

spring-rest-hudson

Create a Spring Web Project using Maven

HelloController.java

```
package com.cognizant.springlearn;
```

```
import org.springframework.web.bind.annotation.GetMapping;  
import org.springframework.web.bind.annotation.RestController;  
  
@RestController  
public class HelloController {  
  
    @GetMapping("/")  
    public String sayHello() {  
        return "Hello, Spring Boot is working!";  
    }  
}
```



Spring Core – Load Country from Spring Configuration XML

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;

    public Country() {
        LOGGER.debug("Inside Country Constructor.");
    }

    public String getCode() {
        LOGGER.debug("Inside getCode()");
        return code;
    }

    public void setCode(String code) {
        LOGGER.debug("Inside setCode()");
        this.code = code;
    }

    public String getName() {
        LOGGER.debug("Inside getName()");
        return name;
    }
}
```

```
public void setName(String name) {  
    LOGGER.debug("Inside setName()");  
    this.name = name;  
}  
  
@Override  
public String toString() {  
    return "Country [code=" + code + ", name=" + name + "]";  
}  
}
```

logback.xml:

```
<?xml version="1.0" encoding="UTF-8"?>  
<list>  
    <country>  
        <code>IN</code>  
        <name>India</name>  
    </country>  
    <country>  
        <code>US</code>  
        <name>United States</name>  
    </country>  
    <country>  
        <code>CN</code>  
        <name>China</name>  
    </country>  
    <country>  
        <code>JP</code>  
        <name>Japan</name>  
    </country>  
    <country>  
        <code>DE</code>
```

```
<name>Germany</name>
</country>
</list>
```

HelloController.java:

```
package com.cognizant.springlearn.controller;

import com.cognizant.springlearn.model.Country;
import org.springframework.context.ApplicationContext;
import org.springframework.context.support.ClassPathXmlApplicationContext;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.RestController;

import java.util.List;

@RestController
public class HelloController {

    @GetMapping("/")
    public String rootMessage() {
        return " ✅ Spring Boot is working!";
    }

    @GetMapping("/hello")
    public String sayHello() {
        return "👋 Hello from Spring Boot!";
    }

    @GetMapping("/country")
    public Country getCountry() {
        return new Country("IN", "India");
    }
}
```

```

    @GetMapping("/countries")
    public List<Country> getCountryList() {
        ApplicationContext context = new ClassPathXmlApplicationContext("country.xml");
        List<Country> countryList = (List<Country>) context.getBean("countryList");
        return countryList;
    }
}

```

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">

    <list id="countryList">
        <bean class="com.cognizant.springlearn.model.Country">
            <property name="code" value="IN"/>
            <property name="name" value="India"/>
        </bean>
        <bean class="com.cognizant.springlearn.model.Country">
            <property name="code" value="US"/>
            <property name="name" value="United States"/>
        </bean>
        <bean class="com.cognizant.springlearn.model.Country">
            <property name="code" value="CN"/>
            <property name="name" value="China"/>
        </bean>
        <bean class="com.cognizant.springlearn.model.Country">
            <property name="code" value="JP"/>
            <property name="name" value="Japan"/>
        </bean>
        <bean class="com.cognizant.springlearn.model.Country">

```

```

<property name="code" value="DE"/>
<property name="name" value="Germany"/>
</bean>
</list>

</beans>
```

SpringLearnApplication.java:

```

package com.cognizant.springlearn;

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) {
        displayCountry();
    }

    public static void displayCountry() {
        ApplicationContext context = new ClassPathXmlApplicationContext("country.xml");
        Country country = context.getBean("country", Country.class);
        LOGGER.debug("Country : {}", country.toString());
    }
}
```

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
    https://maven.apache.org/xsd/maven-4.0.0.xsd">
```

```
<modelVersion>4.0.0</modelVersion>

<parent>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-starter-parent</artifactId>
    <version>3.5.3</version>
    <relativePath/> <!-- lookup parent from repository -->
</parent>

