Day 5: Spring MVC - User Claim Interaction Workflow

Task 1: Migrate front-end form handling to Spring MVC controllers.

First we have to create html page

```
<!DOCTYPE html>
<html>
<head>
    <meta charset="UTF-8">
    <title>Claim Submission Form</title>
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <h2>Claim Submission Form</h2>

    <form action="${pageContext.request.contextPath}/submitClaim" method="post">
        <label for="policyNumber">Policy Number:</label>
        <input type="text" id="policyNumber" name="policyNumber" required><br><br>

        <label for="claimAmount">Claim Amount:</label>
        <input type="text" id="claimAmount" name="claimAmount" required><br><br>

        <label for="claimDetails">Claim Details:</label><br>
        <textarea id="claimDetails" name="claimDetails" rows="4" cols="50"
required></textarea><br><br>

        <input type="submit" value="Submit Claim">
    </form>

</body>
</html>
```

Now we have to create mvc controller

```
package com.example.controller;
```

```
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.PostMapping;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestParam;
@Controller
@RequestMapping("/claim")
public class ClaimController {
    @PostMapping("/submitClaim")
    public String submitClaim(@RequestParam("policyNumber") String policyNumber,
                              @RequestParam("claimAmount") Double claimAmount,
                              @RequestParam("claimDetails") String claimDetails,
                              Model model) {
        model.addAttribute("successMessage", "Claim submitted successfully!");
        return "claimConfirmation";
    }
}
```

Task 2: Configure Thymeleaf as the view layer for dynamic content rendering in Spring MVC.

First add thymeleaf dependency

```
package com.example.config;

import org.springframework.context.annotation.Bean;
import org.springframework.context.annotation.Configuration;
import org.springframework.web.servlet.ViewResolver;
import org.springframework.web.servlet.config.annotation.EnableWebMvc;
import org.springframework.web.servlet.config.annotation.WebMvcConfigurer;
import org.springframework.web.servlet.view.InternalResourceViewResolver;
import org.thymeleaf.spring5.SpringTemplateEngine;
import org.thymeleaf.spring5.view.ThymeleafViewResolver;
import org.thymeleaf.templatemode.TemplateMode;
import org.thymeleaf.templateresolver.ClassLoaderTemplateResolver;

@Configuration
@EnableWebMvc
public class WebConfig implements WebMvcConfigurer {

    @Bean
    public ClassLoaderTemplateResolver templateResolver() {
        ClassLoaderTemplateResolver templateResolver = new ClassLoaderTemplateResolver();
        templateResolver.setPrefix("/WEB-INF/views/");
        templateResolver.setSuffix(".html");
        templateResolver.setTemplateMode(TemplateMode.HTML);
        return templateResolver;
    }

    @Bean
    public SpringTemplateEngine templateEngine() {
        SpringTemplateEngine templateEngine = new SpringTemplateEngine();
        templateEngine.setTemplateResolver(templateResolver());
        return templateEngine;
    }

    @Bean
    public ViewResolver thymeleafViewResolver() {
        ThymeleafViewResolver resolver = new ThymeleafViewResolver();
        resolver.setTemplateEngine(templateEngine());
        resolver.setCharacterEncoding("UTF-8");
        return resolver;
    }
}
```

Task 3: Implement data binding and server-side validation within the Spring MVC framework.

```
package com.example.model;


import javax.validation.constraints.NotBlank;
import javax.validation.constraints.NotNull;
public class Claim {
@NotBlank(message = "Policy number is required")
    private String policyNumber;
    @NotNull(message = "Claim amount is required")
    private Double claimAmount;
@NotBlank(message = "Claim details are required")
    private String claimDetails;
    public String getPolicyNumber() {
        return policyNumber;
    }
public void setPolicyNumber(String policyNumber) {
        this.policyNumber = policyNumber;
    }
public Double getClaimAmount() {
        return claimAmount;
    }


    public void setClaimAmount(Double claimAmount) {
        this.claimAmount = claimAmount;
    }
public String getClaimDetails() {
        return claimDetails;
    }
 public void setClaimDetails(String claimDetails) {
        this.claimDetails = claimDetails;
    }
}
```