

## 1. Dependency Check 준비

### Dependency Check

Prescription

int id;

String patientName;

List<String> medicines;

```
Test.java  config.xml  Prescription.java
1 package com.springcore.dependencycheck;
2
3 import java.util.List;
4
5 public class Prescription {
6
7     private int id;
8     private String patientName;
9     private List<String> medicines;
10
11     public int getId() {
12         return id;
13     }
14
15     public void setId(int id) {
16         this.id = id;
17     }
18
19     public String getPatientName() {
20         return patientName;
21     }
22
23     public void setPatientName(String patientName) {
24         this.patientName = patientName;
25     }
26
27     public List<String> getMedicines() {
28         return medicines;
29     }
30
31     public void setMedicines(List<String> medicines) {
32         this.medicines = medicines;
33     }
34
35     @Override
36     public String toString() {
37         return "Prescription [id=" + id + ", patientName=" + patientName + ", medicines=" + medicines
38     }
39 }
```

```
Test.java  config.xml  Prescription.java
1 package com.springcore.dependencycheck;
2
3 import org.springframework.context.ApplicationContext;
4 import org.springframework.context.support.ClassPathXmlApplicationContext;
5
6 public class Test {
7
8     private static ApplicationContext context;
9
10    public static void main(String[] args) {
11        context = new ClassPathXmlApplicationContext(
12            "com/springcore/dependencycheck/config.xml");
13        Prescription prescription = (Prescription) context.getBean("prescription");
14        System.out.println(prescription);
15    }
16 }
```

```
Test.java  config.xml  Prescription.java
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:p="http://www.springframework.org/schema/p"
6     xsi:schemaLocation="http://www.springframework.org/schema/beans
7         http://www.springframework.org/schema/beans/spring-beans.xsd
8         http://www.springframework.org/schema/context
9         http://www.springframework.org/schema/context/spring-context.xsd">
10     아무런 설정도 하지 않음
11 </beans>
```

## 2. Dependency Check 실행

```
1 package com.springcore.dependencycheck;
2
3 import java.util.List;
4
5 import org.springframework.beans.factory.annotation.Required;
6
7 public class Prescription {
8
9     private int id;
10    private String patientName;
11    private List<String> medicines;
12
13    public int getId() {
14        return id;
15    }
16
17    @Required
18    public void setId(int id) {
19        this.id = id;
20    }
21
22    public String getPatientName() {
23        return patientName;
24    }
25
26    public void setPatientName(String patientName) {
27        this.patientName = patientName;
28    }
29
30    public List<String> getMedicines() {
31        return medicines;
32    }
33
34    public void setMedicines(List<String> medicines) {
35        this.medicines = medicines;
36    }
37
38    @Override
39    public String toString() {
40        return "Prescription [id=" + id + ", patientName=" + patientName + ", medicines=" + medicines + "]";
41    }
42 }
```

Markers Properties Servers Data Source Explorer

<terminated> Test (8) [Java Application] D:\Java\jdk-11.0.16.1\bin\java.exe  
4월 06, 2023 8:41:13 오후 org.springframework.context.support.ClassPathXmlApplicationContext: Refreshing org.springframework.context.support.ClassPathXmlApplicationContext [initializationMethod=org.springframework.context.support.ClassPathXmlApplicationContext\$1@7f0b3423]  
4월 06, 2023 8:41:14 오후 org.springframework.beans.factory.xml.XmlBeanDefinitionReader: Loading XML bean definitions from class path resource [com/springcore/dependencycheck.xml]  
Prescription [id=0, patientName=null, medicines=null]

에러 없이 required 필드 id를 0으로 초기화만 해줌

## 3. 내부빈(inner bean)

Employee	Address
int id;	int hno;
	String street;
Address address;	String city;

```
1 package com.springcore.innerbeans;
2
3 public class Employee {
4
5     private int id;
6     private Address address;
7
8     public int getId() {
9         return id;
10    }
11
12    public void setId(int id) {
13        this.id = id;
14    }
15
16    public Address getAddress() {
17        return address;
18    }
19
20    public void setAddress(Address address) {
21        this.address = address;
22    }
23
24    @Override
25    public String toString() {
26        return "Employee [id=" + id + ", address=" + address + "]";
27    }
28 }
```

com.springcore.innerbeans

- Address.java
- Employee.java
- config.xml

Employee [id=0, address=Address [hno=0, street=, city=]]

```

1 package com.springcore.innerbeans;
2
3 public class Address {
4
5     private int hno;
6     private String street;
7     private String city;
8
9     public int getHno() {
10         return hno;
11     }
12
13     public void setHno(int hno) {
14         this.hno = hno;
15     }
16
17     public String getStreet() {
18         return street;
19     }
20
21     public void setStreet(String street) {
22         this.street = street;
23     }
24
25     public String getCity() {
26         return city;
27     }
28
29     public void setCity(String city) {
30         this.city = city;
31     }
32
33     @Override
34     public String toString() {
35         return "Address [hno=" + hno + ", "
36             + "street=" + street + ", city=" + city + "]\n";
37     }
38 }

```

#### 4. 빈 스코프

가. 싱글톤(singleton): 빈을 하나만 생성(default)

```

ApplicationContext context = new ClassPathXmlApplicationContext(
    "com/bharath/spring/springcore/innerbeans/config.xml");
Employee employee = (Employee) context.getBean("employee");
System.out.println(employee.hashCode());

Employee employee2 = (Employee) context.getBean("employee");
System.out.println(employee2.hashCode());

```

<terminated> Test (10) [Java Ap  
 Mar 02, 2017 5:51:15 PM  
 INFO: Refreshing org.spr  
 Mar 02, 2017 5:51:15 PM  
 INFO: Loading XML bean d  
 182738614  
 182738614

나. 프로토타입(prototype): 생성요청마다 하나씩 생성

```

<bean class="com.bharath.spring.springcore.innerbeans.Employee"
    name="employee" p:id="123" scope="prototype">
    <property name="address">
        <bean class="com.bharath.spring.springcore.innerbeans.Address"
            p:hno="700" p:street="Mira Mesa Blvd" p:city="San Diego"/>
        </property>
    </bean>

```

<terminated> Test (10) [J  
 Mar 02, 2017 5:51:1  
 INFO: Refreshing oi  
 Mar 02, 2017 5:51:1  
 INFO: Loading XML I  
 1529306539  
 1635985705

#### 5. 과제

```

University
    id
    name @Required
    location

```