**SpringLearnApplicationTests.java**

package com.cognizant.springlearn;

import com.cognizant.springlearn.controller.CountryController;

import org.junit.jupiter.api.Test;

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

import org.springframework.boot.test.context.SpringBootTest;

import org.springframework.test.web.servlet.MockMvc;

import org.springframework.boot.test.autoconfigure.web.servlet.AutoConfigureMockMvc;

import org.springframework.test.web.servlet.ResultActions;

import static org.junit.jupiter.api.Assertions.assertNotNull;

import static org.springframework.test.web.servlet.request.MockMvcRequestBuilders.get;

import static org.springframework.test.web.servlet.result.MockMvcResultMatchers.status;

import static org.springframework.test.web.servlet.result.MockMvcResultMatchers.jsonPath;

@SpringBootTest

@AutoConfigureMockMvc

public class SpringLearnApplicationTests {

// Test if controller is loaded into Spring context

@Autowired

private CountryController countryController;

// Mock MVC to simulate HTTP requests

@Autowired

private MockMvc mvc;

@Test

public void contextLoads() {

assertNotNull(countryController);

}

@Test

public void testGetCountry() throws Exception {

ResultActions actions = mvc.perform(get("/country"));

actions.andExpect(status().isOk()) // Check for HTTP 200

.andExpect(jsonPath("$.code").exists())

.andExpect(jsonPath("$.code").value("IN"))

.andExpect(jsonPath("$.name").exists())

.andExpect(jsonPath("$.name").value("India"));

}

}

Country.java:

package com.cognizant.springlearn;

public class Country {

private String code;

private String name;

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;

}

@Override

public String toString() {

return "Country [code=" + code + ", name=" + name + "]";

}

}

**CountryController.java:**

package com.cognizant.springlearn.controller;

import com.cognizant.springlearn.Country;

import com.cognizant.springlearn.service.CountryService;

import com.cognizant.springlearn.service.exception.CountryNotFoundException;

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

import org.springframework.web.bind.annotation.\*;

import org.slf4j.Logger;

import org.slf4j.LoggerFactory;

@RestController

public class CountryController {

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

@Autowired

private CountryService countryService;

@GetMapping("/country")

public Country getCountryIndia() {

LOGGER.info("START getCountryIndia()");

Country country = countryService.getCountry("IN");

LOGGER.debug("Country: {}", country);

LOGGER.info("END getCountryIndia()");

return country;

}

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

public Country getCountry(@PathVariable String code) throws CountryNotFoundException {

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

Country country = countryService.getCountry(code);

LOGGER.debug("Country: {}", country);

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

return country;

}

}

**CountryService.java:**

package com.cognizant.springlearn.service;

import com.cognizant.springlearn.Country;

import com.cognizant.springlearn.service.exception.CountryNotFoundException;

import org.springframework.context.ApplicationContext;

import org.springframework.context.support.ClassPathXmlApplicationContext;

import org.springframework.stereotype.Service;

import java.util.List;

@Service

public class CountryService {

public Country getCountry(String code) {

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

List<Country> countries = (List<Country>) context.getBean("countryList");

return countries.stream()

.filter(c -> c.getCode().equalsIgnoreCase(code))

.findFirst()

.orElseThrow(() -> new CountryNotFoundException("Country not found"));

}

}

**CountryNotFoundException.java:**

package com.cognizant.springlearn.service.exception;

import org.springframework.http.HttpStatus;

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

@ResponseStatus(value = HttpStatus.NOT\_FOUND, reason = "Country not found")

public class CountryNotFoundException extends RuntimeException {

public CountryNotFoundException(String message) {

super(message);

}

}

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