

파일명 : Book.java

```
public class Book {
    private String name;

    public Book(String name) {
        this.name = name;
    }
    public Book() {}
    public String getName() {
        return name;
    }
    public void setName(String name) {
        this.name = name;
    }
}
```

파일명 : AppCtx.java

@Configuration

```
public class AppCtx {
    // @Bean(destroyMethod = "close")
    @Bean()
    public DataSource dataSource() {
        SimpleDriverDataSource ds = new SimpleDriverDataSource();
        ds.setDriverClass(com.mysql.cj.jdbc.Driver.class);
        ds.setUrl("jdbc:mysql://localhost/jdbcTest?characterEncoding=utf8");
        ds.setUsername("root");
        ds.setPassword("root1234");

        return ds;
    }
    @Bean
    public BookDao bookDao() {
        return new BookDao(dataSource());
    }
}
```

파일명 : BookDao.java

```
public class BookDao {
    private JdbcTemplate jdbcTemplate;
    public BookDao(DataSource dataSource) {
        this.jdbcTemplate = new JdbcTemplate(dataSource);
    }
    public int search(String name) {
        Integer count = jdbcTemplate.queryForObject(
            "select count(*) from Book where name = ?", Integer.class, name);
        return count;
    }
    public List<Book> selectAll() {
        List<Book> results = jdbcTemplate.query("select * from BOOK",
            new RowMapper<Book>() {
                @Override
                public Book mapRow(ResultSet arg0, int arg1) throws SQLException {
                    Book book = new Book(arg0.getString("NAME"));
                    return book;
                }
            }
        );
        return results;
    }
    public void insert(Book book) {
        jdbcTemplate.update(
            "insert into Book (NAME) values (?)", book.getName());
    }
    public void update(String newName, String oldName) {
        jdbcTemplate.update(
            "update Book set NAME = ? where NAME = ?", newName, oldName);
    }
    public void delete(String name) {
        jdbcTemplate.update(
            "delete from Book where NAME = ?", name);
    }
}
```

파일명 : BookAdvice.java

@Aspect

```
public class BookAdvice implements ApplicationContextAware{
    private ApplicationContext ctx=null;

    @Pointcut("execution(public * Report3.BookManager.book*(..))")
    private void pointcutBook(){}

    @AfterReturning(pointcut="pointcutBook()")
    public void printObj() {
        BookDao dao = (BookDao)ctx.getBean("bookDao");
        List<Book> books = dao.selectAll();
        if(books == null) {
            System.out.println("출력할 List가 존재하지 않음");
            return;
        }
        Iterator it =books.iterator();
        Book book;
        System.out.println("===== 저장 결과 =====");
        while(it.hasNext()) {
            book = (Book)it.next();
            System.out.println("책 이름 : " + book.getName());
        }
    }
    @Override
    public void setApplicationContext(ApplicationContext arg0) throws BeansException {
        // TODO Auto-generated method stub
        this.ctx = arg0;
    }
}
```

파일명 : BookManager.java

```
public class BookManager implements ApplicationContextAware{
    private ApplicationContext context=null;
    private BookDao bookDao = null;
    Scanner in=new Scanner(System.in);

    public BookManager(BookDao bookDao) {
        this.bookDao = bookDao;
    }

    public void bookAdd() {
        System.out.println("===== 추가 메서드 실행 =====");
        System.out.println("추가할 book 이름 : ");

        String bookName = in.nextLine();
        int cnt = bookDao.search(bookName);
        System.out.println(cnt);
        if(cnt >0) {
            System.out.println("책 이름이 중복됨!!!");
            return;
        }
        Book info = (Book)context.getBean("book");
        info.setName(bookName);
        bookDao.insert(info);
    }

    public void bookUpdate(String oldName){
        int cnt = bookDao.search(oldName);
        System.out.println(cnt);
        if(cnt < 1) {
            System.out.println("저장된 Book 이름이 없음!!!");
            return ;
        }
        System.out.println("수정할 신규 book 이름 : ");
        String newName = in.nextLine();
        bookDao.update(newName, oldName);
    }
}
```

```

public void bookDelete(String oldName) {
    int cnt = bookDao.search(oldName);
    System.out.println(cnt);
    if(cnt < 1) {
        System.out.println("저장된 Book 이름이 없음!!!");
        return ;
    }
    bookDao.delete(oldName);
}
public void bookExitMessage() {
    System.out.println("프로그램 종료!!");
}
@Override
public void setApplicationContext(ApplicationContext arg0) throws BeansException {
    this.context = arg0;
}
}

