-- @Transactional 어노테이션 처리 -->
                         45
           ■ boardDetail.jsp
                               <tx:annotation-driven transaction-manager="transactionManager" />
                         946
           boardEdit.isc
                         47
           boardList.jsp
                         48
                               <!-- naver/daum/google 메일 서버 설정 -->
        > @ check
                         49
                         50 </beans>
```

3. pro04/src/main/java/com.cj.dao.FreeDAOImpl.java 에 글을 읽고, 글을 읽었을 때 읽은 횟수를 증가시키도록 @Transactional 애노테이션을 선언하고, 여러 sqlSession 명령을 묶는다.

```
pro04 - pro04/src/main/java/com/cj/dao/FreeDAOImpl.java - Spring Tool Suite 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                п
Q :
 <sup>1</sup> Package Explorer ≅
                                                     🗎 😘 👂 🖟 🗖 📔 pro04/pomxmi 🗵 web.xmi 💹 servlet-context.xmi 🔝 MemberControllerjava 😺 root-context.xmi 🔻 FreeDAOImpljava 🖂
 v ₩ pro04
                                                                                                    14
              src/main/java

## src/main/java

## com.cj.controlle

## c
                                                                                                   15⊚
                                                                                                                          @Autowired
                                                                                                    16
                                                                                                                         private SqlSession sqlSession;
              > D BoardController.iava
                                                                                                    17
                  FreeController.java
MemberController.java
                                                                                                    189
                                                                                                                          @Override
                                                                                                                         public List<FreeDTO> freeList() throws Exception {
                  SampleController.java
                                                                                                    19

    → ⊕ com.cj.dao
    → ঐ BoardDAO.java
    → ঐ BoardDAOImpl.java

                                                                                                    20
                                                                                                                                     return sqlSession.selectList("free.freeList");
                                                                                                    21
                                                                                                    22
                   P FreeDAO.lava
                                                                                                    23
                                                                                                                          @Transactional
                  FreeDAOImpl.java

MemberDAO.java
                                                                                                    24
                                                                                                                          @Override
                                                                                                                          public FreeDTO freeDetail(int bno) throws Exception {
                  MemberDAOImpl.iava
                                                                                                  $25
                                                                                                                                      sqlSession.update("free.visitCount", bno);
return sqlSession.selectOne("free.freeDetail", bno);
          v 🖶 com.cj.dto
                                                                                                    26
                  ☑ BoardDTO.java
                                                                                                    27
                  ☑ FreeDTO.iava
                                                                                                    28
                   MemberDTO.iava
                                                                                                    29
                   ☑ SampleDTO.java
                                                                                                                          @Override
              # com.cj.inject.test
         -31
                                                                                                                         public void freeInsert(FreeDTO dto) throws Exception {
                                                                                                  32
                                                                                                                                      sqlSession.insert("free.freeInsert", dto);
              # com.cj.service
                                                                                                  33

→ B com.ci.util

                                                                                                     34
                  Lis Admininterceptor.java
                                                                                                                          @Override
                   CheckController.java
                                                                                                    350
                                                                                                                         public void freeDelete(int bno) throws Exception {
                                                                                                   436
                   LoginCheckInterceptor.iava

    Member.java
    MemberValidator.java

                                                                                                    37
                                                                                                                                      sqlSession.delete("free.freeDelete", bno);
                                                                                                    38
               > 

MemberVO.java
```