

Exercise 7: Constructor & Setter Injection

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Scenario:

Demonstrate both constructor-based and setter-based DI.

1. BookService.java

```
private final BookRepository bookRepository;

// constructor injection
public BookService(BookRepository bookRepository) {
    this.bookRepository = bookRepository;
    System.out.println("BookService via constructor");
}

// optional setter
public void setBookRepository(BookRepository bookRepository) {
    System.out.println("BookService via setter");
}
```

2. applicationContext.xml

```
<!-- constructor injection -->
<bean id="bookService" class="com.library.service.BookService">
    <constructor-arg ref="bookRepository"/>
    <!-- setter option -->
    <property name="bookRepository" ref="bookRepository"/>
</bean>
```

3. Test: Run LibraryManagementApplication to confirm both injection paths executed.