**Importing and Mixing Configuration**

In real time project we have to use both type of configuration java based and xml based.

Importing and Mixing Configuration means we can import both configuration java based as well as xml based configuration files.

For java based importing we use @Import Annotation and for xml based configuration we use @ImportResource annotation. Like below

@Import({CarMetaConfiguration.**class**, EngineMetaConfiguration.**class**})

@ImportResource({"classpath:BodyMetaConfiguration.xml","classpath:TyreMetaConfiguration.xml"})

**Importing javaBasedConfiguration file**

In this we have java classes and for each java classes we have MetaConfiguration file in which we are creating bean for that class. Then we will import those MetaConfiguration files in our single main class which will pass into AnnotationConfigApplicationContext like: **AnnotationConfigApplicationContext(SpringConfiguration.class);**

1. **Java class(Car.java)**

**Package** com.org.springannotation;

**import** org.springframework.beans.factory.annotation.Autowired;

**public class** Car {

@Autowired

Engine engine;

@Autowired

Body body;

@Autowired

Tyre tyre;

**public** Engine getEngine() {

**return** engine;

}

**Public void** setEngine(Engine engine) {

**this**.engine = engine;

}

**public** Body getBody() {

**return**body;

}

**Public void** setBody(Body body) {

**this**.body = body;

}

**public** Tyre getTyre() {

**return** tyre;

}

**Public void** setTyre(Tyre tyre) {

**this**.tyre = tyre;

}

**Public void** driveCar()

{

System.*out*.println("This car has engine which name is "+engine.engineName+" and has body of "+body.bodyName+" and tyre of "+tyre.tyreName);

}

}

1. **Java based configuration file CarMetaConfiguration.java**

**package**com.org.springannotation;

**import** org.springframework.context.annotation.Bean;

**import** org.springframework.context.annotation.Configuration;

//This is one more configuration file for creating meta about Car

@Configuration

**Public class** CarMetaConfiguration {

//Creating beans related to Car

@Bean(name="car")

**public** Car getCar()

{

**Return new** Car();

}

}

1. **Java Class(Body.java)**

**package** com.org.springannotation;

**publicclass** Body {

String bodyName="FORD";

**public** String getBodyName() {

**return**bodyName;

}

}

1. **Java Based configuration file BodyMetaConfiguration.java**

**package** com.org.springannotation;

**import** org.springframework.context.annotation.Bean;

**import** org.springframework.context.annotation.Configuration;

//This is one more configuration file for creating meta about Body

@Configuration

**publicclass** BodyMetaConfiguration {

//Creating beans related to Body

@Bean(name="Body")

**public** Body getBody()

{

**returnnew** Body();

}

}

1. **Java Class(Engine.java)**

**package** com.org.springannotation;

**publicclass** Engine {

String engineName="Owngenrated";

**public** String getEngineName() {

**return**engineName;

}

}

**3**. **Java Based configuration file EngineMetaConfiguration.java**

**package**com.org.springannotation;

**import** org.springframework.context.annotation.Bean;

**import** org.springframework.context.annotation.Configuration;

//This file have configuration about the engine

@Configuration

**publicclass**EngineMetaConfiguration {

//creating bean related to engine

@Bean(name="Engine")

**public** Engine getEngine()

{

**returnnew** Engine();

}

}

1. **Java Class(Tyre.java)**

**package** com.org.springannotation;

**publicclass** Tyre {

String tyreName="MRF";

**public** String getTyreName() {

**return**tyreName;

}

}

**4**. **Java Based configuration file TyreMetaConfiguration.java**

**package**com.org.springannotation;

**import** org.springframework.context.annotation.Bean;

**import** org.springframework.context.annotation.Configuration;

//This file have configuration about the tyre

@Configuration

**publicclass**TyreMetaConfiguration {

//creating bean related to Tyre

@Bean(name="Tyre")

**public** Tyre getTyre()

{

**returnnew** Tyre();

}

}

**Java Based SpringConfiguration file:**

This is a main configuration file in which we will import other configuration files.

This main configuration file we write into **AnnotationConfigApplicationContext**

Like:

AbstractApplicationContext context=**new**AnnotationConfigApplicationContext(SpringConfiguration.**class**);

**package** com.org.springannotation;

**import** org.springframework.context.annotation.Configuration;

**import** org.springframework.context.annotation.Import;

@Configuration

/\*here we are importing javaBasedConfiguration same like this we can also import xml based configuration but for that we will have to create xml file to import like we created CarMetaConfiguration.java,BodyMetaConfiguration.java etc file for java based configuration \*/

@Import({CarMetaConfiguration.**class**, EngineMetaConfiguration.**class**,BodyMetaConfiguration.**class**,TyreMetaConfiguration.**class**})

//This is xml based configuration importing

//@ImportResource({"classpath:BodyMetaConfiguration.xml","classpath:TyreMetaConfiguration.xml"})

//here classpath means search these xml file into src folder. If xml file is not in src folder then write file in place of classpath.

**publicclass** SpringConfiguration {

/\*@Bean(name="car")

public Car getCar(){

return new Car();

}\*/

//<bean id="car" class="com.doj.spring.Car"/>

}

**Main method class:** DriveCar.java

**package** com.org.springannotation;

**import** org.springframework.context.annotation.AnnotationConfigApplicationContext;

**import** org.springframework.context.support.AbstractApplicationContext;

**import**org.springframework.context.support.ClassPathXmlApplicationContext;

**publicclass** DriveCar {

**publicstaticvoid** main(String[] args) {

//ClassPathXmlApplicationContext context=new ClassPathXmlApplicationContext("spring.xml");

**AbstractApplicationContext context = new AnnotationConfigApplicationContext(SpringConfiguration.class);**

Car car=(Car) context.getBean("car");

car.driveCar();

context.close();

}

}

**Importing XmlBasedConfiguration files**

In this we create xml file to configure beans and those xml file we import into main spring.xml files. Here we are taking example to few classes and for each we are creating xml file to create bean for those classes.

