1-1. pro04/pom.xml 에 의존성 라이브러리 추가


```
276        <!-- java의 validation 라이브러리 -->
277        <dependency>
278            <groupId>javax.validation</groupId>
279            <artifactId>validation-api</artifactId>
280            <version>2.0.1.Final</version>
281        </dependency>
282        <!-- 폼 검증을 애노테이션으로 검증하도록 하는 hibernate 라이브러리 -->
283        <dependency>
284            <groupId>org.hibernate</groupId>
285            <artifactId>hibernate-annotations</artifactId>
286            <version>3.5.6-Final</version>
287        </dependency>
288        <!-- hibernate Validator 라이브러리 -->
289        <dependency>
290            <groupId>org.hibernate.validator</groupId>
291            <artifactId>hibernate-validator</artifactId>
292            <version>6.0.8.Final</version>
293        </dependency>
294        <dependency>
295            <groupId>javax.xml.bind</groupId>
296            <artifactId>jaxb-api</artifactId>
297            <version>2.3.0</version>
298        </dependency>
299
```
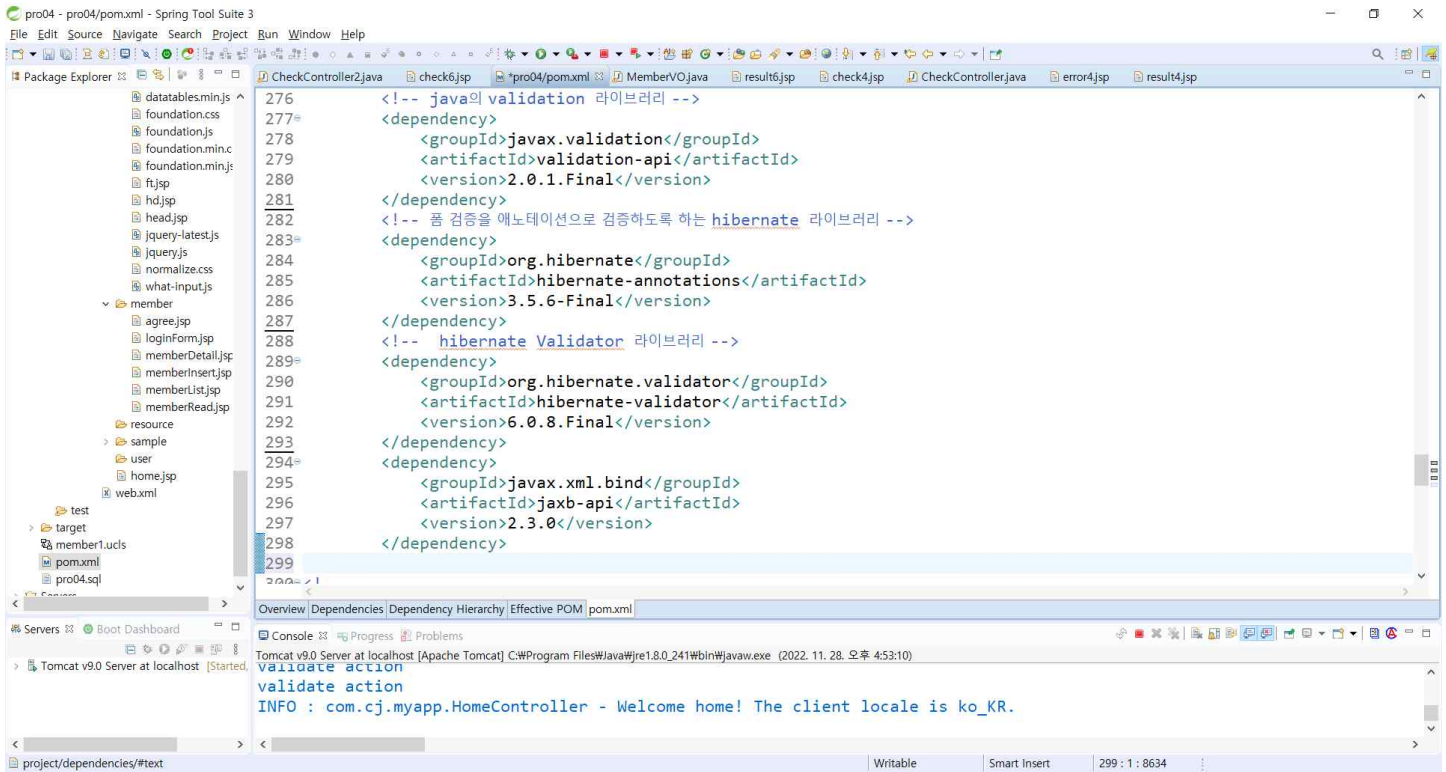
1-2. 폼 컨트롤의 pattern 속성과 required로 폼 검증하기
pro04/src/main/webapp/WEB-INF/views/check/check1.jsp를 작성


```
1  <%@ page language="java" contentType="text/html; charset=UTF-8"
2      pageEncoding="UTF-8"%>
3  <%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"  %>
4  <%@ taglib prefix="fmt" uri="http://java.sun.com/jsp/jstl/fmt" %>
5  <%@ taglib prefix="fn" uri = "http://java.sun.com/jsp/jstl/functions"%>
6  <!DOCTYPE html>
7  <html>
8  <head>
9      <meta charset="UTF-8">
10     <meta http-equiv="X-UA-Compatible" content="IE=edge">
11     <meta name="viewport" content="width=device-width, initial-scale=1.0">
12     <title>폼 유효성 검사1</title>
13 </head>
14 <body>
15     <h2>FORM 유효성 검사1</h2>
16     <form action="./check1" method="post">
17         id : <input type="text" name="id" id="id" pattern="^[a-z0-9]{5,12}" maxlength="12" required /><br><br>
18         pw : <input type="password" name="pw" id="pw" pattern="^[a-zA-Z0-9]{8,12}$" maxlength="12" required /><br><br>
19         <button class="btn" type="submit"> 전송 </button>
20     </form>
21 </body>
22 </html>
```

