Assignment: REST – Get Country by Country Code

# ✅ Objective:

Write a RESTful web service that returns a specific country based on the country code (case-insensitive).

# ✅ Task Details

• Controller: com.cognizant.spring-learn.controller.CountryController

• Method Annotation: @GetMapping("/countries/{code}")

• Method Name: getCountry(String code)

• Calls: countryService.getCountry(code)

• Service Method: com.cognizant.spring-learn.service.CountryService.getCountry(String code)

# ✅ Service Method Implementation Steps

• Get the country code using @PathVariable

• Load country list from country.xml

• Iterate the list or use Lambda expression

• Perform case-insensitive match for code

• Return the matching Country object

# ✅ Sample Request

GET: http://localhost:8083/countries/in

# ✅ Sample Response (JSON)

{  
 "code": "IN",  
 "name": "India"  
}

# ✅ Controller Code (CountryController.java)

@GetMapping("/countries/{code}")  
public Country getCountry(@PathVariable String code) {  
 return countryService.getCountry(code);  
}

# ✅ Service Code (CountryService.java)

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);  
}

# ✅ SME Explanation

## 📌 a) What happens in the controller method?

• The URL pattern /countries/{code} maps to the controller method getCountry().  
• The code is extracted from the path using @PathVariable.  
• It passes the code to CountryService.getCountry() method.  
• The result (Country object) is returned as JSON.

## 📌 b) Case-insensitive matching logic?

• The service uses equalsIgnoreCase to compare the input code with each country code.  
• This ensures case-insensitive matching, so "IN", "in", or "In" all match the same country.

## 📌 c) How is it serialized to JSON?

• The controller is annotated with @RestController which implies @ResponseBody.  
• Spring Boot uses Jackson to automatically convert the returned Java object to JSON.

# ✅ Conclusion

This RESTful service returns a country based on a dynamic, case-insensitive country code. It uses Spring's annotation-based request mapping, service delegation, and Jackson serialization to achieve the functionality.