Question Number 8:-

Write a Java program to demonstrate i - initializingBean and DisposableBean.

ii – Use init-method and destroy-method in xml config

iii – Use @PostConstruct and @PreDestroy

Solution:-

Created Package helloworld

Have two classes in it, MainShape, Shape and an xml file shape.xml.

You need to add javax.annotation jar files in the libraries for the iii problem.( https://mvnrepository.com/artifact/javax.annotation/javax.annotation-api/1.3.2)

i ->

Main.Shape:

**package** com.helloworld;

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

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

**public** **class** MainShape {

**public** **static** **void** main(String[] args) {

AbstractApplicationContext context=**new** ClassPathXmlApplicationContext("shape.xml");

context.registerShutdownHook();

Shape obj=(Shape) context.getBean("shape");

obj.draw();

}

}

Shape.java:

**package** com.helloworld;

**import** org.springframework.beans.factory.DisposableBean;

**import** org.springframework.beans.factory.InitializingBean;

**public** **class** Shape **implements** InitializingBean, DisposableBean {

**public** **void** draw() {

System.***out***.println("Drawing a circle");

}

@Override

**public** **void** destroy() **throws** Exception {

System.***out***.println("This is Destroy");

}

@Override

**public** **void** afterPropertiesSet() **throws** Exception {

System.***out***.println("This is Initializing method");

}

}

Shape.xml:

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

<beans xmlns=*"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"*>

<bean id=*"shape"* class=*"com.helloworld.Shape"* >

</bean>

</beans>

ii ->

Mainshape:

**package** com.helloworld;

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

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

**public** **class** MainShape {

**public** **static** **void** main(String[] args) {

AbstractApplicationContext context=**new** ClassPathXmlApplicationContext("shape.xml");

context.registerShutdownHook();

Shape obj=(Shape) context.getBean("shape");

obj.draw();

}

}

Shape.java:

**ackage** com.helloworld;

**public** **class** Shape {

**public** **void** draw() {

System.***out***.println("Drawing a circle");

}

**public** **void** myInit() {

System.***out***.println("My init method called for Shape");

}

**public** **void** cleanup() {

System.***out***.println("My cleanup method called for Shape");

}

}

shape.xml:

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

<beans xmlns=*"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"*>

<bean id=*"shape"* class=*"com.helloworld.Shape"* init-method=*"myInit"* destroy-method=*"cleanup"* >

</bean>

</beans>

iii ->

MainShape:

**package** com.helloworld;

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

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

**public** **class** MainShape {

**public** **static** **void** main(String[] args) {

AbstractApplicationContext context=**new** ClassPathXmlApplicationContext("shape.xml");

context.registerShutdownHook();

Shape obj=(Shape) context.getBean("shape");

obj.draw();

}

}

Shape.java :

**package** com.helloworld;

**import** javax.annotation.PostConstruct;

**import** javax.annotation.PreDestroy;

**public** **class** Shape {

**public** **void** draw() {

System.***out***.println("Drawing a circle");

}

@PostConstruct

**public** **void** myInit() {

System.***out***.println("My init method called for Shape");

}

@PreDestroy

**public** **void** cleanup() {

System.***out***.println("My cleanup method called for Shape");

}

}

shape.xml:

<?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"*

xsi:schemaLocation = *"http://www.springframework.org/schema/beans*

*http://www.springframework.org/schema/beans/spring-beans-3.0.xsd*

*http://www.springframework.org/schema/context*

*http://www.springframework.org/schema/context/spring-context-3.0.xsd"*>

<context:annotation-config/>

<bean id=*"shape"* class=*"com.helloworld.Shape"* >

</bean>

</beans>