WEEK-4 assignemnts- mandatory

1. SpringLearnApplication.java

package com.cognizant;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class SpringLearnApplication {

public static void main(String[] args) {

System.out.println("Starting SpringLearnApplication...");

SpringApplication.run(SpringLearnApplication.class, args);

System.out.println("SpringLearnApplication started successfully.");

}

}

pom.xml

<dependencies>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-web</artifactId>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-devtools</artifactId>

<scope>runtime</scope>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-test</artifactId>

<scope>test</scope>

</dependency>

</dependencies>

Output:

Starting SpringLearnApplication...

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:: Spring Boot :: (v3.x.x)

2025-07-26 10:00:00.000 INFO 12345 --- [main] c.c.SpringLearnApplication : Starting SpringLearnApplication using Java 17

2025-07-26 10:00:01.000 INFO 12345 --- [main] c.c.SpringLearnApplication : Started SpringLearnApplication in 2.3 seconds

SpringLearnApplication started successfully.

Test file:

package com.cognizant;

import org.junit.jupiter.api.Test;

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

@SpringBootTest

class SpringLearnApplicationTests {

@Test

void contextLoads() {

}

}

1. country.java

package com.cognizant.springlearn;

import org.slf4j.Logger;

import org.slf4j.LoggerFactory;

public class Country {

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

private String code;

private String name;

public Country() {

LOGGER.debug("Inside Country Constructor.");

}

public String getCode() {

LOGGER.debug("Getter for code called");

return code;

}

public void setCode(String code) {

LOGGER.debug("Setter for code called with value: {}", code);

this.code = code;

}

public String getName() {

LOGGER.debug("Getter for name called");

return name;

}

public void setName(String name) {

LOGGER.debug("Setter for name called with value: {}", name);

this.name = name;

}

@Override

public String toString() {

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

}

}

**country.xml (in src/main/resources/)**

<?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

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

<bean id="country" class="com.cognizant.springlearn.Country">

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

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

</bean>

</beans>

SpringLearnApplication.java

package com.cognizant.springlearn;

import org.slf4j.Logger;

import org.slf4j.LoggerFactory;

import org.springframework.context.ApplicationContext;

import org.springframework.context.support.ClassPathXmlApplicationContext;

public class SpringLearnApplication {

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

public static void main(String[] args) {

LOGGER.debug("Start of Main");

displayCountry();

LOGGER.debug("End of Main");

}

public static void displayCountry() {

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

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

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

}

}

Output:

Inside Country Constructor.

Setter for code called with value: IN

Setter for name called with value: India

Getter for code called

Getter for name called

Country : Country [code=IN, name=India]

1. SpringHelloRestApplication.java

package com.cognizant;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class SpringHelloRestApplication {

public static void main(String[] args) {

SpringApplication.run(SpringHelloRestApplication.class, args);

}

}

HelloController.java

package com.cognizant;

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

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

@RestController

public class HelloController {

@GetMapping("/")

public String helloWorld() {

return "Hello World RESTful Web Service";

}

}

pom.xml

<project xmlns="http://maven.apache.org/POM/4.0.0" ...>

<modelVersion>4.0.0</modelVersion>

<groupId>com.cognizant</groupId>

<artifactId>spring-hello-rest</artifactId>

<version>0.0.1-SNAPSHOT</version>

<packaging>jar</packaging>

<name>spring-hello-rest</name>

<description>Demo RESTful Hello World Service</description>

<parent>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-parent</artifactId>

<version>3.1.0</version>

</parent>

<dependencies>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-web</artifactId>

</dependency>

</dependencies>

<build>

<plugins>

<plugin>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-maven-plugin</artifactId>

</plugin>

</plugins>

</build>

</project>

Output: Hello World RESTful Web Service

1. Country.java

package com.cognizant;

public class Country {

private String code;

private String name;

public Country() {

}

public Country(String code, String name) {

this.code = code;

this.name = 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;

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

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

@RestController

public class CountryController {

@GetMapping("/country")

public String countryService() {

return "REST - Country Web Service";

}

@GetMapping("/country/details")

public Country getCountryDetails() {

return new Country("IN", "India");

}

}

SpringCountryRestApplication.java

package com.cognizant;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class SpringCountryRestApplication {

public static void main(String[] args) {

SpringApplication.run(SpringCountryRestApplication.class, args);

}

}

Output: {

"code": "IN",

"name": "India"

}

1. Country.java

package com.cognizant;

public class Country {

private String code;

private String name;

public Country() {}

public Country(String code, String name) {

this.code = code;

this.name = 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;

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

import java.util.HashMap;

import java.util.Map;

@RestController

public class CountryController {

private static final Map<String, Country> countryMap = new HashMap<>();

static {

countryMap.put("IN", new Country("IN", "India"));

countryMap.put("US", new Country("US", "United States"));

countryMap.put("DE", new Country("DE", "Germany"));

countryMap.put("JP", new Country("JP", "Japan"));

}

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

public Country getCountryByCode(@PathVariable String code) {

return countryMap.getOrDefault(code.toUpperCase(), new Country("N/A", "Country Not Found"));

}

}

SpringCountryServiceApplication.java

package com.cognizant;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class SpringCountryServiceApplication {

public static void main(String[] args) {

SpringApplication.run(SpringCountryServiceApplication.class, args);

}

}

pom.xml

<project xmlns="http://maven.apache.org/POM/4.0.0" ...>

<modelVersion>4.0.0</modelVersion>

<groupId>com.cognizant</groupId>

<artifactId>spring-country-service</artifactId>

<version>0.0.1-SNAPSHOT</version>

<name>spring-country-service</name>

<parent>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-parent</artifactId>

<version>3.1.0</version>

</parent>

<dependencies>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-web</artifactId>

</dependency>

</dependencies>

</project>

Output:

{

"code": "IN",

"name": "India"

}