

## 1. Bean Externalization or Reading Properties

가. 개념: 외부에 저장된 설정파일을 이용하기 때문에 변경이 발생해도 재컴파일X

나. 구현 방법

| database.properties | property place holder configuration |
|---------------------|-------------------------------------|
| dbName              | Create the properties               |
| port                |                                     |
| userName            | Link the properties                 |
| password            | User properties in xml and inject   |

다. 구현

The screenshot illustrates the implementation of bean externalization using Spring Framework. It shows the following components:

- database.properties:** A file containing database configuration properties.

```
1 dbServer=khtServer
2 #The default port
3 dbPort=3306
4 dbUser=test
5 #dbPass=test
```
- Test.java:** A simple test class.

```
1 package com.springcoreadvanced.propertiesplaceholder;
2
3 public class Test {
4
5 }
```
- MyDAO.java:** A class that uses the database properties.

```
1 package com.springcoreadvanced.propertiesplaceholder;
2
3 public class MyDAO {
4
5     private String dbServer;
6
7     public MyDAO(String dbServer) {
8         this.dbServer = dbServer;
9     }
10
11     @Override
12     public String toString() {
13         return "MyDAO [dbServer=" + dbServer + "]\n";
14     }
15 }
16 }
```
- config.xml:** An XML file defining the Spring context and bean.

```
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       xmlns:c="http://www.springframework.org/schema/c"
7       xsi:schemaLocation="http://www.springframework.org/schema/beans
8       http://www.springframework.org/schema/beans/spring-beans.xsd
9       http://www.springframework.org/schema/context
10      http://www.springframework.org/schema/context/spring-context.xsd">
11
12     <context:property-placeholder
13         location="com/springcoreadvanced/propertiesplaceholder/database.properties"/>
14
15     <bean name="/myDAO"
16         class="com.springcoreadvanced.propertiesplaceholder.MyDAO">
17         <constructor-arg>
18             <value>${dbServer}</value>
19         </constructor-arg>
20     </bean>
21
22 </beans>
```
- Console Log:** The output of the application, showing the bean initialization and the value of the dbServer property.

```
<terminated> Test (12) [Java Application] D:\Java\jdk-1
4월 08, 2023 5:50:26 오전 org.springframework
INFO: Refreshing org.springframework.context
4월 08, 2023 5:50:26 오전 org.springframework
INFO: Loading XML bean definitions from clas
4월 08, 2023 5:50:27 오전 org.springframework
INFO: Loading properties file from class pat
MyDAO [dbServer=khtServer]
```

## 2. BeanDefinitionStoreException

```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:context="http://www.springframework.org/schema/context"
       xmlns:p="http://www.springframework.org/schema/p"
       xmlns:c="http://www.springframework.org/schema/c"
       xsi:schemaLocation="http://www.springframework.org/schema/beans
http://www.springframework.org/schema/beans/spring-beans.xsd
http://www.springframework.org/schema/context
http://www.springframework.org/schema/context/spring-context.xsd"
>
  <context:property-placeholder
    location="com/springcoreadvanced/propertiesplaceholder/datab
  >
  <bean name="myDAO"
        class="com.springcoreadvanced.propertiesplaceholder.MyDAO">
    <constructor-arg>
      <value>${dbserver}</value>
    </constructor-arg>
  </bean>
</beans>
```

설정파일에는 dbServer임, 대소문자 구분

```
<terminated> Test (12) [Java Application] D:\Java\jdk-11.0.16\bin\javaw.exe (2023. 4. 8. 오전 5:59:27 - 오전 5:59:28)
INFO: Loading properties file from class path resource [com/springcoreadvanced/propertiesplaceholder/datab
4월 08, 2023 5:59:28 오전 org.springframework.context.support.ClassPathXmlApplicationContext
WARNING: Exception encountered during context initialization - cancelling refresh attempt:
Exception in thread "main" org.springframework.beans.factory.BeanDefinitionStoreException:
at org.springframework.beans.factory.config.PlaceholderConfigurerSupport.doProcessPlaceholder
at org.springframework.context.support.PropertySourcesPlaceholderConfigurer.processPropertySources
at org.springframework.context.support.PropertySourcesPlaceholderConfigurer.postProcessPropertySources
at org.springframework.context.support.PostProcessorRegistrationDelegate.invokeBeanFactoryPostProcessors
at org.springframework.context.support.PostProcessorRegistrationDelegate.invokeBeanFactoryPostProcessors
at org.springframework.context.support.AbstractApplicationContext.invokeBeanFactoryPostProcessors
```

## 3. 과제

```
wsclient.properties

url=xyz          Spring Configuration
userName=test
password=test    Test
```