Case Study Title: *Online Course Enrollment System*

Course.java:

```java
package com.example.model;
public class Course {
    private Long id;
    private String name;

    public Course() {}

    public Course(Long id, String name) {
        this.id = id;
        this.name = name;
    }

    public Long getId() {
return id;
 }
    public void setId(Long id) {
this.id = id;
}

    public String getName() {
return name;
}
    public void setName(String name) {
this.name = name;
}
}
```

Student.java:

```java
package com.example.model;
public class Student {
private String name;
private String email;
private Long courseId;
public String getName() {
return name;
}
```

```java
public void setName(String name) {
this.name = name;
}
public String getEmail() {
return email;
}
public void setEmail(String email) {
this.email = email;
}
public Long getCourseId() {
return courseId;
}
public void setCourseId(Long courseId) {
this.courseId = courseId;
}
}
```

CourseController.java

```java
package com.example.controller;
import java.util.Arrays;
import java.util.List;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.*;
import com.example.model.Course;
import com.example.model.Student;
@Controller
public class CourseController {
private final List<Course> courseList = Arrays.asList(
    new Course(101L, "Java Programming"),
    new Course(102L, "Spring MVC"),
    new Course(103L, "Hibernate Basics")
);

  @GetMapping("/courses")
  public String showCourses(Model model) {
    model.addAttribute("courses", courseList);
    return "courses";
  }
```

```java
@GetMapping("/enroll")
public String enrollForm(Model model) {
    model.addAttribute("student", new Student());
    model.addAttribute("courses", courseList);
    return "enroll";
}

@PostMapping("/submitEnrollment")
public String submitForm(@ModelAttribute Student student, Model model) {
    model.addAttribute("student", student);
    return "success";
}
}
```

courses.jsp:
```jsp
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<!DOCTYPE html>
<html><head>
<meta charset="UTF-8">
<title>Available Courses</title>
</head>
<body>
<h2>Available Courses</h2>
<ul>
<c:forEach var="course" items="${courses}">
<li>${course.id} - ${course.name}</li>
</c:forEach>
</ul>
<a href="enroll">Enroll Now</a>
</body>
</html>
```

enroll.jsp:
```jsp
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
```

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Student Enrollment Form</title>
</head>
<body>
<h2>Student Enrollment</h2>
<form action="submitEnrollment" method="post">
Name: <input type="text" name="name" required /><br/><br/>
Email: <input type="email" name="email" required /><br/><br/>
Course ID: <input type="text" name="courseId" required /><br/><br/>
<input type="submit" value="Enroll"/>
</form>
</body>
</html>
```

success.jsp:

```jsp
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Enrollment Confirmation</title>
</head>
<body>
<h2>Enrollment Successful</h2>
<p><strong>Welcome, ${student.name}</strong></p>
<p>Your email: ${student.email}</p>
<p>You have successfully enrolled in course ID:
<strong>${student.courseId}</strong></p>
<a href="courses">Go back to Courses</a>
</body></html>
```

Index.jsp:

```jsp
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
```

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Online Course Enrollment</title>
</head>
<body>
<h2>Welcome to the Online Course Enrollment System</h2>
<a href="courses">View Available Courses</a>
</body>
</html>
```

Web.xml:

```xml
<?xml version="1.0" encoding="UTF-8"?>
<web-app xmlns="https://jakarta.ee/xml/ns/jakartaee"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="https://jakarta.ee/xml/ns/jakartaee
https://jakarta.ee/xml/ns/jakartaee/web-app_6_0.xsd"
version="6.0">
<display-name>SpringMVCMultiView</display-name>
<servlet>
<servlet-name>spring</servlet-name>
<servlet
class>org.springframework.web.servlet.DispatcherServlet</servlet-class>
<init-param>
<param-name>contextConfigLocation</param-name>
<param-value>/WEB-INF/spring-servlet.xml</param-value>
</init-param>
<load-on-startup>1</load-on-startup>
</servlet>
<servlet-mapping>
<servlet-name>spring</servlet-name>
<url-pattern>/</url-pattern>
</servlet-mapping>
<welcome-file-list>
<welcome-file>index.jsp</welcome-file>
</welcome-file-list>
</web-app>
```

Spring-servlet.xml:

```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"
xmlns:context="http://www.springframework.org/schema/context"
xmlns:mvc="http://www.springframework.org/schema/mvc"
xsi:schemaLocation="
http://www.springframework.org/schema/beans
http://www.springframework.org/schema/beans/spring-beans.xsd
http://www.springframework.org/schema/context
http://www.springframework.org/schema/context/spring-context.xsd
http://www.springframework.org/schema/mvc
http://www.springframework.org/schema/mvc/spring-mvc.xsd">
<context:component-scan base-package="com.example" />
<mvc:annotation-driven />
<bean
class="org.springframework.web.servlet.view.InternalResourceViewResolver">
<property name="prefix" value="/WEB-INF/views/" />
<property name="suffix" value=".jsp" />
</bean>
</beans>
```