1-3. 결과 페이지인 pro04/src/main/webapp/WEB-INF/views/check/result1.jsp 작성

```jsp
1  <%@ page language="java" contentType="text/html; charset=UTF-8"
2       pageEncoding="UTF-8"%>
3  <%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"  %>
4  <%@ taglib prefix="fmt" uri="http://java.sun.com/jsp/jstl/fmt" %>
5  <%@ taglib prefix="fn" uri = "http://java.sun.com/jsp/jstl/functions"%>
6  <!DOCTYPE html>
7  <html>
8  <head>
9      <meta charset="UTF-8">
10     <meta http-equiv="X-UA-Compatible" content="IE=edge">
11     <meta name="viewport" content="width=device-width, initial-scale=1.0">
12     <title>결과1</title>
13 </head>
14 <body>
15     <h2>결과1</h2>
16     <div>
17         <p>${id }</p>
18         <p>${pw }</p>
19     </div>
20 </body>
21 </html>
```
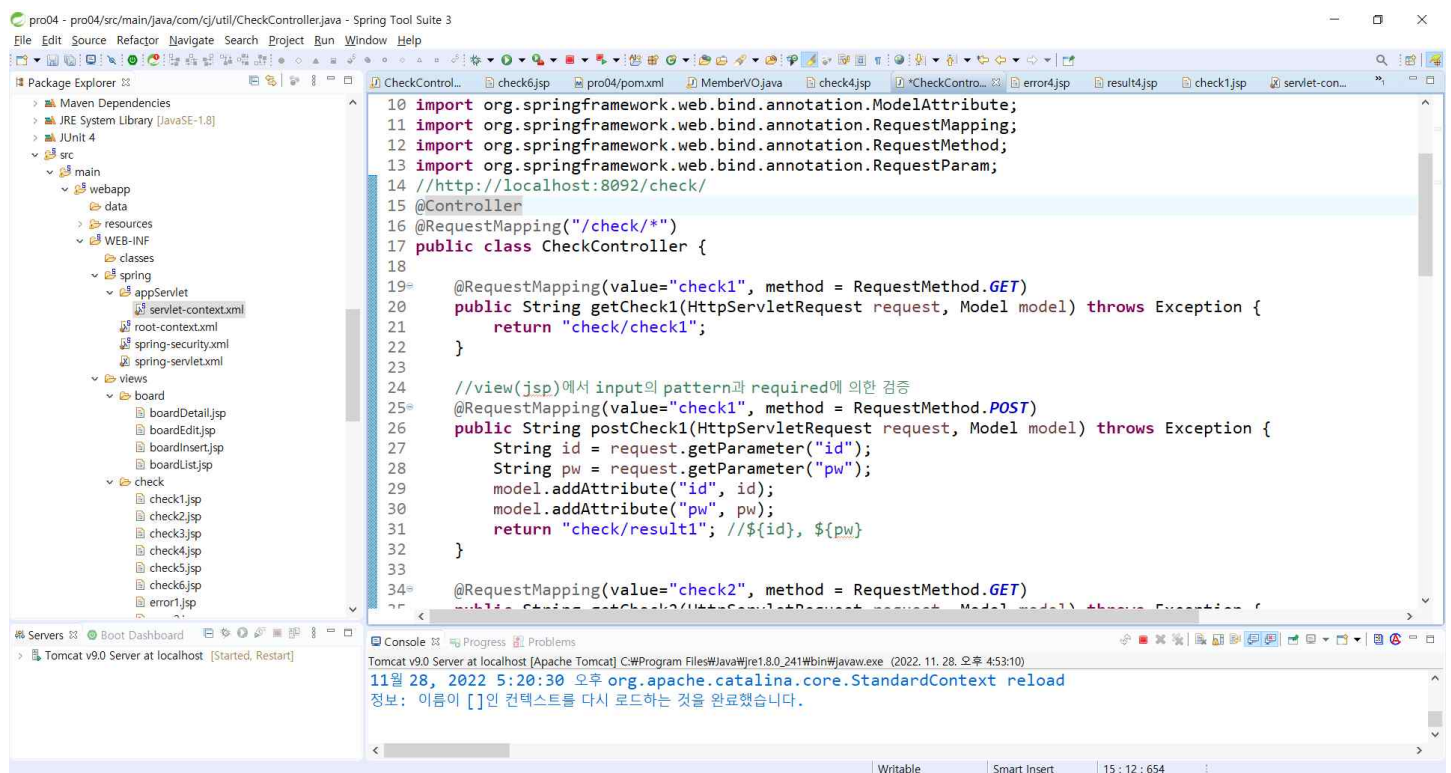
1-4. 에러 페이지인 pro04/src/main/webapp/WEB-INF/views/check/error1.jsp 작성

```jsp
1  <%@ page language="java" contentType="text/html; charset=UTF-8"
2       pageEncoding="UTF-8"%>
3  <%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"  %>
4  <%@ taglib prefix="fmt" uri="http://java.sun.com/jsp/jstl/fmt" %>
5  <%@ taglib prefix="fn" uri = "http://java.sun.com/jsp/jstl/functions"%>
6  <!DOCTYPE html>
7  <html>
8  <head>
9      <meta charset="UTF-8">
10     <meta http-equiv="X-UA-Compatible" content="IE=edge">
11     <meta name="viewport" content="width=device-width, initial-scale=1.0">
12     <title>에러 페이지</title>
13 </head>
14 <body>
15     <h2>에러페이지1</h2>
16     <div>
17         <p>아이디 또는 비밀번호를 입력하지 않으셨거나 비밀번호 형식이 잘못되었습니다.</p>
18     </div>
19 </body>
20 </html>
```

