

Digital Nurture – 4.0 JAVA FSE – Week 4 Assignments

File name: 1. spring-rest-handson

Name: Create a Spring Web Project using Maven

SpringLearnApplication.java;

```
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("SpringLearnApplication is starting...");
```

```
SpringApplication.run(SpringLearnApplication.class, args);
```

}

}

Output;

```

Run SpringLearnApplication x
"C:\Program Files\Java\jdk-21\bin\java.exe" ...
SpringLearnApplication is starting...
SpringLearnApplication is starting...

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:: Spring Boot ::                (v3.5.3)

2025-07-13T19:11:19.559+05:30 INFO 11760 --- [spring-learn] [ restartedMain] c.c.spring_learn.SpringLearnA
2025-07-13T19:11:19.561+05:30 INFO 11760 --- [spring-learn] [ restartedMain] c.c.spring_learn.SpringLearnA
2025-07-13T19:11:19.672+05:30 INFO 11760 --- [spring-learn] [ restartedMain] .e.DevToolsPropertyDefaultsP

```

File name: 1. spring-rest-handson

Name: Spring Core – Load Country from Spring Configuration XML

date-format.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="dateFormat" class="java.text.SimpleDateFormat">
    <constructor-arg value="dd/MM/yyyy" />
  </bean>

</beans>
```

SpringLearnApplication.java;

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

```
import java.text.ParseException;
import java.text.SimpleDateFormat;
import java.util.Date;
```

```
import org.springframework.context.ApplicationContext;
import org.springframework.context.support.ClassPathXmlApplicationContext;
import org.springframework.boot.autoconfigure.SpringBootApplication;
```

```
@SpringBootApplication
```

```
public class SpringLearnApplication {
```

```
    public static void main(String[] args) throws ParseException {
        displayDate();
    }
```

```
    public static void displayDate() throws ParseException {
        ApplicationContext context = new ClassPathXmlApplicationContext("date-format.xml");
```

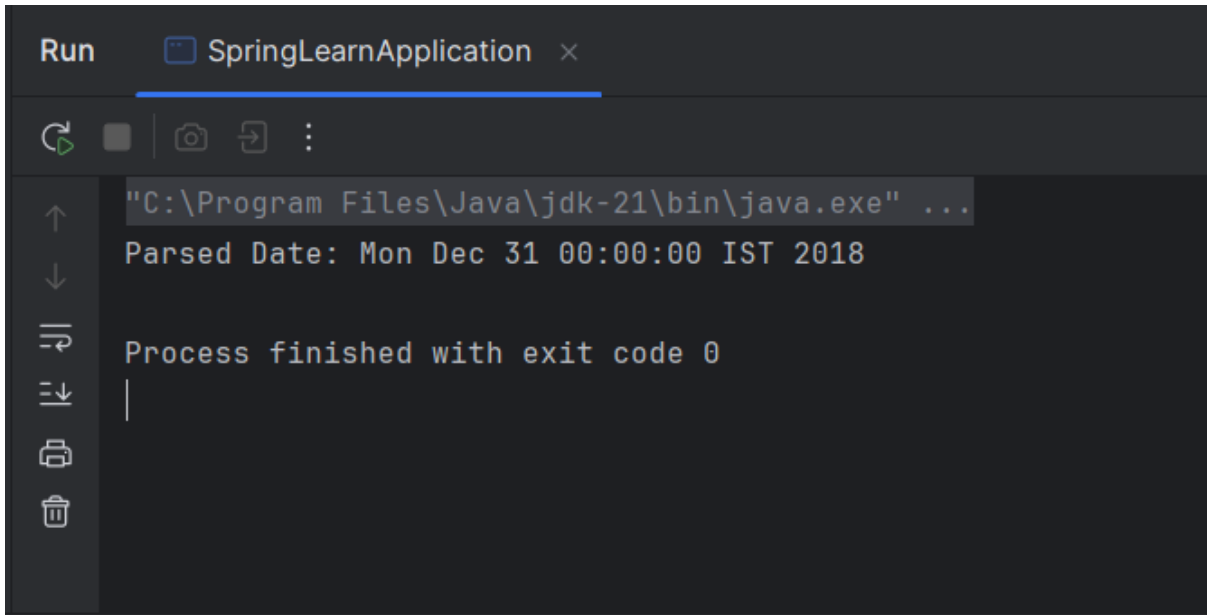
```
        SimpleDateFormat format = context.getBean("dateFormat", SimpleDateFormat.class);
```