<groupId>com.cognizant</groupId>
<artifactId>spring-learn</artifactId>
<version>0.0.1-SNAPSHOT</version>
<name>spring-learn</name>
<description>Demo project for Spring Boot</description>
<url/>
<licenses>
    <license/>
</licenses>
<developers>
    <developer/>
</developers>
<scm>
    <connection/>
    <developerConnection/>
    <tag/>
    <url/>
</scm>
<properties>
    <java.version>17</java.version>
</properties>
<dependencies>
    <dependency>
        <groupId>org.springframework.boot</groupId>
        <artifactId>spring-boot-starter-web</artifactId>
```

```
</dependency>

<dependency>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-devtools</artifactId>
    <scope>runtime</scope>
    <optional>true</optional>
</dependency>
<dependency>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-starter-test</artifactId>
    <scope>test</scope>
</dependency>
<dependency>
    <groupId>org.slf4j</groupId>
    <artifactId>slf4j-api</artifactId>
    <version>1.7.36</version>
</dependency>
<dependency>
    <groupId>ch.qos.logback</groupId>
    <artifactId>logback-classic</artifactId>
    <version>1.2.11</version> <!-- or a compatible version -->
</dependency>
<dependency>
    <groupId>ch.qos.logback</groupId>
    <artifactId>logback-core</artifactId>
    <version>1.2.11</version> <!-- must match the classic version -->
</dependency>
</dependencies>

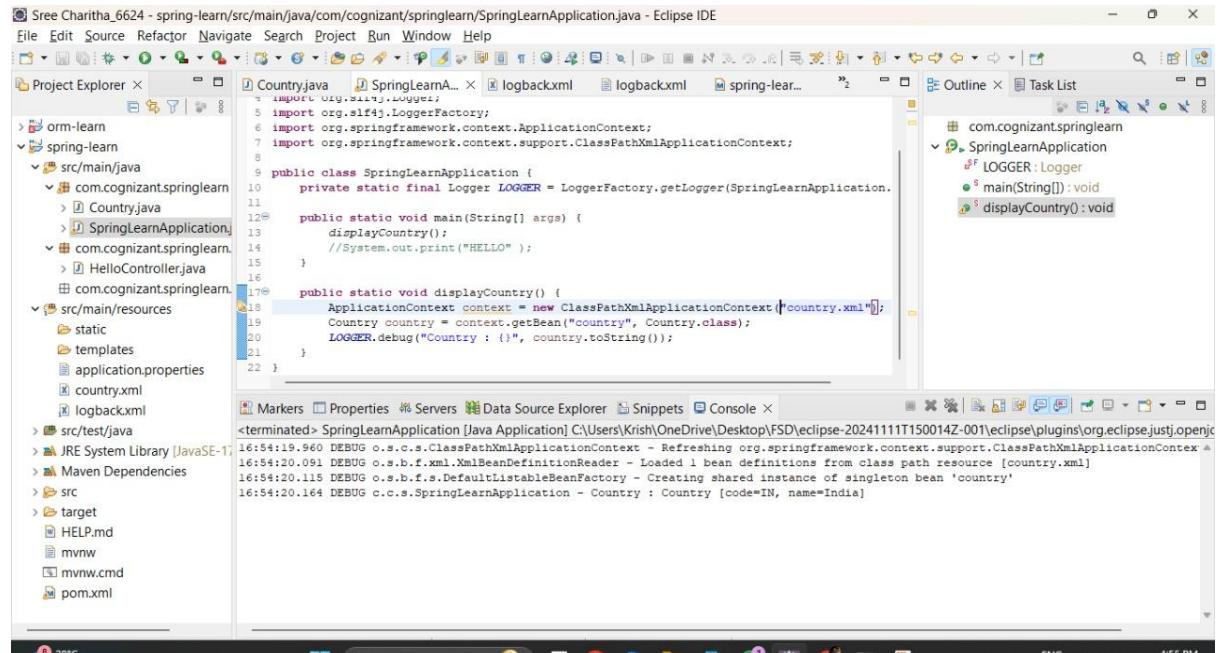
<build>
    <plugins>
```

```

<plugin>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-maven-plugin</artifactId>
</plugin>
</plugins>
</build>

