

WEEK 4-Spring REST using Spring Boot 3

1.Create a Spring Web Project using Maven

```
mvn clean package -Dhttp.proxyHost=proxy.cognizant.com -Dhttp.proxyPort=6050 \
-Dhttps.proxyHost=proxy.cognizant.com -Dhttps.proxyPort=6050 \
-Dhttp.proxyUser=123456
```

```
package com.cognizant.springlearn;
```

```
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 <<<");
```

```
    }
```

```
}
```

```
<dependencies>
```

```
<!-- Spring Boot DevTools -->
```

```
<dependency>
```

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

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

<scope>runtime</scope>

<optional>true</optional>

</dependency>

<!-- Spring Web -->

<dependency>

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

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

</dependency>

<!-- Testing -->

<dependency>

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

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

    <scope>test</scope>

</dependency>

</dependencies>

<build>

<plugins>

    <plugin>

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

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

    </plugin>

</plugins>
```

OUTPUT:

```
>>> Starting SpringLearnApplication <<<

  .      _ _ _      _      _ _ _ _
 /\ /  _ ' _ _ _ _ ( _ ) _ _ _ _ \ \ \ \
( ( ) \ _ | ' _ | ' _ / / ' _ \ \ _ ` / \ \ \ \
 \ \ /  _ _ ) | _ _ ) / / / / / / / ( _ | | ) ) ) )
  '  | _ _ | . _ | _ / / _ | _ \ _ , | / / / /
=====| _ /=====| _ _ / = / _ / _ /

>>> SpringLearnApplication Started Successfully <<<
```

2. Spring Core – Load Country from Spring Configuration XML

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

    <!-- Country Bean Configuration -->

    <bean id="country" class="com.cognizant.springlearn.Country">
        <property name="code" value="IN" />
        <property name="name" value="India" />
    </bean>
```

</beans>

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;
```

```
    // Empty constructor with debug log
```

```
    public Country() {
```

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

```
    }
```

```
    // Getters and setters with debug logs
```

```
    public String getCode() {
```

```
        LOGGER.debug("Inside getCode()");
```

```
        return code;
```

```
    }
```

```
public void setCode(String code) {  
    LOGGER.debug("Inside setCode()");  
    this.code = code;  
}
```

```
public String getName() {  
    LOGGER.debug("Inside getName()");  
    return name;  
}
```

```
public void setName(String name) {  
    LOGGER.debug("Inside setName()");  
    this.name = name;  
}
```

```
// toString method
```

```
@Override
```

```
public String toString() {  
    return "Country [code=" + code + ", name=" + name + "];"  
}  
}
```

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.info("Start Main");
        displayCountry();
        LOGGER.info("End Main");
    }

    public static void displayCountry() {
        ApplicationContext context = new ClassPathXmlApplicationContext("country.xml");
        Country country = context.getBean("country", Country.class);
        LOGGER.debug("Country : {}", country.toString());
    }
}

```

OUTPUT:

```

DEBUG com.cognizant.springlearn.Country - Inside Country Constructor.
DEBUG com.cognizant.springlearn.Country - Inside setCode()
DEBUG com.cognizant.springlearn.Country - Inside setName()
DEBUG com.cognizant.springlearn.SpringLearnApplication - Country : Country [code=

```

3.Hello World RESTful Web Service

src/main/java/com/cognizant/springlearn/controller/HelloController.java

```
package com.cognizant.springlearn.controller;

import org.slf4j.Logger;
import org.slf4j.LoggerFactory;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.RestController;

@RestController

public class HelloController {

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

    @GetMapping("/hello")
    public String sayHello() {
        LOGGER.info("Start: sayHello()");
        String response = "Hello World!!";
        LOGGER.info("End: sayHello()");
        return response;
    }
}
```

Src/main/resources/application.properties

```
server.port=8083
```

OUTPUT:

```
Hello World!!
```