## WEEK 4

# **Spring REST using Spring Boot 3**

#### Hello World RESTful Web Service

Write a REST service in the spring learn application created earlier, that returns the text "Hello World!!" using Spring Web Framework. Refer details below:

Method: GET URL: /hello

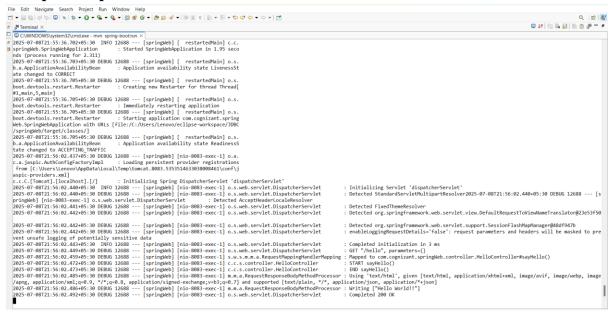
Controller: com.cognizant.spring-learn.controller.HelloController

**Method Signature:** public String sayHello()

**Method Implementation:** return hard coded string "Hello World!!"

Sample Request: http://localhost:8083/hello

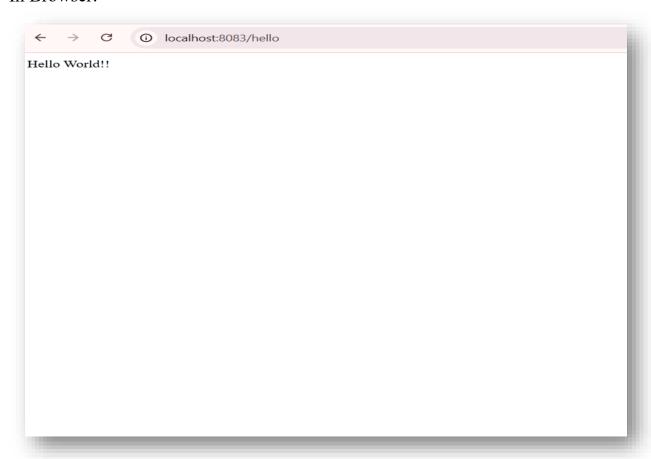
Sample Response: Hello World!!



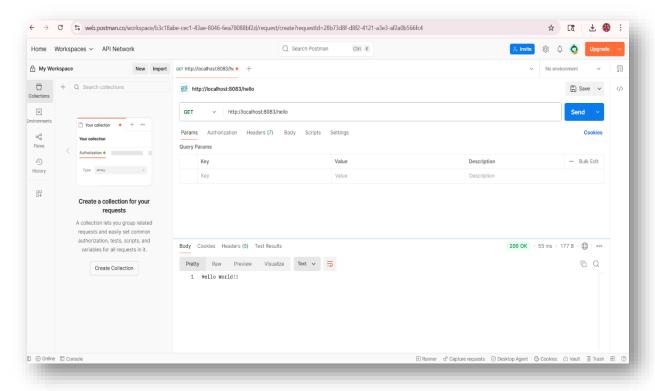
```
Console X

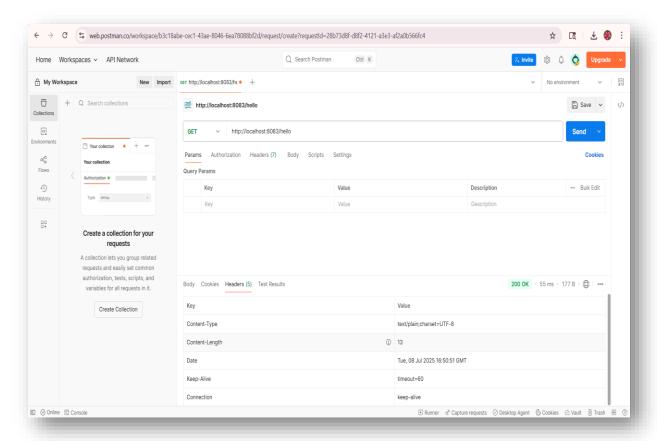
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#### In Browser:



#### In Postman:





# **REST - Country Web Service**

Write a REST service that returns India country details in the earlier created spring learn application.

**URL**: /country

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

Method Annotation: @RequestMapping

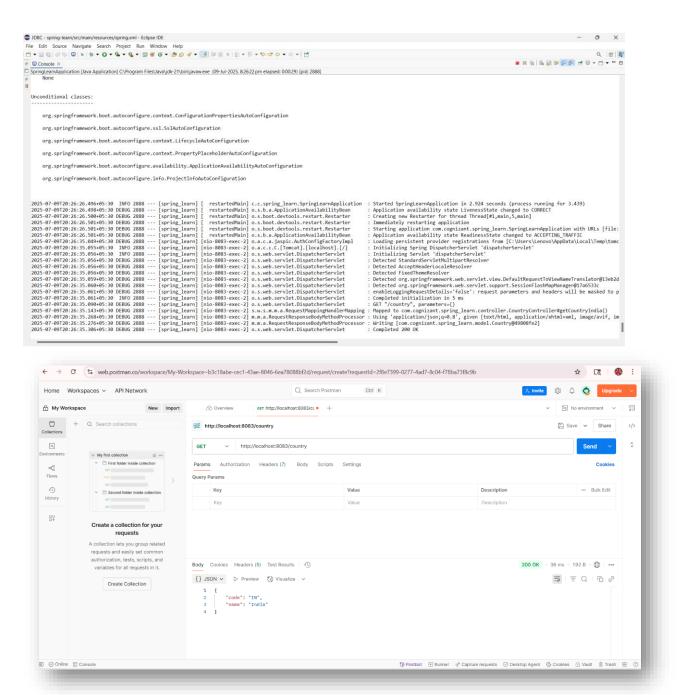
Method Name: getCountryIndia()

Method Implementation: Load India bean from spring xml configuration and

return

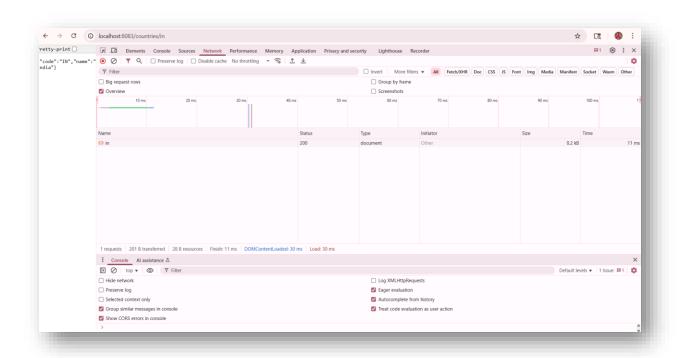
Sample Request: <a href="http://localhost:8083/country">http://localhost:8083/country</a>