```
        String dateStr = "31/12/2018";
        Date parsedDate = format.parse(dateStr);
```

```
        System.out.println("Parsed Date: " + parsedDate);
```

```
    }
}
```

Output:



```
Run SpringLearnApplication x
"C:\Program Files\Java\jdk-21\bin\java.exe" ...
Parsed Date: Mon Dec 31 00:00:00 IST 2018
Process finished with exit code 0
```

File name: 2. spring-rest-handson

Name: Hello World RESTful Web Service

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 message = "Hello World!!";
```

```
        LOGGER.info("End - sayHello()");
```

```
        return message;
```

```
    }
```

```
}
```

```
SpringLearnApplication.java;
```

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

```
import org.slf4j.Logger;
```

```
import org.slf4j.LoggerFactory;
```

```
import org.springframework.boot.SpringApplication;
```

```
import org.springframework.boot.autoconfigure.SpringBootApplication;
```

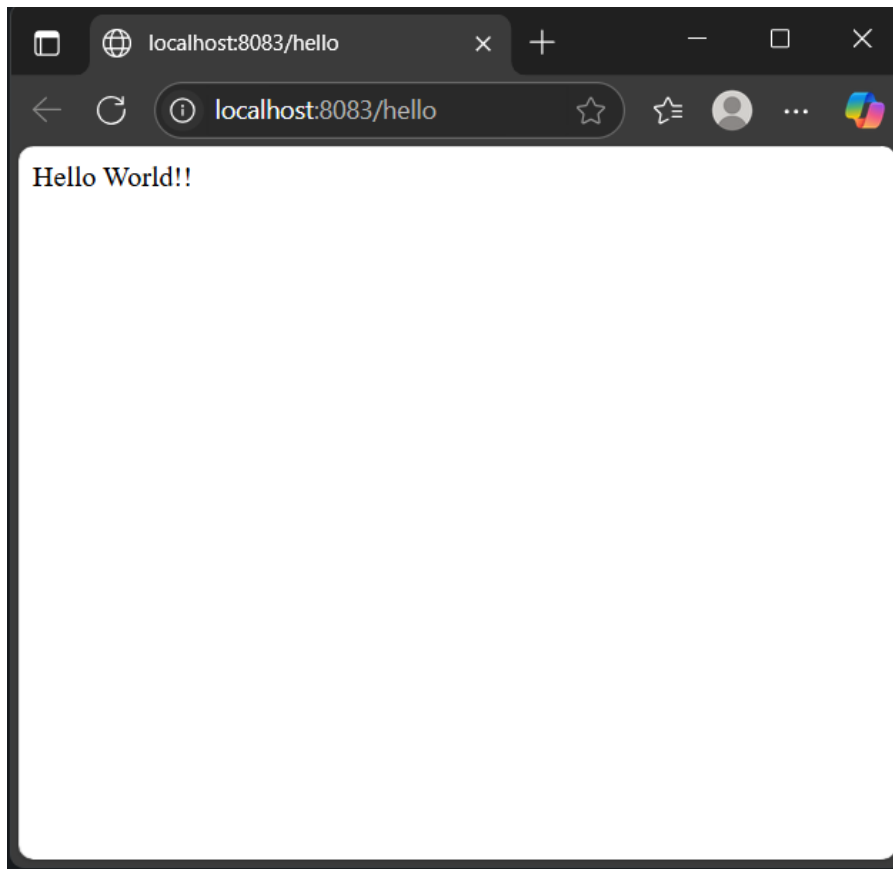
```
@SpringBootApplication
```

```
public class SpringLearnApplication {
```

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

```
    public static void main(String[] args) {  
        LOGGER.info("START - SpringLearnApplication");  
        SpringApplication.run(SpringLearnApplication.class, args);  
        LOGGER.info("END - SpringLearnApplication");  
    }  
}
```

Output:



File name: 2. spring-rest-handson
Name: REST - Country Web Service

Country.java;

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

```
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;  
    }  
}
```

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="in" class="com.cognizant.springlearn.model.Country">  
        <property name="code" value="IN"/>  
        <property name="name" value="India"/>  
    </bean>  
</beans>
```

CountryController.java;

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