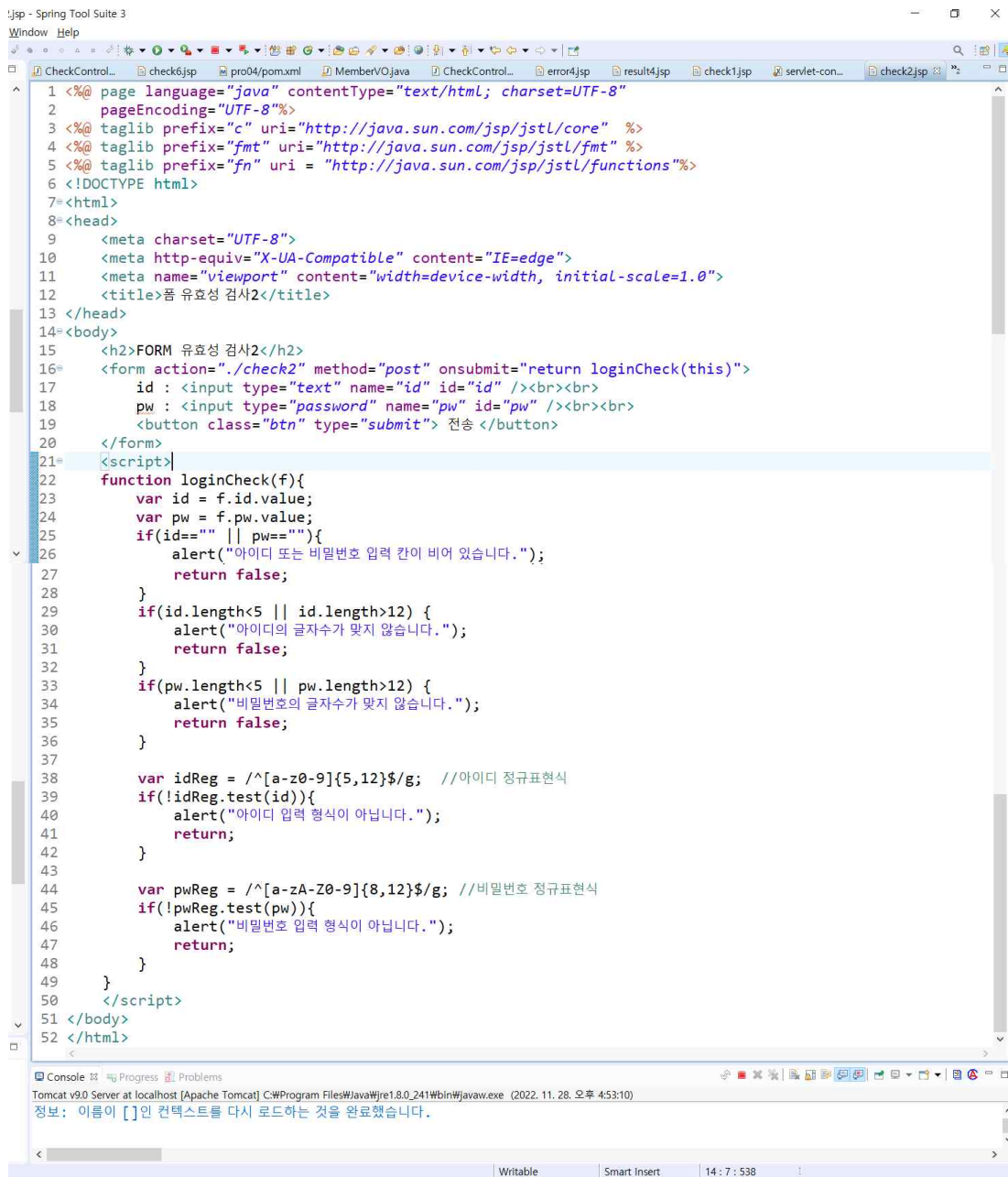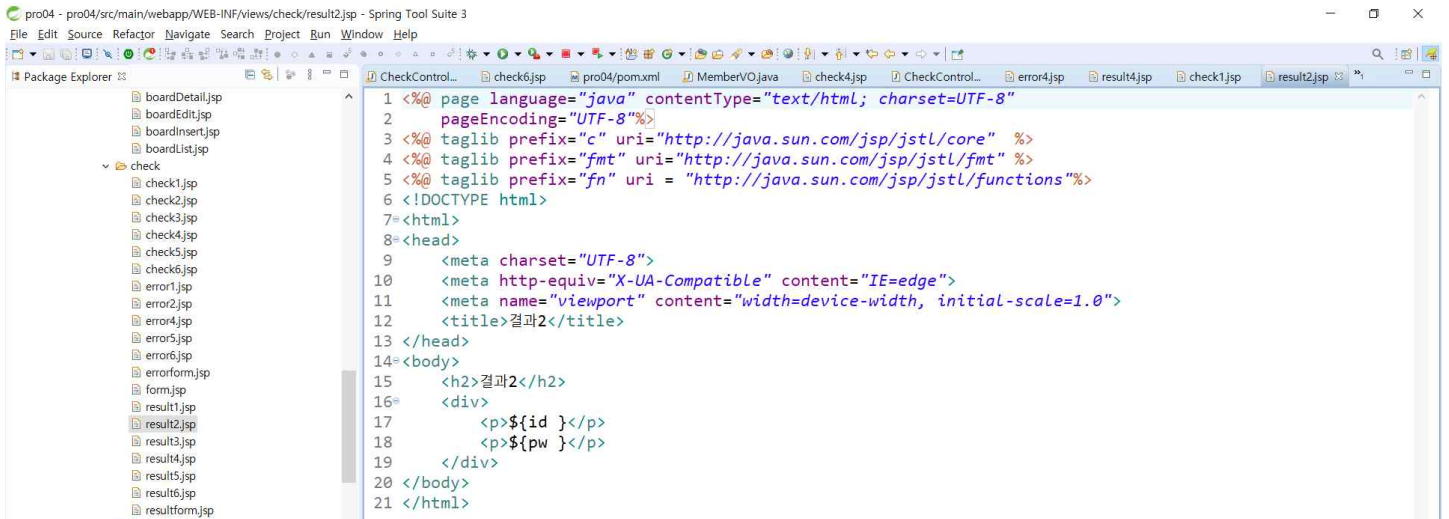# 1-5. pro04/src/main/webapp/WEB-INF/spring/appServlet/servlet-context.xml 에 check 디렉토리 내용이 접근 가능하도록 자원 추가하기


```
13    <annotation-driven />
14    <!-- 접근 자원에 대한 권한 설정 -->
15    <!-- Handles HTTP GET requests for /resources/** by efficiently serving up static resources in the $
16    <resources mapping="/resources/**" location="/resources/" />
17    <resources mapping="/data/**" location="/data/" />
18
19    <resources mapping="/include/**" location="/WEB-INF/views/include" />
20    <resources mapping="/board/**" location="/WEB-INF/views/board" />
21    <resources mapping="/member/**" location="/WEB-INF/views/member" />
22    <resources mapping="/reservate/**" location="/WEB-INF/views/reservate" />
23    <resources mapping="/qna/**" location="/WEB-INF/views/qna" />
24    <resources mapping="/databank/**" location="/WEB-INF/views/databank" />
25    <resources mapping="/util/**" location="/WEB-INF/views/util" />
26    <resources mapping="/sample/**" location="/WEB-INF/views/sample" />
27    <resources mapping="/check/**" location="/WEB-INF/views/check" />
28    <resources mapping="/user/**" location="/WEB-INF/views/user" />
29    <resources mapping="/free/**" location="/WEB-INF/views/free" />
30
31    <!-- 리졸버에 대한 접두사와 접미사 설정 -->
32    <!-- Resolves views selected for rendering by @Controllers to .jsp resources in the /WEB-INF/views d
33    <beans:bean class="org.springframework.web.servlet.view.InternalResourceViewResolver">