```
Sample Response:
{
  "code": "IN",
  "name": "India"
```

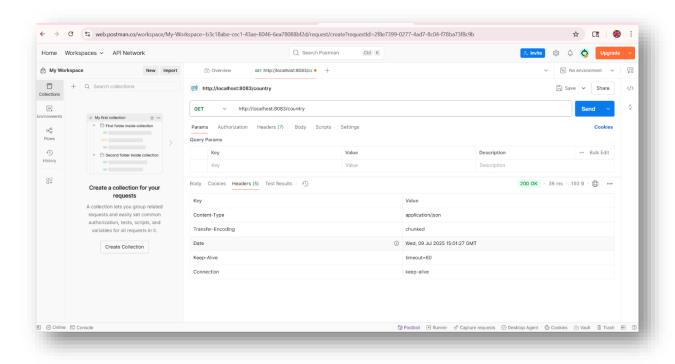


- What happens in the controller method?
  - This method is mapped to /country URL using @RequestMapping.
  - ❖ When you call http://localhost:8083/country, Spring will execute getCountryIndia().
  - ❖ It uses ApplicationContext to load the bean with id "in" (configured in your spring.xml).

- ❖ The bean is of type Country, containing India details (code IN, name India).
- ❖ Finally, it **returns the Country object**, which Spring automatically converts to a JSON response (thanks to @RestController).
- How the bean is converted into JSON reponse?
  - The @RestController annotation is a combination of @Controller + @ResponseBody.
  - ❖ Any Java object returned from the method is **automatically** serialized into JSON by Spring Boot.
  - ❖ Spring uses the **Jackson** library under the hood (by default) to convert the Country Java object into JSON.
- In network tab of developer tools show the HTTP header details received



• In postman click on "Headers" tab to view the HTTP header details received



```
[spring_learn] [nio-8083-exec-5] s.w.s.m.m.a.RequestMappingHandlerMapping : Mapped to com.cognizant.spring_learn.controller.CountryController#getCoun [spring_learn] [nio-8083-exec-5] m.m.a.RequestResponseBodyMethodProcessor : Using 'application/json', given [*/*] and supported [application/json, ap [spring_learn] [nio-8083-exec-5] m.m.a.RequestResponseBodyMethodProcessor : Writing [com.cognizant.spring_learn.model.Country@49808fe2] [spring_learn] [nio-8083-exec-5] o.s.web.servlet.DispatcherServlet : Completed 200 OK
```

## **REST - Get country based on country code**

Write a REST service that returns a specific country based on country code. The country code should be case insensitive.

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

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

Method Name: getCountry(String code)

Method Implemetation: Invoke countryService.getCountry(code)

Service Method: com.cognizant.spring-

learn.service.CountryService.getCountry(String code)

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