</project>

```



Hello World RESTful Web Service

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 https://maven.apache.org/xsd/maven-4.0.0.xsd">
    <modelVersion>4.0.0</modelVersion>

```

```
<parent>
  <groupId>org.springframework.boot</groupId>
  <artifactId>spring-boot-starter-parent</artifactId>
  <version>3.5.3</version>
  <relativePath/> <!-- lookup parent from repository -->
</parent>

<groupId>com.cognizant</groupId>
<artifactId>spring-learn</artifactId>
<version>0.0.1-SNAPSHOT</version>
<name>spring-learn</name>
<description>Demo project for Spring Boot</description>

<properties>
  <java.version>17</java.version>
</properties>

<dependencies>
  <!-- Spring Boot Web (includes Spring MVC + Jackson + logging) -->
  <dependency>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-starter-web</artifactId>
  </dependency>

  <!-- Hot reloading during development -->
  <dependency>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-devtools</artifactId>
    <scope>runtime</scope>
    <optional>true</optional>
  </dependency>
```

```

<!-- Testing support -->
<dependency>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-starter-test</artifactId>
    <scope>test</scope>
</dependency>
</dependencies>

<build>
    <plugins>
        <plugin>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-maven-plugin</artifactId>
        </plugin>
    </plugins>
</build>
</project>

```

HelloController.java:

```

package com.cognizant.springlearn.controller;

import org.slf4j.Logger;
import org.slf4j.LoggerFactory;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.RestController;

@RestController
public class HelloController {

    private static final Logger LOGGER = LoggerFactory.getLogger(HelloController.class);

    @GetMapping("/hello")

```

```

public String sayHello() {
    LOGGER.info("START sayHello()");
    String response = "Hello World!!";
    LOGGER.info("END sayHello()");
    return response;
}

```

Logback.xml:

```

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

    <!-- Console Appender -->
    <appender name="CONSOLE" class="ch.qos.logback.core.ConsoleAppender">
        <encoder>
            <pattern>%d{yyyy-MM-dd HH:mm:ss} %-5level [%thread] %logger{36} -
            %msg%n</pattern>
        </encoder>
    </appender>

    <!-- File Appender -->
    <appender name="FILE" class="ch.qos.logback.core.FileAppender">
        <file>logs/spring-learn.log</file>
        <append>true</append>
        <encoder>
            <pattern>%d{yyyy-MM-dd HH:mm:ss} %-5level %logger{36} - %msg%n</pattern>
        </encoder>
    </appender>

    <!-- Set log level for your app -->
    <logger name="com.cognizant.springlearn" level="INFO" />

    <!-- Root logger (for all others) -->

```

```
<root level="WARN">  
    <appender-ref ref="CONSOLE"/>  
    <appender-ref ref="FILE"/>  
</root>  
  
</configuration>
```

SpringLearnApplication.java:

```
package com.cognizant.springlearn;  
  
import org.springframework.boot.SpringApplication;  
import org.springframework.boot.autoconfigure.SpringBootApplication;  
  
@SpringBootApplication  
public class SpringLearnApplication {  
    public static void main(String[] args) {  
        SpringApplication.run(SpringLearnApplication.class, args);  
    }  
}
```



REST - Country Web Service

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 https://maven.apache.org/xsd/maven-4.0.0.xsd">

  <modelVersion>4.0.0</modelVersion>

  <parent>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-starter-parent</artifactId>
    <version>3.5.3</version>
    <relativePath/> <!-- lookup parent from repository -->
  </parent>

  <groupId>com.cognizant</groupId>
  <artifactId>spring-learn</artifactId>
  <version>0.0.1-SNAPSHOT</version>
  <name>spring-learn</name>
  <description>Demo project for Spring Boot</description>