34        <beans:property name="prefix" value="/WEB-INF/views/" />
35        <beans:property name="suffix" value=".jsp" />
36    </beans:bean>
```
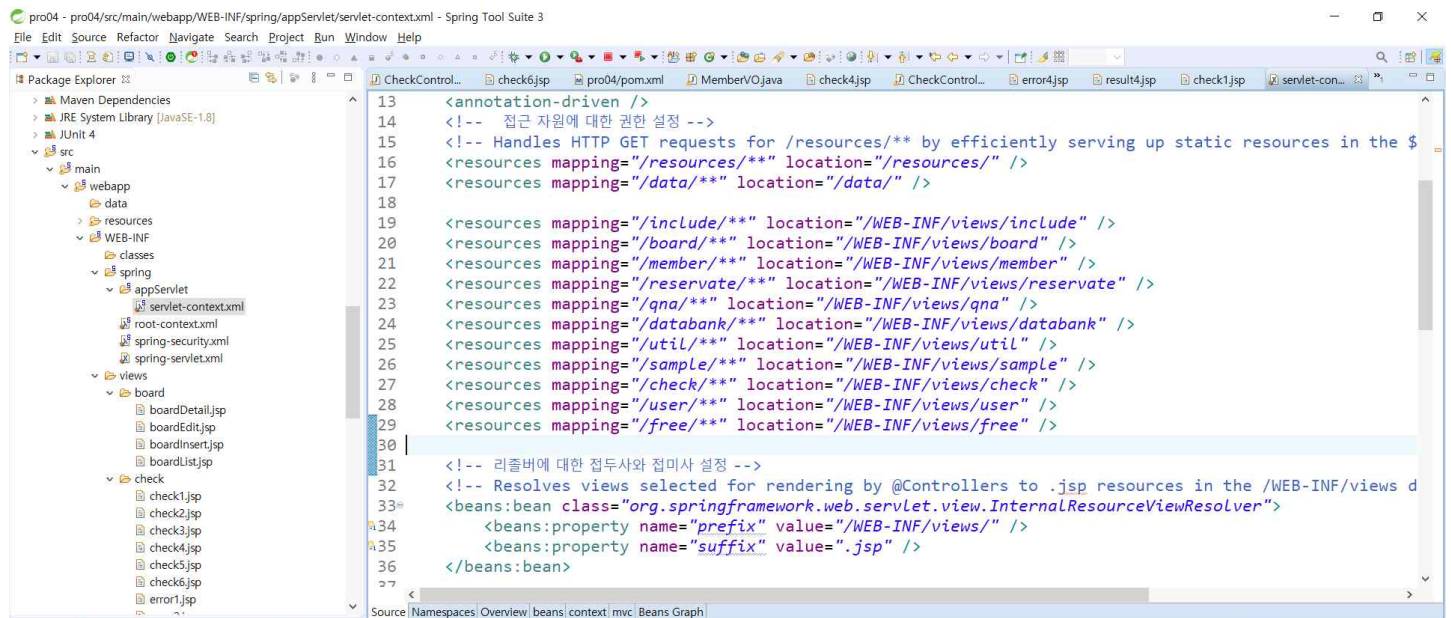
1.6 pro04/src/main/java/com.cj.util.CheckController.java 에 check1의 요청 컨트롤러 작성하기


```
10    import org.springframework.web.bind.annotation.ModelAttribute;
11    import org.springframework.web.bind.annotation.RequestMapping;
12    import org.springframework.web.bind.annotation.RequestMethod;
13    import org.springframework.web.bind.annotation.RequestParam;
14    //http://localhost:8092/check/
15    @Controller
16    @RequestMapping("/check/*")
17    public class CheckController {
18
19        @RequestMapping(value="check1", method = RequestMethod.GET)
20        public String getCheck1(HttpServletRequest request, Model model) throws Exception {
21            return "check/check1";
22        }
23
24        //view(jsp)에서 input의 pattern과 required에 의한 검증
25        @RequestMapping(value="check1", method = RequestMethod.POST)
26        public String postCheck1(HttpServletRequest request, Model model) throws Exception {
27            String id = request.getParameter("id");
28            String pw = request.getParameter("pw");
29            model.addAttribute("id", id);
30            model.addAttribute("pw", pw);
31            return "check/result1"; //${id}, ${pw}
32        }
33
34        @RequestMapping(value="check2", method = RequestMethod.GET)
```

