Spring Web Maven Project

## 1. Spring Core – Load Country from Spring Configuration XML

Country.java  
  
package com.example.model;  
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; }  
}  
  
beans.xml (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.example.model.Country">  
 <property name="code" value="IN"/>  
 <property name="name" value="India"/>  
 </bean>  
</beans>  
  
MainApp.java  
  
package com.example;  
import org.springframework.context.ApplicationContext;  
import org.springframework.context.support.ClassPathXmlApplicationContext;  
import com.example.model.Country;  
public class MainApp {  
 public static void main(String[] args) {  
 ApplicationContext context = new ClassPathXmlApplicationContext("beans.xml");  
 Country country = (Country) context.getBean("country");  
 System.out.println(country.getCode() + " - " + country.getName());  
 }  
}

## 2. Hello World RESTful Web Service

HelloController.java  
package com.example.controller;  
import org.springframework.web.bind.annotation.GetMapping;  
import org.springframework.web.bind.annotation.RestController;  
@RestController  
public class HelloController {  
 @GetMapping("/hello")  
 public String hello() {  
 return "Hello, World!";  
 }  
}

## 3. REST - Country Web Service

Country.java  
  
package com.example.model;  
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; }  
}  
  
CountryController.java  
  
package com.example.controller;  
import org.springframework.web.bind.annotation.\*;  
import java.util.\*;  
@RestController  
@RequestMapping("/countries")  
public class CountryController {  
 List<Country> countryList = new ArrayList<>(List.of(new Country("IN", "India"), new Country("US", "United States")));  
 @GetMapping  
 public List<Country> getAllCountries() {  
 return countryList;  
 }  
}

## 4. REST - Get country based on country code

CountryController.java (continued)  
  
@GetMapping("/{code}")  
public Country getCountryByCode(@PathVariable String code) {  
 return countryList.stream().filter(c -> c.getCode().equalsIgnoreCase(code)).findFirst().orElse(null);  
}

## 5. Create authentication service that returns JWT

JwtUtil.java  
  
package com.example.security;  
import io.jsonwebtoken.Jwts;  
import io.jsonwebtoken.SignatureAlgorithm;  
import java.util.Date;  
public class JwtUtil {  
 private static final String SECRET\_KEY = "secret";  
 public String generateToken(String username) {  
 return Jwts.builder()  
 .setSubject(username)  
 .setIssuedAt(new Date())  
 .setExpiration(new Date(System.currentTimeMillis() + 1000 \* 60 \* 60))  
 .signWith(SignatureAlgorithm.HS256, SECRET\_KEY)  
 .compact();  
 }  
}  
  
AuthController.java  
  
package com.example.controller;  
import com.example.security.JwtUtil;  
import org.springframework.web.bind.annotation.\*;  
@RestController  
@RequestMapping("/auth")  
public class AuthController {  
 JwtUtil jwtUtil = new JwtUtil();  
 @PostMapping("/login")  
 public String login(@RequestParam String username, @RequestParam String password) {  
 if (username.equals("admin") && password.equals("admin")) {  
 return jwtUtil.generateToken(username);  
 }  
 return "Invalid credentials";  
 }  
}