  <properties>
    <java.version>17</java.version>
  </properties>

  <dependencies>
    <!-- Spring Boot Web (includes Spring MVC + Jackson + logging) -->
    <dependency>
      <groupId>org.springframework.boot</groupId>
      <artifactId>spring-boot-starter-web</artifactId>
    </dependency>
```

```

<!-- Hot reloading during development -->
<dependency>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-devtools</artifactId>
    <scope>runtime</scope>
    <optional>true</optional>
</dependency>

<!-- Testing support -->
<dependency>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-starter-test</artifactId>
    <scope>test</scope>
</dependency>
</dependencies>

<build>
    <plugins>
        <plugin>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-maven-plugin</artifactId>
        </plugin>
    </plugins>
</build>

</project>

```

Country.java:

```
package com.cognizant.springlearn.model;
```

```
public class Country {
    private String code;
```

```

private String name;

// Getters and Setters
public String getCode() {
    return code;
}

public void setCode(String code) {
    this.code = code;
}

public String getName() {
    return name;
}

public void setName(String name) {
    this.name = name;
}

```

Logback.xml:

```

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

    <!-- Console Appender -->
    <appender name="CONSOLE" class="ch.qos.logback.core.ConsoleAppender">
        <encoder>
            <pattern>%d {yyyy-MM-dd HH:mm:ss} %-5level [%thread] %logger{36} -
            %msg%n</pattern>
        </encoder>
    </appender>

    <!-- File Appender -->

```

```

<appender name="FILE" class="ch.qos.logback.core.FileAppender">
    <file>logs/spring-learn.log</file>
    <append>true</append>
    <encoder>
        <pattern>%d{yyyy-MM-dd HH:mm:ss} %-5level %logger{36} - %msg%n</pattern>
    </encoder>
</appender>
<!-- Set log level for your app -->
<logger name="com.cognizant.springlearn" level="INFO" />

<!-- Root logger (for all others) -->
<root level="WARN">
    <appender-ref ref="CONSOLE"/>
    <appender-ref ref="FILE"/>
</root>
</configuration>

```

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">

    <bean id="in" class="com.cognizant.springlearn.model.Country">
        <property name="code" value="IN"/>
        <property name="name" value="India"/>
    </bean>
</beans>

```

CountryController.java:

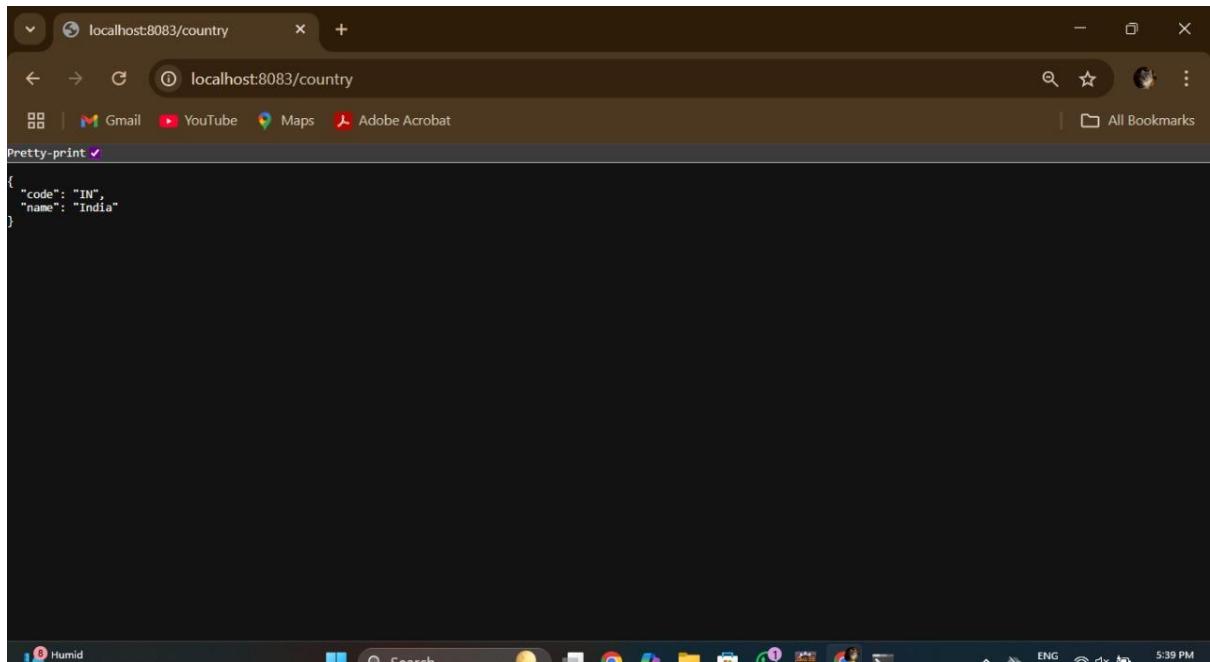
```
package com.cognizant.springlearn.controller;
```

```
import com.cognizant.springlearn.model.Country;
import org.slf4j.Logger;
import org.slf4j.LoggerFactory;
import org.springframework.context.ApplicationContext;
import org.springframework.context.support.ClassPathXmlApplicationContext;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RestController;

@RestController
public class CountryController {

    private static final Logger LOGGER = LoggerFactory.getLogger(CountryController.class);

    @RequestMapping("/country")
    public Country getCountryIndia() {
        LOGGER.info("START: getCountryIndia()");
        ApplicationContext context = new ClassPathXmlApplicationContext("country.xml");
        Country country = (Country) context.getBean("in");
        LOGGER.info("END: getCountryIndia()");
        return country;
    }
}
```