2-1. 자바스크립트로 폼 검증하기

pro04/src/main/webapp/WEB-INF/views/check/check2.jsp를 작성

```jsp
1  <%@ page language="java" contentType="text/html; charset=UTF-8"
2      pageEncoding="UTF-8"%>
3  <%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"  %>
4  <%@ taglib prefix="fmt" uri="http://java.sun.com/jsp/jstl/fmt" %>
5  <%@ taglib prefix="fn" uri = "http://java.sun.com/jsp/jstl/functions"%>
6  <!DOCTYPE html>
7  <html>
8  <head>
9      <meta charset="UTF-8">
10     <meta http-equiv="X-UA-Compatible" content="IE=edge">
11     <meta name="viewport" content="width=device-width, initial-scale=1.0">
12     <title>폼 유효성 검사2</title>
13 </head>
14 <body>
15     <h2>FORM 유효성 검사2</h2>
16     <form action="./check2" method="post" onsubmit="return loginCheck(this)">
17         id : <input type="text" name="id" id="id" /><br><br>
18         pw : <input type="password" name="pw" id="pw" /><br><br>
19         <button class="btn" type="submit"> 전송 </button>
20     </form>
21     <script>
22     function loginCheck(f){
23         var id = f.id.value;
24         var pw = f.pw.value;
25         if(id=="" || pw==""){
26             alert("아이디 또는 비밀번호 입력 칸이 비어 있습니다.");
27             return false;
28         }
29         if(id.length<5 || id.length>12) {
30             alert("아이디의 글자수가 맞지 않습니다.");
31             return false;
32         }
33         if(pw.length<5 || pw.length>12) {
34             alert("비밀번호의 글자수가 맞지 않습니다.");
35             return false;
36         }
37
38         var idReg = /^[a-z0-9]{5,12}$/g;  //아이디 정규표현식
39         if(!idReg.test(id)){
40             alert("아이디 입력 형식이 아닙니다.");
41             return;
42         }
43
44         var pwReg = /^[a-zA-Z0-9]{8,12}$/g; //비밀번호 정규표현식
45         if(!pwReg.test(pw)){
46             alert("비밀번호 입력 형식이 아닙니다.");
47             return;
48         }
49     }
50     </script>
51 </body>
52 </html>
```
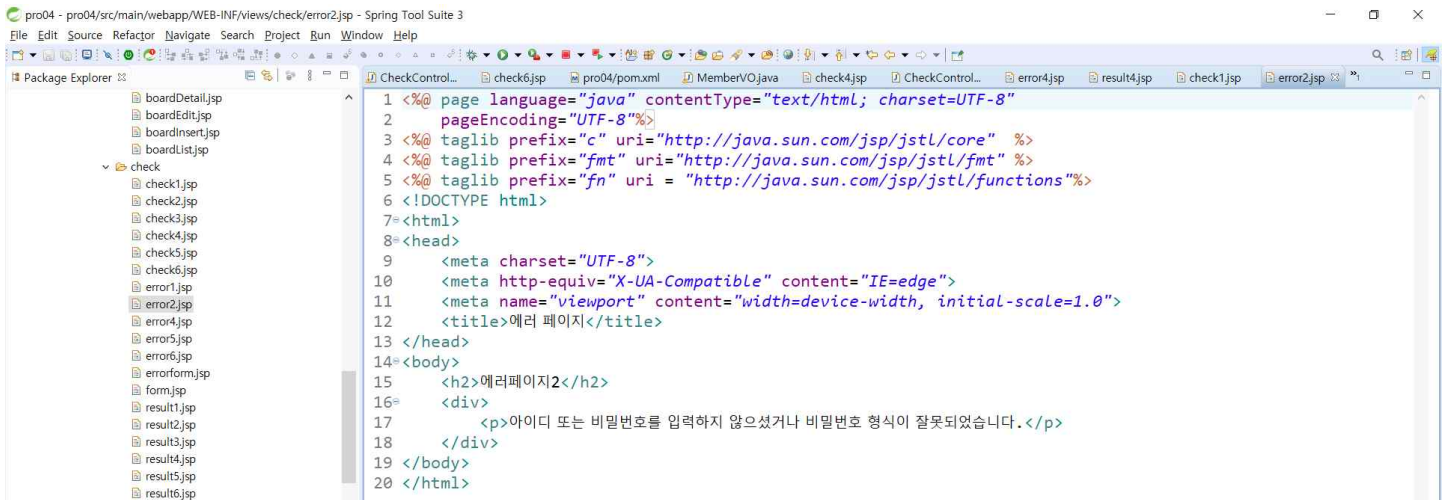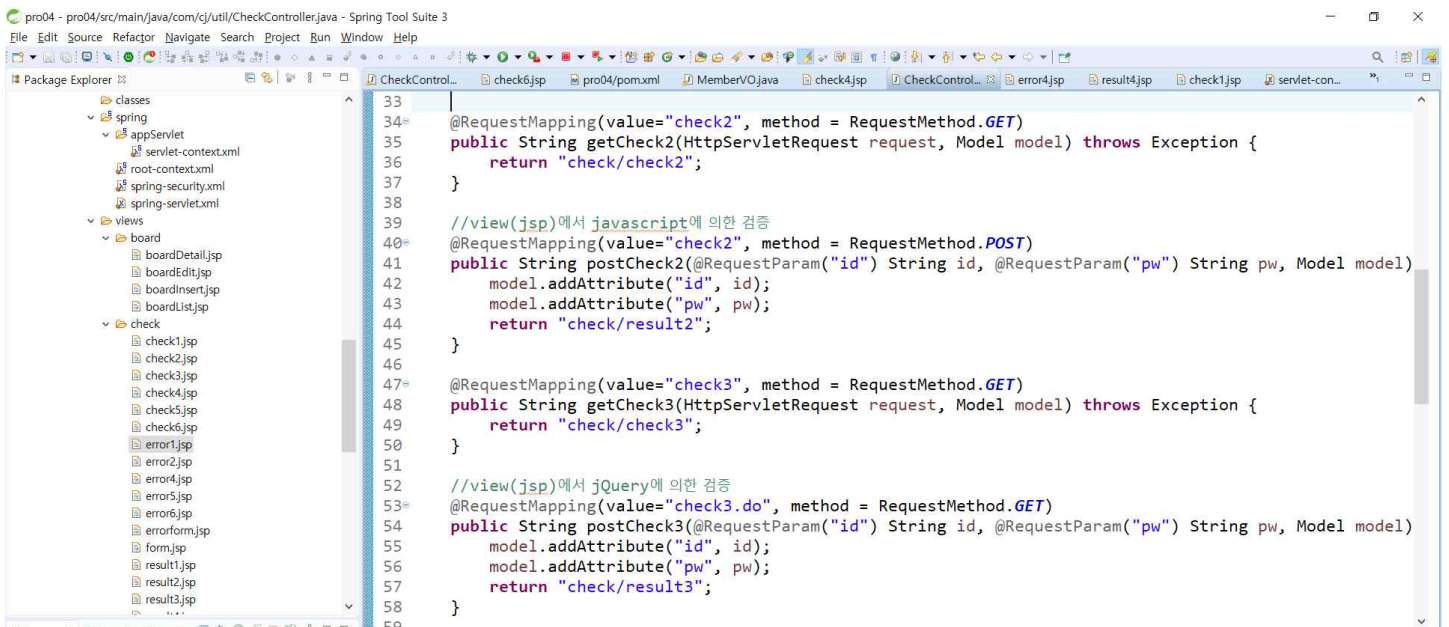
2-2. 결과 페이지인 pro04/src/main/webapp/WEB-INF/views/check/result2.jsp 작성

