**11.1 Aim: Write a program to demonstrate Spring AOP – before advice.**

**Code –**

**Student.java**

**package** org.mca;

**public** **class** Student {

**int** age;

String name;

**public** **int** getAge() {

**return** age;

}

**public** **void** setAge(**int** age) {

**this**.age = age;

}

**public** String getName() {

**return** name;

}

**public** **void** setName(String name) {

**this**.name = name;

}

}

**Logging.java**

**package** org.mca;

**public** **class** Logging {

**public** **void** beforeAdvice() {

System.***out***.println("Going to setup student profile.");

}

}

**StudentTest.java**

**package** org.mca;

**import** org.springframework.context.ApplicationContext;

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

**import** java.io.\*;

**public** **class** StudentTest {

**private** **static** ApplicationContext *context*;

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

// **TODO** Auto-generated method stub

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

Student student = (Student) *context*.getBean("student");

String abc=student.getName();

System.***out***.println("Name is:"+abc);

**int** ag=student.getAge();

System.***out***.println("Age is:"+ag);

}

}

**appctx.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:aop="http://www.springframework.org/schema/aop"

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/aop http://www.springframework.org/schema/aop/spring-aop-4.3.xsd

http://www.springframework.org/schema/context http://www.springframework.org/schema/context/spring-context-4.3.xsd">

<aop:config>

<aop:aspect id = "log" ref = "logging">

<aop:pointcut id = "selectAll"

expression = "execution(\* org.mca.Student.getName(..))"/>

<aop:before pointcut-ref="selectAll" method="beforeAdvice"/>

</aop:aspect>

</aop:config>

<bean id = "student" class = "org.mca.Student">

<property name = "name" value = "Zara" />

<property name = "age" value = "11"/>

</bean>

<!-- Definition for logging aspect -->

<bean id = "logging" class = "org.mca.Logging"/>

</beans>

**pom.xml**

<project xmlns=*"http://maven.apache.org/POM/4.0.0"* xmlns:xsi=*"http://www.w3.org/2001/XMLSchema-instance"* xsi:schemaLocation=*"http://maven.apache.org/POM/4.0.0 https://maven.apache.org/xsd/maven-4.0.0.xsd"*>

<modelVersion>4.0.0</modelVersion>

<groupId>org.mca1</groupId>

<artifactId>org.mca1</artifactId>

<version>0.0.1-SNAPSHOT</version>

<packaging>jar</packaging>

<name>AopStudent</name>

<url>http://maven.apache.org</url>

<properties>

<project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>

</properties>

<dependencies>

<dependency>

<groupId>junit</groupId>

<artifactId>junit</artifactId>

<version>3.8.1</version>

<scope>test</scope>

</dependency>

<dependency>

<groupId>org.springframework</groupId>

<artifactId>spring-core</artifactId>

<version>5.2.8.RELEASE</version>

</dependency>

<!-- https://mvnrepository.com/artifact/org.springframework/spring-context -->

<dependency>

<groupId>org.springframework</groupId>

<artifactId>spring-context</artifactId>

<version>5.2.8.RELEASE</version>

</dependency>

<!-- https://mvnrepository.com/artifact/org.postgresql/postgresql -->

<dependency>

<groupId>org.postgresql</groupId>

<artifactId>postgresql</artifactId>

<version>42.2.19</version>

</dependency>

<!-- https://mvnrepository.com/artifact/org.springframework/spring-jdbc -->

<dependency>

<groupId>org.springframework</groupId>

<artifactId>spring-jdbc</artifactId>

<version>5.2.8.RELEASE</version>

</dependency>

<!-- https://mvnrepository.com/artifact/org.springframework/spring-aop -->

<dependency>

<groupId>org.springframework</groupId>

<artifactId>spring-aop</artifactId>

<version>5.2.8.RELEASE</version>

</dependency>

<!-- https://mvnrepository.com/artifact/org.aspectj/aspectjrt -->

<dependency>

<groupId>org.aspectj</groupId>

<artifactId>aspectjrt</artifactId>

<version>1.9.6</version>

</dependency>

<!-- https://mvnrepository.com/artifact/org.aspectj/aspectjweaver -->

<dependency>

<groupId>org.aspectj</groupId>

<artifactId>aspectjweaver</artifactId>

<version>1.9.6</version>

</dependency>

</dependencies>

</project>