**1.Create a spring web project using Maven**

├── src

│ ├── main

│ │ ├── java

│ │ │ └── com.example.springresthandson

│ │ │ └── SpringRestHandsonApplication.java

│ │ └── resources

│ │ ├── application.properties

│ │ └── static

│ │ └── templates

│ └── test

│ └── java

package com.example.springresthandson;

import org.springframework.web.bind.annotation.GetMapping;

import org.springframework.web.bind.annotation.RestController;

@RestController

public class GreetingController {

@GetMapping("/greet")

public String greet() {

return "Hello! Welcome to Spring REST with Spring Boot 3.";

}

}

package com.example.springresthandson;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class SpringRestHandsonApplication {

public static void main(String[] args) {

SpringApplication.run(SpringRestHandsonApplication.class, args);

}

}

**Run the Application:**

./mvnw spring-boot:run

**We will see:**

Tomcat started on port(s): 8080 (http)...

**Output:**

Hello! Welcome to Spring REST with Spring Boot 3.

**2. Spring Core – Load Country from Spring Configuration XML**

Create a country class inside:

src/main/java/com/example/springresthandson/

package com.example.springresthandson;

public class Country {

private String countryName;

private String countryCode;

public String getCountryName() {

return countryName;

}

public void setCountryName(String countryName) {

this.countryName = countryName;

}

public String getCountryCode() {

return countryCode;

}

public void setCountryCode(String countryCode) {

this.countryCode = countryCode;

}

@Override

public String toString() {

return "Country [countryName=" + countryName + ", countryCode=" + countryCode + "]";

}

}

src/main/resources/

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

https://www.springframework.org/schema/beans/spring-beans.xsd">

<bean id="country" class="com.example.springresthandson.Country">

<property name="countryName" value="India"/>

<property name="countryCode" value="IN"/>

</bean>

</beans>

src/main/java/com/example/springresthandson/

package com.example.springresthandson;

import org.springframework.context.ApplicationContext;

import org.springframework.context.support.ClassPathXmlApplicationContext;

import org.springframework.stereotype.Component;

@Component

public class SpringXmlConfigTest {

public void displayCountry() {

ApplicationContext context = new ClassPathXmlApplicationContext("country.xml");

Country country = (Country) context.getBean("country");

System.out.println(country);

}

}

package com.example.springresthandson;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.boot.CommandLineRunner;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class SpringRestHandsonApplication implements CommandLineRunner {

@Autowired

private SpringXmlConfigTest xmlConfigTest;

public static void main(String[] args) {

SpringApplication.run(SpringRestHandsonApplication.class, args);

}

@Override

public void run(String... args) throws Exception {

xmlConfigTest.displayCountry();

}

}

Run:

./mvnw spring-boot:run

Output:

Country [countryName=India, countryCode=IN]

**3. Hello World RESTful Web Service**

src/main/java/com/example/springresthandson/

package com.example.springresthandson;

import org.springframework.web.bind.annotation.GetMapping;

import org.springframework.web.bind.annotation.RequestMapping;

import org.springframework.web.bind.annotation.RestController;

@RestController

@RequestMapping("/api")

public class HelloWorldController {

@GetMapping("/hello")

public String sayHello() {

return "Hello World from Spring Boot REST API!";

}

}

Run:

./mvnw spring-boot:run

You will see:

Tomcat started on port(s): 8080 (http)

Output:

Hello World from Spring Boot REST API!

**4. REST - Country Web Service**

package com.example.springresthandson;

public class Country {

private String countryName;

private String countryCode;

public String getCountryName() {

return countryName;

}

public void setCountryName(String countryName) {

this.countryName = countryName;

}

public String getCountryCode() {

return countryCode;

}

public void setCountryCode(String countryCode) {

this.countryCode = countryCode;

}

@Override

public String toString() {

return "Country [countryName=" + countryName + ", countryCode=" + countryCode + "]";

}

}

src/main/java/com/example/springresthandson/

package com.example.springresthandson;

import org.springframework.web.bind.annotation.GetMapping;

import org.springframework.web.bind.annotation.RequestMapping;

import org.springframework.web.bind.annotation.RestController;

@RestController

@RequestMapping("/api")

public class CountryController {

@GetMapping("/country")

public Country getCountry() {

Country country = new Country();

country.setCountryName("India");

country.setCountryCode("IN");

return country;

}

}

Run:

./mvnw spring-boot:run

We will see:

Tomcat started on port(s): 8080 (http)

Output:

{

"countryName": "India",

"countryCode": "IN"

}

**5. REST - Get country based on country code**

package com.example.springresthandson;

public class Country {

private String countryName;

private String countryCode;

public String getCountryName() {

return countryName;

}

public void setCountryName(String countryName) {

this.countryName = countryName;

}

public String getCountryCode() {

return countryCode;

}

public void setCountryCode(String countryCode) {

this.countryCode = countryCode;

}

@Override

public String toString() {

return "Country [countryName=" + countryName + ", countryCode=" + countryCode + "]";

}

}

src/main/java/com/example/springresthandson/

package com.example.springresthandson;

import org.springframework.web.bind.annotation.GetMapping;

import org.springframework.web.bind.annotation.PathVariable;

import org.springframework.web.bind.annotation.RequestMapping;

import org.springframework.web.bind.annotation.RestController;

@RestController

@RequestMapping("/api")

public class CountryController {

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

public Country getCountryByCode(@PathVariable String code) {

Country country = new Country();

if (code.equalsIgnoreCase("IN")) {

country.setCountryName("India");

country.setCountryCode("IN");

} else if (code.equalsIgnoreCase("US")) {

country.setCountryName("United States");

country.setCountryCode("US");

} else if (code.equalsIgnoreCase("JP")) {

country.setCountryName("Japan");

country.setCountryCode("JP");

} else {

country.setCountryName("Unknown");

country.setCountryCode(code.toUpperCase());

}

return country;

}

}

Run:

./mvnw spring-boot:run

<http://localhost:8080/api/country/IN>

{

"countryName": "India",

"countryCode": "IN"

}

<http://localhost:8080/api/country/US>

{

"countryName": "United States",

"countryCode": "US"

}