**Create a Spring Web Project using Maven**

**Project Structure**

spring-web-maven/

├── src/

│ └── main/

│ ├── java/

│ │ └── com.example.controller/

│ │ └── HelloController.java

│ ├── resources/

│ └── webapp/

│ ├── WEB-INF/

│ │ ├── web.xml

│ │ └── dispatcher-servlet.xml

│ └── index.jsp

├── pom.xml

**Step 1: pom.xml**

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

xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="http://maven.apache.org/POM/4.0.0

http://maven.apache.org/xsd/maven-4.0.0.xsd">

<modelVersion>4.0.0</modelVersion>

<groupId>com.example</groupId>

<artifactId>spring-web-maven</artifactId>

<version>1.0-SNAPSHOT</version>

<packaging>war</packaging>

<properties>

<java.version>1.8</java.version>

<spring.version>5.3.9</spring.version>

</properties>

<dependencies>

<!-- Spring MVC -->

<dependency>

<groupId>org.springframework</groupId>

<artifactId>spring-webmvc</artifactId>

<version>${spring.version}</version>

</dependency>

<!-- Servlet API -->

<dependency>

<groupId>javax.servlet</groupId>

<artifactId>javax.servlet-api</artifactId>

<version>4.0.1</version>

<scope>provided</scope>

</dependency>

<!-- JSP -->

<dependency>

<groupId>javax.servlet.jsp</groupId>

<artifactId>javax.servlet.jsp-api</artifactId>

<version>2.3.3</version>

<scope>provided</scope>

</dependency>

</dependencies>

<build>

<finalName>spring-web-maven</finalName>

</build>

</project>

**Step 2: web.xml**

**Location:** src/main/webapp/WEB-INF/web.xml

<web-app xmlns="http://xmlns.jcp.org/xml/ns/javaee"

version="3.1">

<display-name>Spring Web Maven</display-name>

<servlet>

<servlet-name>dispatcher</servlet-name>

<servlet-class>org.springframework.web.servlet.DispatcherServlet</servlet-class>

<load-on-startup>1</load-on-startup>

</servlet>

<servlet-mapping>

<servlet-name>dispatcher</servlet-name>

<url-pattern>/</url-pattern>

</servlet-mapping>

</web-app>

**Step 3: dispatcher-servlet.xml**

**Location:** src/main/webapp/WEB-INF/dispatcher-servlet.xml

<beans xmlns="http://www.springframework.org/schema/beans"

xmlns:mvc="http://www.springframework.org/schema/mvc"

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

http://www.springframework.org/schema/mvc

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

<mvc:annotation-driven/>

<context:component-scan base-package="com.example.controller"/>

<bean class="org.springframework.web.servlet.view.InternalResourceViewResolver">

<property name="prefix" value="/WEB-INF/views/"/>

<property name="suffix" value=".jsp"/>

</bean>

</beans>

**Step 4: HelloController.java**

package com.example.controller;

import org.springframework.stereotype.Controller;

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

import org.springframework.web.servlet.ModelAndView;

@Controller

public class HelloController {

@RequestMapping("/")

public ModelAndView hello() {

return new ModelAndView("index", "message", "Hello from Spring MVC!");

}

}

**Step 5: index.jsp**

**Location:** src/main/webapp/WEB-INF/views/index.jsp

<html>

<body>

<h2>${message}</h2>

</body>

</html>

**To Run:**

* Package with Maven:

mvn clean install

* Deploy the generated .war file to a servlet container (like **Tomcat**).

**Output in Browser**

Hello from Spring MVC!

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

**Project Structure (Spring Boot)**

rest-country-api/

├── src/

│ └── main/

│ └── java/

│ └── com.example.demo/

│ ├── CountryController.java

│ └── DemoApplication.java

├── pom.xml

**pom.xml**

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

<modelVersion>4.0.0</modelVersion>

<groupId>com.example</groupId>

<artifactId>rest-country-api</artifactId>

<version>1.0-SNAPSHOT</version>

<parent>

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

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

<version>3.1.2</version>

</parent>

<dependencies>

<dependency>

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

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

</dependency>

</dependencies>

</project>

**DemoApplication.java**

package com.example.demo;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class DemoApplication {

public static void main(String[] args) {

SpringApplication.run(DemoApplication.class, args);

}

}

**CountryController.java**

package com.example.demo;

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

import java.util.HashMap;

import java.util.Map;

@RestController

@RequestMapping("/api")

public class CountryController {

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

static {

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

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

countryMap.put("UK", "United Kingdom");

countryMap.put("CA", "Canada");

}

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

public String getCountryByCode(@PathVariable String code) {

return countryMap.getOrDefault(code.toUpperCase(), "Country not found");

}

}

**Sample Requests and Output**

* **Request:**

GET http://localhost:8080/api/country/IN

* **Response:**

India

* **Request:**

GET http://localhost:8080/api/country/DE

* **Response:**

Country not found