2-3. 에러 페이지인 pro04/src/main/webapp/WEB-INF/views/check/error2.jsp 작성

2-4. pro04/src/main/java/com.cj.util.CheckController.java 에 check2의 요청 컨트롤러 작성하기


```java
        @RequestMapping(value="check2", method = RequestMethod.GET)
        public String getCheck2(HttpServletRequest request, Model model) throws Exception {
            return "check/check2";
        }

        //view(jsp)에서 javascript에 의한 검증
        @RequestMapping(value="check2", method = RequestMethod.POST)
        public String postCheck2(@RequestParam("id") String id, @RequestParam("pw") String pw, Model model)
            model.addAttribute("id", id);
            model.addAttribute("pw", pw);
            return "check/result2";
        }

        @RequestMapping(value="check3", method = RequestMethod.GET)
        public String getCheck3(HttpServletRequest request, Model model) throws Exception {
            return "check/check3";
        }

        //view(jsp)에서 jQuery에 의한 검증
        @RequestMapping(value="check3.do", method = RequestMethod.GET)
        public String postCheck3(@RequestParam("id") String id, @RequestParam("pw") String pw, Model model)
            model.addAttribute("id", id);
            model.addAttribute("pw", pw);
            return "check/result3";
        }
```

3-1. jQuery로 폼 검증하기

pro04/src/main/webapp/WEB-INF/views/check/check3.jsp를 작성

```jsp
1  <%@ page language="java" contentType="text/html; charset=UTF-8"
2      pageEncoding="UTF-8"%>
3  <%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"  %>
4  <%@ taglib prefix="fmt" uri="http://java.sun.com/jsp/jstl/fmt" %>
5  <%@ taglib prefix="fn" uri = "http://java.sun.com/jsp/jstl/functions"%>
6  <!DOCTYPE html>
7  <html>
8  <head>
9      <meta charset="UTF-8">
10     <meta http-equiv="X-UA-Compatible" content="IE=edge">
11     <meta name="viewport" content="width=device-width, initial-scale=1.0">
12     <title>폼 유효성 검사3</title>
13     <script src="https://code.jquery.com/jquery-latest.js"></script>
14 </head>
15 <body>
16     <h2>FORM 유효성 검사3</h2>
17     id : <input type="text" name="id" id="id" /><br><br>
18     pw : <input type="password" name="pw" id="pw" /><br><br>
19     <button class="button" id="submit_btn"> 전송 </button>
20     <script>
21     $(document).ready(function(){
22         $("#submit_btn").click(function(){
23             var id = $("#id").val();
24             var pw = $("#pw").val();
25
26             if(id=="" || pw==""){
27                 alert("아이디 또는 비밀번호 입력 칸이 비어 있습니다.");
28                 return false;
29             }
30             if(id.length<5 || id.length>12) {
31                 alert("아이디의 글자수가 맞지 않습니다.");
32                 return false;
33             }
34             if(pw.length<5 || pw.length>12) {
35                 alert("비밀번호의 글자수가 맞지 않습니다.");
36                 return false;
37             }
38             var idReg = /^[a-z0-9]{5,12}$/g;  //아이디 정규표현식
39             if(!idReg.test(id)){
40                 alert("아이디 입력 형식이 아닙니다.");
41                 return;
42             }
43             var pwReg = /^[a-zA-Z0-9]{8,12}$/g; //비밀번호 정규표현식
44             if(!pwReg.test(pw)){
45                 alert("비밀번호 입력 형식이 아닙니다.");
46                 return;
47             }
48             location.href = "./check3.do?id="+id+"&pw="+pw;
49         });
50     });
51     </script>
52 </body>
53 </html>
```

3-2. 결과 페이지인 pro04/src/main/webapp/WEB-INF/views/check/result3.jsp 작성

```jsp
1  <%@ page language="java" contentType="text/html; charset=UTF-8"
2      pageEncoding="UTF-8"%>
3  <%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"  %>
4  <%@ taglib prefix="fmt" uri="http://java.sun.com/jsp/jstl/fmt" %>
5  <%@ taglib prefix="fn" uri = "http://java.sun.com/jsp/jstl/functions"%>
6  <!DOCTYPE html>
7  <html>
8  <head>
9      <meta charset="UTF-8">
10     <meta http-equiv="X-UA-Compatible" content="IE=edge">
11     <meta name="viewport" content="width=device-width, initial-scale=1.0">
12     <title>결과3</title>
13 </head>
14 <body>
15     <h2>결과3</h2>
16     <div>
17         <p>${id }</p>
18         <p>${pw }</p>
19     </div>
20 </body>
21 </html>
```