REST - Get country based on country code

Pom.xml:

```
<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="country" class="com.cognizant.spring_learn.model.Country">
        <property name="code" value="IN"/>
        <property name="name" value="India"/>
    </bean>

    <bean id="countryList" class="java.util.ArrayList">
        <constructor-arg>
            <list>
                <bean class="com.cognizant.spring_learn.model.Country">
                    <property name="code" value="IN"/>
                    <property name="name" value="India"/>
                </bean>
            </list>
        </constructor-arg>
    </bean>

```

```

</bean>

<bean class="com.cognizant.spring_learn.model.Country">
    <property name="code" value="US"/>
    <property name="name" value="United States"/>
</bean>

<bean class="com.cognizant.spring_learn.model.Country">
    <property name="code" value="CN"/>
    <property name="name" value="China"/>
</bean>

</list>

</constructor-arg>

</bean>

</beans>

```

CountryService.java:

```

package com.cognizant.spring_learn.service;

import java.util.List;

import org.springframework.context.ApplicationContext;
import org.springframework.context.support.ClassPathXmlApplicationContext;
import org.springframework.stereotype.Service;

import com.cognizant.spring_learn.model.Country;

@Service
public class CountryService {

    public Country getCountry(String code) {
        ApplicationContext context = new ClassPathXmlApplicationContext("country.xml");
        List<Country> countryList = (List<Country>) context.getBean("countryList");

        return countryList.stream()

```

```
.filter(c -> c.getCode().equalsIgnoreCase(code))
.findFirst()
.orElse(null); // Or throw an exception if preferred
}
}
```

CountryController.java:

```
package com.cognizant.spring_learn.controller;
```

```
import com.cognizant.spring_learn.model.Country;
import com.cognizant.spring_learn.service.CountryService;
```

```
import org.slf4j.Logger;
import org.slf4j.LoggerFactory;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.web.bind.annotation.*;
```

```
@RestController
```

```
public class CountryController {
```

```
    private static final Logger LOGGER = LoggerFactory.getLogger(CountryController.class);
```

```
    @Autowired
```

```
    private CountryService countryService;
```

```
    @GetMapping("/country/{code}")
```

```
    public Country getCountry(@PathVariable String code) {
```

```
        LOGGER.info("START - getCountry()");
```

```
        Country country = countryService.getCountry(code);
```

```
        LOGGER.info("END - getCountry()");
```

```
        return country;
```

```
}
```

```
}
```

