Exercise 4:Spring Core-Load Country from Spring Configuration XML:

**Solution:**

**SpringLearnApplication.java:**

package com.cognizant.spring\_country\_config;  
  
import org.slf4j.Logger;  
import org.slf4j.LoggerFactory;  
import org.springframework.context.ApplicationContext;  
import org.springframework.context.support.ClassPathXmlApplicationContext;  
  
public class SpringLearnApplication {  
 private static final Logger *LOGGER* = LoggerFactory.*getLogger*(SpringLearnApplication.class);  
  
 public static void main(String[] args) {  
 *LOGGER*.info("Starting Spring Country Configuration Application");  
  
 // Create instance and call displayCountry method  
 SpringLearnApplication app = new SpringLearnApplication();  
 app.displayCountry();  
  
 *LOGGER*.info("Application execution completed");  
 }  
  
 public void displayCountry() {  
 *LOGGER*.debug("Inside displayCountry() method");  
  
 // Load Spring configuration file  
 ApplicationContext context = new ClassPathXmlApplicationContext("country.xml");  
  
 // Get the country bean from Spring context  
 com.cognizant.springlearn.Country country = context.getBean("country", com.cognizant.springlearn.Country.class);  
  
 // Display country details  
 *LOGGER*.debug("Country : {}", country.toString());  
  
 // Also print to console for visibility  
 System.*out*.println("Country Details: " + country.toString());  
  
 // Close the context  
 ((ClassPathXmlApplicationContext) context).close();  
 }  
}

**Country.java:**

package com.cognizant.springlearn;  
  
import org.slf4j.Logger;  
import org.slf4j.LoggerFactory;  
  
public class Country {  
 private static final Logger *LOGGER* = LoggerFactory.*getLogger*(Country.class);  
  
 private String code;  
 private String name;  
  
 // Empty parameter constructor with debug log  
 public Country() {  
 *LOGGER*.debug("Inside Country Constructor.");  
 }  
  
 // Getter for code with debug log  
 public String getCode() {  
 *LOGGER*.debug("Inside getCode() method. Returning code: {}", code);  
 return code;  
 }  
  
 // Setter for code with debug log  
 public void setCode(String code) {  
 *LOGGER*.debug("Inside setCode() method. Setting code to: {}", code);  
 this.code = code;  
 }  
  
 // Getter for name with debug log  
 public String getName() {  
 *LOGGER*.debug("Inside getName() method. Returning name: {}", name);  
 return name;  
 }  
  
 // Setter for name with debug log  
 public void setName(String name) {  
 *LOGGER*.debug("Inside setName() method. Setting name to: {}", name);  
 this.name = name;  
 }  
  
 // toString method  
 @Override  
 public String toString() {  
 return "Country{" +  
 "code='" + code + '\'' +  
 ", name='" + name + '\'' +  
 '}';  
 }  
}

**country.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">  
  
 <!-- Country bean configuration for India -->  
 <bean id="country" class="com.cognizant.springlearn.Country">  
 <property name="code" value="IN" />  
 <property name="name" value="India" />  
 </bean>  
  
 <!-- Alternative configurations for other countries (commented out) -->  
 <!--  
 <bean id="countryUS" class="com.cognizant.springlearn.Country">  
 <property name="code" value="US" />  
 <property name="name" value="United States" />  
 </bean>  
  
 <bean id="countryDE" class="com.cognizant.springlearn.Country">  
 <property name="code" value="DE" />  
 <property name="name" value="Germany" />  
 </bean>  
  
 <bean id="countryJP" class="com.cognizant.springlearn.Country">  
 <property name="code" value="JP" />  
 <property name="name" value="Japan" />  
 </bean>  
 -->  
</beans>

Logback.xml:

<?xml version="1.0" encoding="UTF-8"?>  
<configuration>  
 <appender name="STDOUT" class="ch.qos.logback.core.ConsoleAppender">  
 <encoder>  
 <pattern>%d{yyyy-MM-dd HH:mm:ss} [%thread] %-5level %logger{36} - %msg%n</pattern>  
 </encoder>  
 </appender>  
  
 <!-- Set root logger level to DEBUG to see all debug messages -->  
 <root level="DEBUG">  
 <appender-ref ref="STDOUT" />  
 </root>  
</configuration>

**Pom.xml:**

<?xml version="1.0" encoding="UTF-8"?>  
<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  
 http://maven.apache.org/xsd/maven-4.0.0.xsd">  
 <modelVersion>4.0.0</modelVersion>  
  
 <groupId>com.cognizant</groupId>  
 <artifactId>spring-country-config</artifactId>  
 <version>1.0-SNAPSHOT</version>  
 <packaging>jar</packaging>  
  
 <name>Spring Country Configuration</name>  
 <description>Spring Core application to load country data from XML configuration</description>  
  
 <properties>  
 <maven.compiler.source>11</maven.compiler.source>  
 <maven.compiler.target>11</maven.compiler.target>  
 <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>  
 <spring.version>5.3.21</spring.version>  
 </properties>  
  
 <dependencies>  
 <!-- Spring Core -->  
 <dependency>  
 <groupId>org.springframework</groupId>  
 <artifactId>spring-core</artifactId>  
 <version>${spring.version}</version>  
 </dependency>  
  
 <!-- Spring Context -->  
 <dependency>  
 <groupId>org.springframework</groupId>  
 <artifactId>spring-context</artifactId>  
 <version>${spring.version}</version>  
 </dependency>  
  
 <!-- Spring Beans -->  
 <dependency>  
 <groupId>org.springframework</groupId>  
 <artifactId>spring-beans</artifactId>  
 <version>${spring.version}</version>  
 </dependency>  
  
 <!-- Logging -->  
 <dependency>  
 <groupId>ch.qos.logback</groupId>  
 <artifactId>logback-classic</artifactId>  
 <version>1.2.11</version>  
 </dependency>  
  
 <dependency>  
 <groupId>org.slf4j</groupId>  
 <artifactId>slf4j-api</artifactId>  
 <version>1.7.36</version>  
 </dependency>  
 </dependencies>  
  
 <build>  
 <plugins>  
 <plugin>  
 <groupId>org.apache.maven.plugins</groupId>  
 <artifactId>maven-compiler-plugin</artifactId>  
 <version>3.8.1</version>  
 <configuration>  
 <source>11</source>  
 <target>11</target>  
 </configuration>  
 </plugin>  
 </plugins>  
 </build>  
</project>

**Output:**

A computer screen with text

AI-generated content may be incorrect.