3-3. 에러 페이지인 pro04/src/main/webapp/WEB-INF/views/check/error3.jsp 작성

File Edit Source Refactor Navigate Search Project Run Window Help

Package Explorer

```
CheckController2.java    check6.jsp    pro04/pom.xml    MemberVO.java    result6.jsp    check4.jsp    CheckController.java    error3.jsp

 1  <%@ page language="java" contentType="text/html; charset=UTF-8"
 2      pageEncoding="UTF-8"%>
 3  <%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"  %>
 4  <%@ taglib prefix="fmt" uri="http://java.sun.com/jsp/jstl/fmt" %>
 5  <%@ taglib prefix="fn" uri = "http://java.sun.com/jsp/jstl/functions"%>
 6  <!DOCTYPE html>
 7  <html>
 8  <head>
 9      <meta charset="UTF-8">
10      <meta http-equiv="X-UA-Compatible" content="IE=edge">
11      <meta name="viewport" content="width=device-width, initial-scale=1.0">
12      <title>에러 페이지</title>
13  </head>
14  <body>
15      <h2>에러페이지3</h2>
16      <div>
17          <p>아이디 또는 비밀번호를 입력하지 않으셨거나 비밀번호 형식이 잘못되었습니다.</p>
18      </div>
19  </body>
20  </html>
```
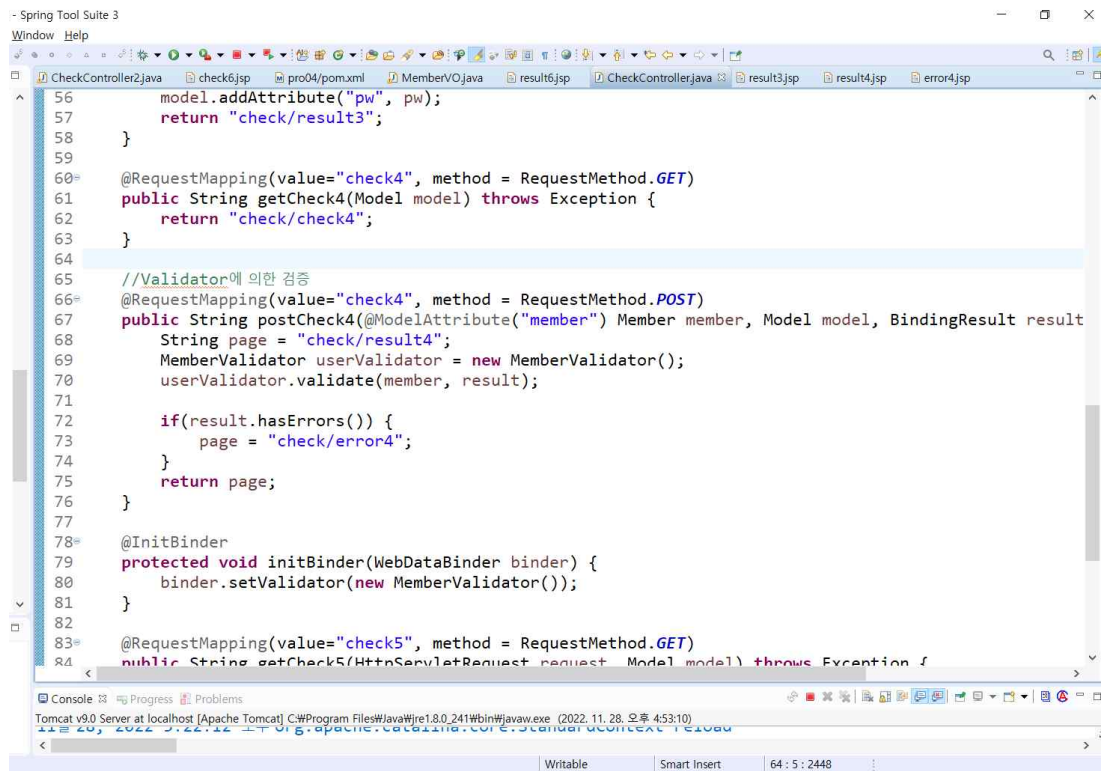
3-4. pro04/src/main/java/com.cj.util.CheckController.java 에 check3의 요청 컨트롤러 작성하기

```
views
  board
    boardDetail.jsp
    boardEdit.jsp
    boardInsert.jsp
    boardList.jsp
  check
    check1.jsp
    check2.jsp
    check3.jsp
    check4.jsp
    check5.jsp
    check6.jsp
    error1.jsp
    error2.jsp
    error4.jsp
    error5.jsp
    error6.jsp
    errorform.jsp
    form.jsp
    result1.jsp
    result2.jsp
    result3.jsp
```

```
39      //view(jsp)에서 javascript에 의한 검증
40      @RequestMapping(value="check2", method = RequestMethod.POST)
41      public String postCheck2(@RequestParam("id") String id, @RequestParam("pw") String pw, Model model)
42          model.addAttribute("id", id);
43          model.addAttribute("pw", pw);
44          return "check/result2";
45      }
46
47      @RequestMapping(value="check3", method = RequestMethod.GET)
48      public String getCheck3(HttpServletRequest request, Model model) throws Exception {
49          return "check/check3";
50      }
51
52      //view(jsp)에서 jQuery에 의한 검증
53      @RequestMapping(value="check3.do", method = RequestMethod.GET)
54      public String postCheck3(@RequestParam("id") String id, @RequestParam("pw") String pw, Model model)
55          model.addAttribute("id", id);
56          model.addAttribute("pw", pw);
57          return "check/result3";
58      }
```

4-1. Validator에 의한 검증

pro04/src/main/webapp/WEB-INF/views/check/check4.jsp를 작성

```jsp
1  <%@ page language="java" contentType="text/html; charset=UTF-8"
2      pageEncoding="UTF-8"%>
3  <%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"  %>
4  <%@ taglib prefix="fmt" uri="http://java.sun.com/jsp/jstl/fmt" %>
5  <%@ taglib prefix="fn" uri = "http://java.sun.com/jsp/jstl/functions"%>
6  <%@ taglib prefix="spring" uri="http://www.springframework.org/tags" %>
7  <c:set var="path1" value="${pageContext.servletContext.contextPath }" />
8  <!DOCTYPE html>
9  <html>
10 <head>
11     <meta charset="UTF-8">
12     <meta http-equiv="X-UA-Compatible" content="IE=edge">
13     <meta name="viewport" content="width=device-width, initial-scale=1.0">
14     <title>폼 유효성 검사4</title>
15 </head>
16 <body>
17     <h2>FORM 유효성 검사4</h2>
18     <form action="${path1 }/check/check4" method="post">
19         id : <input type="text" name="id" id="id"/><br><br>
20         pw : <input type="password" name="pw" id="pw" /><br><br>
21         <button class="btn" type="submit"> 전송 </button>
22     </form>
23 </body>
24 </html>
```

4-2. 결과 페이지인 pro04/src/main/webapp/WEB-INF/views/check/result4.jsp 작성

```jsp
1  <%@ page language="java" contentType="text/html; charset=UTF-8"
2      pageEncoding="UTF-8"%>
3  <%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"  %>
4  <%@ taglib prefix="fmt" uri="http://java.sun.com/jsp/jstl/fmt" %>
5  <%@ taglib prefix="fn" uri = "http://java.sun.com/jsp/jstl/functions"%>
6  <%@ taglib prefix="spring" uri="http://www.springframework.org/tags" %>
7  <!DOCTYPE html>
8  <html>
9  <head>
10     <meta charset="UTF-8">
11     <meta http-equiv="X-UA-Compatible" content="IE=edge">
12     <meta name="viewport" content="width=device-width, initial-scale=1.0">
13     <title>결과4</title>
14 </head>
15 <body>
16     <h2>결과4</h2>
17     <div>
18         <p>${member.id }</p>
19         <p>${member.pw }</p>
20     </div>
21 </body>
22 </html>
```
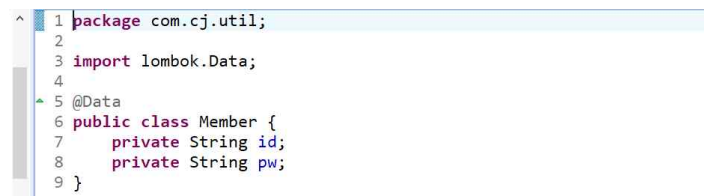
4-3. 에러 페이지인 pro04/src/main/webapp/WEB-INF/views/check/error4.jsp를 작성

```jsp
1  <%@ page language="java" contentType="text/html; charset=UTF-8"
2      pageEncoding="UTF-8"%>
3  <%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"  %>
4  <%@ taglib prefix="fmt" uri="http://java.sun.com/jsp/jstl/fmt" %>
5  <%@ taglib prefix="fn" uri = "http://java.sun.com/jsp/jstl/functions"%>
6  <!DOCTYPE html>
7  <html>
8  <head>
9      <meta charset="UTF-8">
10     <meta http-equiv="X-UA-Compatible" content="IE=edge">
11     <meta name="viewport" content="width=device-width, initial-scale=1.0">
12     <title>에러 페이지</title>
13 </head>
14 <body>
15     <h2>에러페이지4</h2>
16     <div>
17         <p>아이디 또는 비밀번호를 입력하지 않으셨거나 비밀번호 형식이 잘못되었습니다.</p>
18     </div>
19 </body>
20 </html>
```

