Account class:

package com.deere.banking;

import org.aspectj.lang.annotation.Before;

import org.springframework.beans.factory.annotation.Value;

import org.springframework.stereotype.Component;

@Component(value="acc")

public class Account {

@Value("555")

private int acctNo;

@Value("55500")

private int balance;

public Account() {

super();

// TODO Auto-generated constructor stub

}

public int getAcctNo() {

return acctNo;

}

public void setAcctNo(int acctNo) {

this.acctNo = acctNo;

}

public int getBalance() {

return balance;

}

public void setBalance(int balance) {

this.balance = balance;

}

public void deposit() {

System.out.println("Inside Deposit method.");

}

public void withdraw() {

}

public void getBalanceT() {

System.out.println("Inside getBalanceT method.");

}

@Override

public String toString() {

return "Account [acctNo=" + acctNo + ", balance=" + balance + "]";

}

}

package com.deere.banking;

import java.util.List;

import javax.annotation.PostConstruct;

import javax.annotation.PreDestroy;

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

import org.springframework.beans.factory.annotation.Qualifier;

import org.springframework.beans.factory.annotation.Value;

import org.springframework.beans.factory.config.ConfigurableBeanFactory;

import org.springframework.context.annotation.Lazy;

import org.springframework.context.annotation.PropertySource;

import org.springframework.context.annotation.Scope;

import org.springframework.stereotype.Component;

@Component

@PropertySource(value="classpath:customer.properties")

//@Lazy

public class Customer {

private String firstname;

private String lastname;

@Value("${ssn}")

private int ssn;

@Autowired

private Account acct;

@Autowired

private List<FixedDeposit> li;

public Customer() {

System.out.println("Inside default constructor of customer class.");

}

public Customer(String firstname, String lastname) {

super();

this.firstname = firstname;

this.lastname = lastname;

}

public Customer(String firstname, String lastname, int ssn) {

super();

this.firstname = firstname;

this.lastname = lastname;

this.ssn = ssn;

}

public String getFirstname() {

return firstname;

}

public void setFirstname(String firstname) {

this.firstname = firstname;

}

public String getLastname() {

return lastname;

}

public void setLastname(String lastname) {

this.lastname = lastname;

}

public int getSsn() {

return ssn;

}

public void setSsn(int ssn) {

this.ssn = ssn;

}

public Account getAcct() {

return acct;

}

public void setAcct(Account acct) {

this.acct = acct;

}

public List<FixedDeposit> getLi() {

return li;

}

public void setLi(List<FixedDeposit> li) {

this.li = li;

}

@PostConstruct

public void doinit() {

System.out.println("Inside doinit method");

}

@PreDestroy

public void destroyMethod() {

System.out.println("Inside destroy method");

}

@Override

public String toString() {

return "Customer [firstname=" + firstname + ", lastname=" + lastname + ", ssn=" + ssn + ", acct=" + acct

+ ", li=" + li + "]";

}

}

FixedDeposit class :

package com.deere.banking;

import org.springframework.beans.factory.annotation.Value;

import org.springframework.stereotype.Component;

@Component

public class FixedDeposit {

private int acctNo;

private int amount;

private String maturitydate;

public FixedDeposit() {

System.out.println("Inside default constructor of fixed deposit.");

}

public FixedDeposit(int acctNo, int amount, String maturitydate) {

super();

this.acctNo = acctNo;

this.amount = amount;

this.maturitydate = maturitydate;

}

public int getAcctNo() {

return acctNo;

}

public void setAcctNo(int acctNo) {

this.acctNo = acctNo;

}

public int getAmount() {

return amount;

}

public void setAmount(int amount) {

this.amount = amount;

}

public String getMaturitydate() {

return maturitydate;

}

public void setMaturitydate(String maturitydate) {

this.maturitydate = maturitydate;

}

@Override

public String toString() {

return "FixedDeposit [acctNo=" + acctNo + ", amount=" + amount + ", maturitydate=" + maturitydate + "]";