**package** com.org;

**publicclass** Body {

String bodyName="FORD";

**public** String getBodyName() {

**return**bodyName;

}

}

**package** com.org;

**publicclass** Engine {

String engineName="Owngenrated";

**public** String getEngineName() {

**return**engineName;

}

}

**package** com.org;

**import** org.springframework.beans.factory.annotation.Autowired;

**publicclass** Car {

@Autowired

Engine engine;

@Autowired

Body body;

@Autowired

Tyre tyre;

**public** Engine getEngine() {

**return**engine;

}

**publicvoid** setEngine(Engine engine) {

**this**.engine = engine;

}

**public** Body getBody() {

**return**body;

}

**publicvoid** setBody(Body body) {

**this**.body = body;

}

**public** Tyre getTyre() {

**return**tyre;

}

**publicvoid** setTyre(Tyre tyre) {

**this**.tyre = tyre;

}

**publicvoid** driveCar()

{

System.***out***.println("This car has engine which name is "+engine.engineName+" and has body of "+body.bodyName+" and tyre of "+tyre.tyreName);

}

}

**package** com.org;

**publicclass** Tyre {

String tyreName="MRF";

**public** String getTyreName() {

**return**tyreName;

}

}

<?xmlversion=*"1.0"*encoding=*"UTF-8"*?>

<beansxmlns=*"http://www.springframework.org/schema/beans"*

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.xsd"*>

<!-- Creating Bean related to Body Part -->

<beanid=*"body"*class=*"com.org.Body"*></bean>

</beans>

<?xmlversion=*"1.0"*encoding=*"UTF-8"*?>

<beansxmlns=*"http://www.springframework.org/schema/beans"*

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.xsd"*>

<!-- Creating Bean related to Engine Part -->

<beanid=*"engine"*class=*"com.org.Engine"*></bean>

</beans>

<?xmlversion=*"1.0"*encoding=*"UTF-8"*?>

<beansxmlns=*"http://www.springframework.org/schema/beans"*

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.xsd"*>

<!-- Creating Bean related to Car Part -->

<beanid=*"car"*class=*"com.org.Car"*></bean>

</beans>

<?xmlversion=*"1.0"*encoding=*"UTF-8"*?>

<beansxmlns=*"http://www.springframework.org/schema/beans"*

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.xsd"*>

<!-- Creating Bean related to Tyre Part -->

<beanid=*"tyre"*class=*"com.org.Tyre"*></bean>

</beans>

**Main method class:DriveCar.java**

**package**com.org;

**import** org.springframework.context.annotation.AnnotationConfigApplicationContext;

**import** org.springframework.context.support.ClassPathXmlApplicationContext;

**publicclass**DriveCar {

**publicstaticvoid** main(String[] args) {

ClassPathXmlApplicationContext context=**new** ClassPathXmlApplicationContext("spring.xml");

Car car=(Car) context.getBean("car");

car.driveCar();

context.close();

}

}

**Spring.xml main config file in with we will import other config files:-**

<?xmlversion=*"1.0"*encoding=*"UTF-8"*?>

<beansxmlns=*"http://www.springframework.org/schema/beans"*

xmlns:xsi=*"http://www.w3.org/2001/XMLSchema-instance"*

xmlns:context=*"http://www.springframework.org/schema/context"*

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"*>

<!-- There are no bean definition here -->

<!-- Component scaning from this base package -->

<context:component-scanbase-package=*"com.org"*/>

<!-- This is configuration file about Spring we are going to use importing other files(Java Config, XML Config) here-->

<!-- Importing XML Configuration files -->

<importresource=*"TyreMetaConfiguration.xml"*/>

<importresource=*"BodyMetaConfiguration.xml"*/>

<importresource=*"CarMetaConfiguration.xml"*/>

<importresource=*"EngineMetaConfiguration.xml"*/>

<!-- Importing Java Configuration files -->

<!-- <bean class="com.org.springannotation.CarMetaConfiguration"></bean>

<bean class="com.org.springannotation.EngineMetaConfiguration"></bean>

<bean class="com.org.springannotation.BodyMetaConfiguration"></bean>

<bean class="com.org.springannotation.TyreMetaConfiguration"></bean>

-->

</beans>

**Importing Mixing files**

**We can import both together in java file like this**

@Import({CarMetaConfiguration.**class**, EngineMetaConfiguration.**class**,BodyMetaConfiguration.**class**,TyreMetaConfiguration.**class**})

@ImportResource({"classpath:BodyMetaConfiguration.xml","classpath:TyreMetaConfiguration.xml"})

**Also can import both in spring.xml file**

<!-- Component scaning from this base package -->

<context:component-scanbase-package=*"com.org"*/>

<!-- This is configuration file about Spring we are going to use importing other files(Java Config, XML Config) here-->

<!-- Importing XML Configuration files -->

<importresource=*"TyreMetaConfiguration.xml"*/>

<importresource=*"BodyMetaConfiguration.xml"*/>

<importresource=*"CarMetaConfiguration.xml"*/>

<importresource=*"EngineMetaConfiguration.xml"*/>

<!-- Importing Java Configuration files -->

<!-- <bean class="com.org.springannotation.CarMetaConfiguration"></bean>

<bean class="com.org.springannotation.EngineMetaConfiguration"></bean>

<bean class="com.org.springannotation.BodyMetaConfiguration"></bean>

<bean class="com.org.springannotation.TyreMetaConfiguration"></bean>

-->