**4.2 - Spring REST – Country Web Service**

**Objective:**

To develop a REST API in the spring-learn application that returns details of **India** by loading it from the Spring XML configuration. The API must respond with JSON and be accessible at /country.

**Key Characteristics:**

1. **Controller Method** – It is annotated with @RequestMapping to map the /country URL to getCountryIndia().

On receiving a GET request:

* The Spring container loads the in bean (India) from the XML configuration.
* The bean is returned as the response body.

1. **Bean converted into JSON Response**

Uses HttpMessageConverters.

Detects the return type (Country object).

Converts the object to JSON using Jackson.

1. **HTTP Headers in Developer Tools**

Open browser DevTools (F12) → Network tab → Click on the /country request.

**Request Headers:**

GET /country HTTP/1.1

Host: localhost:8083

Accept: application/json

**Response Headers:**

Content-Type: application/json

Content-Length: 32

1. **View HTTP Headers in Postman**.

Send a GET request to <http://localhost:8083/country>.

Click on **Headers** tab in response section.

**Steps for Spring REST:**

**Step1**: Create Spring XML configuration.

i.e., country.xml

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

**Step2:** Create Controller class.

i.e., CountryController.java

|  |
| --- |
| package com.cognizant.spring\_learn.controller;  import org.springframework.beans.factory.annotation.Autowired;  import org.springframework.context.ApplicationContext;  import org.springframework.web.bind.annotation.RequestMapping;  import org.springframework.web.bind.annotation.RestController;  import com.cognizant.model.Country;  @RestController  public class CountryController {  @Autowired  private ApplicationContext context;  @RequestMapping("/country")  public Country getCountryIndia() {  Country country = (Country) context.getBean("in");  return country;  }  } |

**Step3:** Create a Model Class.

i.e., Country.java

|  |
| --- |
| package com.cognizant.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; }  } |

Enable component Scanning in Spring Boot.

i.e.,

@SpringBootApplication

@ComponentScan("com.cognizant.spring\_learn")

**Step5:** Add required dependencies in pom.xml

|  |
| --- |
| <dependency>  <groupId>com.fasterxml.jackson.core</groupId>  <artifactId>jackson-databind</artifactId>  </dependency> |

**Step6**: Run the Application.

Right click on SpringLearnApplication.java

Run As 🡪 Spring Boot app.

**Expected Output:**

23:37:41.450 [main] INFO com.cognizant.spring\_learn.SpringLearnApplication -- START

23:37:41.453 [main] INFO com.cognizant.spring\_learn.SpringLearnApplication -- Countries: [com.cognizant.spring\_learn.Country@536dbea0, com.cognizant.spring\_learn.Country@47c81abf, com.cognizant.spring\_learn.Country@776a6d9b, com.cognizant.spring\_learn.Country@21d03963]

23:37:41.455 [main] INFO com.cognizant.spring\_learn.SpringLearnApplication -- END

**Step7:** Test in Postman or browser.

Enter the url.,

i.e., URL: <http://localhost:8083/country>

**Expected response:**

The JSON response is.,

{

"code": "IN",

"name": "India"

}