```

파일명 : MenuObj.java

```
public class MenuObj {  
    public int menuDisplay() {  
        Scanner in=new Scanner(System.in);  
  
        System.out.println("===== Book 관리 프로그램 =====");  
        System.out.println("Book  추가[1]");  
        System.out.println("Book  수정[2]");  
        System.out.println("Book  삭제[3]");  
        System.out.println("프로그램 종료[4]");  
        System.out.println("기능 선택 : ");  
  
        return in.nextInt();  
    }  
    public String commonMessage(String op) {  
        Scanner in=new Scanner(System.in);  
        System.out.println("===== " + op + " 메서드 실행 =====");  
  
        System.out.println(op + "할 기존 book 이름 : ");  
        return in.nextLine();  
    }  
}
```

파일명 : Report3.xml

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<beans xmlns="http://www.springframework.org/schema/beans"
  xmlns:p="http://www.springframework.org/schema/p"
  xmlns:aop="http://www.springframework.org/schema/aop"
  xmlns:context="http://www.springframework.org/schema/context"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.springframework.org/schema/beans
    http://www.springframework.org/schema/beans/spring-beans-3.0.xsd
    http://www.springframework.org/schema/aop
    http://www.springframework.org/schema/aop/spring-aop-3.0.xsd
    http://www.springframework.org/schema/context
    http://www.springframework.org/schema/context/spring-context-3.0.xsd">

  <aop:aspectj-autoproxy />
  <context:annotation-config />

  <bean id="appCtx" class="Report3.AppCtx"/>
  <bean id="mainObj" class="Report3.Report3Main"/>
  <bean id="menu" class="Report3.MenuObj"/>

  <bean name="advice" class="Report3.BookAdvice"/>
  <bean id="book" class="Report3.Book"/>
  <bean id="bookMng" class="Report3.BookManager">
    <constructor-arg>
      <ref bean="bookDao" />
    </constructor-arg>
  </bean>

</beans>
```

파일명 : Report3Main.java

```
public class Report3Main {

    private BookManager bookMng=null;
    private MenuObj menu=null;

    private void switchOperation(int num) {
        String bookName;
        switch(num) {
            case 1 :
                bookMng.bookAdd();
                break;
            case 2 :
                bookName=menu.commonMessage("수정");
                bookMng.bookUpdate(bookName);
                break;
            case 3 :
                bookName=menu.commonMessage("삭제");
                bookMng.bookDelete(bookName);
                break;
            case 4 :
                bookName=menu.commonMessage("삭제");
                bookMng.bookDelete(bookName);
                break;
        }
    }

    public static void main(String[] args) {
        AbstractApplicationContext ctx =
            new GenericXmlApplicationContext("classpath:Report3/Report3.xml");
        Report3Main main =(Report3Main)ctx.getBean("mainObj");;
        main.bookMng = (BookManager) ctx.getBean("bookMng");
        main.menu= (MenuObj) ctx.getBean("menu");
        int num;
        while(true) {
            num = main.menu.menuDisplay();
            if(num < 1 || num > 4) {
```



```
        System.out.println("기능 번호를 잘못 선택했음!!");
        continue;
    }
    if(num == 4) {
        main.bookMng.bookExitMessage();
        break;
    }
    main.switchOperation(num);
}
ctx.close();

}

}
```