```

import com.cognizant.springlearn.model.Country;
import org.slf4j.Logger;
import org.slf4j.LoggerFactory;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RestController;
import org.springframework.context.ApplicationContext;
import org.springframework.context.support.ClassPathXmlApplicationContext;

@RestController
public class CountryController {

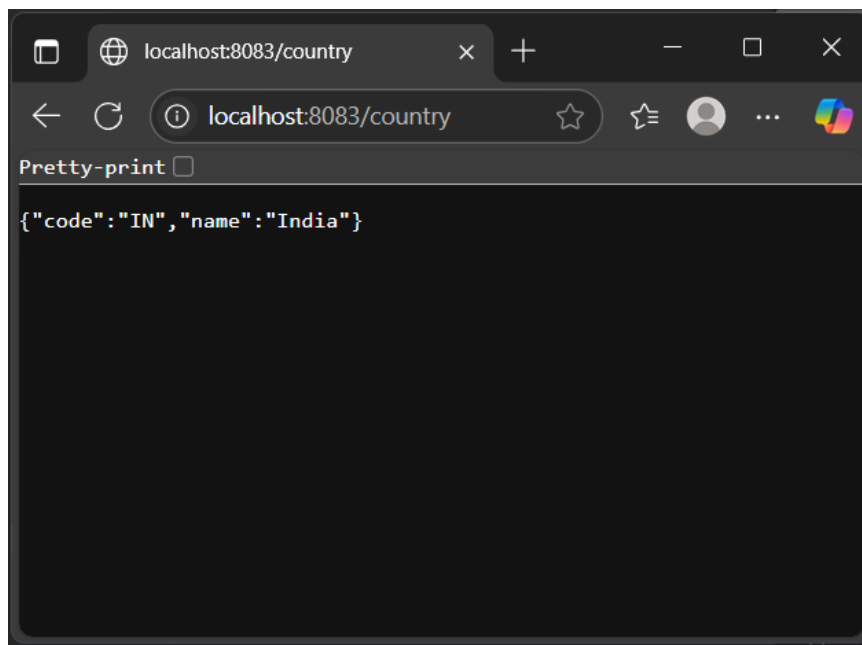
    private static final Logger LOGGER = LoggerFactory.getLogger(CountryController.class);

    @RequestMapping("/country")
    public Country getCountryIndia() {
        LOGGER.info("START - getCountryIndia()");
        ApplicationContext context = new ClassPathXmlApplicationContext("country.xml");
        Country country = context.getBean("in", Country.class);
        LOGGER.info("END - getCountryIndia()");
        return country;
    }
}

```

Run <http://localhost:8083/country> to get output.

Output:



File name: 2. spring-rest-handson

Name: REST - Get country based on country code

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="in" class="com.cognizant.springlearn.model.Country">
        <property name="code" value="IN"/>
        <property name="name" value="India"/>
    </bean>

    <bean id="us" class="com.cognizant.springlearn.model.Country">
        <property name="code" value="US"/>
        <property name="name" value="United States"/>
    </bean>

    <bean id="countries" class="java.util.ArrayList">
        <constructor-arg>
            <list>
                <ref bean="in"/>
                <ref bean="us"/>
            </list>
        </constructor-arg>
    </bean>

</beans>
```

CountryService.java;

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

```
import com.cognizant.springlearn.model.Country;
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");

@SuppressWarnings("unchecked")
List<Country> countries = (List<Country>) context.getBean("countries");

return countries.stream()
    .filter(country -> country.getCode().equalsIgnoreCase(code))
    .findFirst()
    .orElse(null);
}
}

```

CountryController.java;

```

package com.cognizant.springlearn.controller;

import com.cognizant.springlearn.model.Country;
import com.cognizant.springlearn.service.CountryService;
import org.slf4j.Logger;
import org.slf4j.LoggerFactory;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RestController;

@RestController
public class CountryController {

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

    @Autowired
    private CountryService countryService;

    @GetMapping("/countries/{code}")
    public Country getCountry(@PathVariable String code) {
        LOGGER.info("START - getCountry()");
        Country country = countryService.getCountry(code);
        LOGGER.info("END - getCountry()");
        return country;
    }
}

```

Run <http://localhost:8083/countries/us> to get output.

Output;