}

}

LoggingAspect :

package com.deere.banking;

import org.aspectj.lang.JoinPoint;

import org.aspectj.lang.annotation.After;

import org.aspectj.lang.annotation.AfterReturning;

import org.aspectj.lang.annotation.AfterThrowing;

import org.aspectj.lang.annotation.Aspect;

import org.aspectj.lang.annotation.Before;

import org.springframework.context.annotation.EnableAspectJAutoProxy;

import org.springframework.stereotype.Component;

@Aspect

@Component

@EnableAspectJAutoProxy

public class LoggingAspect {

@Before(value = "execution(public void deposit())")

public void logBefore(JoinPoint jp) {

System.out.println("Inside Deposit Method:"+ jp.getSignature().getName());

}

@AfterReturning(value = "execution(public void getBalanceT())", returning="r")

public void logAfter(JoinPoint jp, Object r) {

System.out.println("Inside getBalanceT Method:"+ jp.getSignature().getName());

}

@AfterThrowing(value = "execution(public void withdraw())", throwing="e")

public void logthrow(Exception e) {

System.out.println("Inside exception method.");

}

}

Main :

package com.deere.banking;

import org.springframework.context.ApplicationContext;

import org.springframework.context.ConfigurableApplicationContext;

import org.springframework.context.annotation.AnnotationConfigApplicationContext;

import org.springframework.context.support.ClassPathXmlApplicationContext;

public class Main {

public static void main(String[] args) {

ApplicationContext context = new AnnotationConfigApplicationContext(MyConfig.class);

Account actx = context.getBean("acc", Account.class);

actx.deposit();

actx.getBalanceT();

Customer c1 = context.getBean("b1", Customer.class);

System.out.println("First customer data is :" +c1.toString());

Customer c2 = context.getBean("b2", Customer.class);

System.out.println("Second customer data is :" +c2.toString());

/\* Customer constrct1 = context.getBean("cnstruct1", Customer.class);

System.out.println("First constructor data :" +constrct1.toString());

Customer constrct2 = context.getBean("cnstruct2", Customer.class);

System.out.println("second constructor data :" +constrct2.toString());\*/

ConfigurableApplicationContext ctx = (ConfigurableApplicationContext) context;

ctx.close();

}

}

Myconfig class :

package com.deere.banking;

import org.springframework.beans.factory.annotation.Qualifier;

import org.springframework.beans.factory.config.ConfigurableBeanFactory;

import org.springframework.context.annotation.Bean;

import org.springframework.context.annotation.ComponentScan;

import org.springframework.context.annotation.Configuration;

import org.springframework.context.annotation.Primary;

import org.springframework.context.annotation.Scope;

import org.springframework.core.annotation.Order;

import org.springframework.stereotype.Component;

@Configuration

@ComponentScan(basePackages="com.deere.banking")

public class MyConfig {

@Bean("b1")

@Scope(value = ConfigurableBeanFactory.SCOPE\_PROTOTYPE)

public Customer cust2() {

Customer c = new Customer("Golu", "Jain", 121);

return c;

}

@Bean("b2")

@Scope(value = ConfigurableBeanFactory.SCOPE\_PROTOTYPE)

public Customer cust1() {

Customer c = new Customer("Vimal", "Jain", 111);

return c;

}

@Bean("fd")

@Order(2)

public FixedDeposit fd() {

FixedDeposit c = new FixedDeposit(1223001, 300000, "22/12/2019");

return c;

}

@Bean("fd1")

@Order(1)

public FixedDeposit fd1() {

FixedDeposit c = new FixedDeposit(4423002, 400000, "24/12/2019");

return c;

}

}

Test class :

package com.deere.banking;

import org.springframework.context.ApplicationContext;

import org.springframework.context.support.ClassPathXmlApplicationContext;

public class Test {

public static void main(String[] args) {

ApplicationContext context = new ClassPathXmlApplicationContext("banking-beans.xml");

FixedDeposit f1 = context.getBean("fd", FixedDeposit.class);

System.out.println("First customer data is :" +f1.toString());

FixedDeposit f2 = context.getBean("fd", FixedDeposit.class);

System.out.println("First customer data is :" +f2.toString());

FixedDeposit f3 = context.getBean("fd1", FixedDeposit.class);

System.out.println("First customer data is :" +f3.toString());

FixedDeposit f4 = context.getBean("fd1", FixedDeposit.class);

System.out.println("First customer data is :" +f4.toString());

}

}