4-4. pro04/src/main/java/com.cj.util.CheckController.java 에 check4의 요청 컨트롤러 작성하기
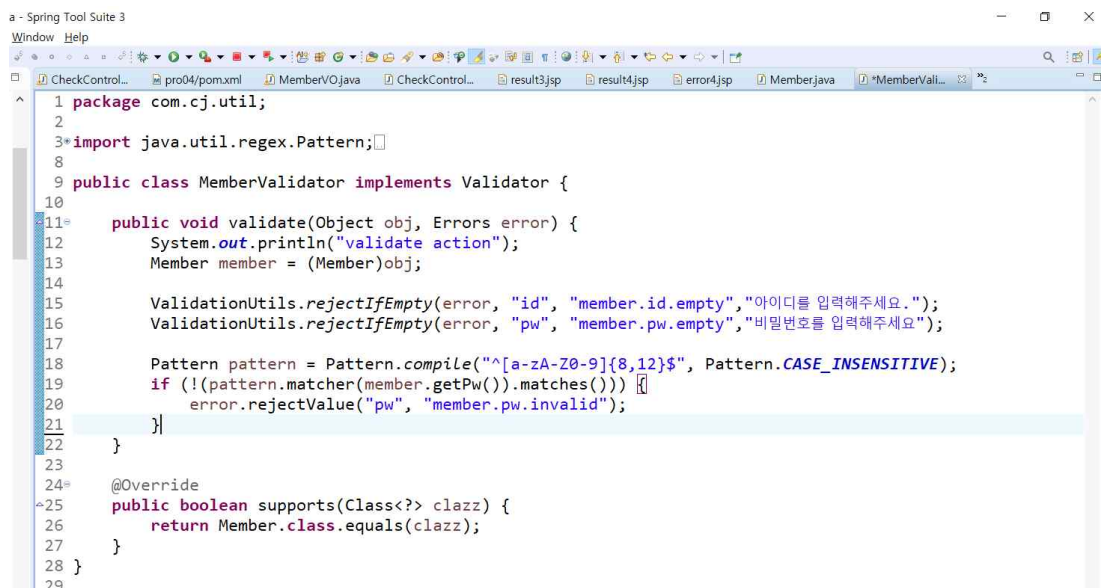
```java
56          model.addAttribute("pw", pw);
57          return "check/result3";
58      }
59
60      @RequestMapping(value="check4", method = RequestMethod.GET)
61      public String getCheck4(Model model) throws Exception {
62          return "check/check4";
63      }
64
65      //Validator에 의한 검증
66      @RequestMapping(value="check4", method = RequestMethod.POST)
67      public String postCheck4(@ModelAttribute("member") Member member, Model model, BindingResult result
68          String page = "check/result4";
69          MemberValidator userValidator = new MemberValidator();
70          userValidator.validate(member, result);
71
72          if(result.hasErrors()) {
73              page = "check/error4";
74          }
75          return page;
76      }
77
78      @InitBinder
79      protected void initBinder(WebDataBinder binder) {
80          binder.setValidator(new MemberValidator());
81      }
82
83      @RequestMapping(value="check5", method = RequestMethod.GET)
84      public String getCheck5(HttpServletRequest request, Model model) throws Exception {
```

4-5. pro04/src/main/javacom.cj.util.Member 작성

```java
1  package com.cj.util;
2
3  import lombok.Data;
4
5  @Data
6  public class Member {
7      private String id;
8      private String pw;
9  }
```

4-6. pro04/src/main/javacom.cj.util.MemberValidator 작성

```java
1  package com.cj.util;
2
3  import java.util.regex.Pattern;
8
9  public class MemberValidator implements Validator {
10
11     public void validate(Object obj, Errors error) {
12         System.out.println("validate action");
13         Member member = (Member)obj;
14
15         ValidationUtils.rejectIfEmpty(error, "id", "member.id.empty","아이디를 입력해주세요.");
16         ValidationUtils.rejectIfEmpty(error, "pw", "member.pw.empty","비밀번호를 입력해주세요");
17
18         Pattern pattern = Pattern.compile("^[a-zA-Z0-9]{8,12}$", Pattern.CASE_INSENSITIVE);
19         if (!(pattern.matcher(member.getPw()).matches())) {
20             error.rejectValue("pw", "member.pw.invalid");
21         }
22     }
23
24     @Override
25     public boolean supports(Class<?> clazz) {
26         return Member.class.equals(clazz);
27     }
28 }
29
```

5-1. Validator에 의한 검증(@Valid+@InitBinder)
pro04/src/main/webapp/WEB-INF/views/check/check5.jsp를 작성

```jsp
1  <%@ page language="java" contentType="text/html; charset=UTF-8"
2      pageEncoding="UTF-8"%>
3  <%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"  %>
4  <%@ taglib prefix="fmt" uri="http://java.sun.com/jsp/jstl/fmt" %>
5  <%@ taglib prefix="fn" uri = "http://java.sun.com/jsp/jstl/functions"%>
6  <!DOCTYPE html>
7  <html>
8  <head>
9      <meta charset="UTF-8">
10     <meta http-equiv="X-UA-Compatible" content="IE=edge">
11     <meta name="viewport" content="width=device-width, initial-scale=1.0">
12     <title>폼 유효성 검사5</title>
13 </head>
14 <body>
15     <h2>FORM 유효성 검사5</h2>
16     <form action="./check5" method="post">
17         id : <input type="text" name="id" id="id"/><br><br>
18         pw : <input type="password" name="pw" id="pw" /><br><br>
19         <button class="btn" type="submit"> 전송 </button>
20     </form>
21 </body>
22 </html>
```
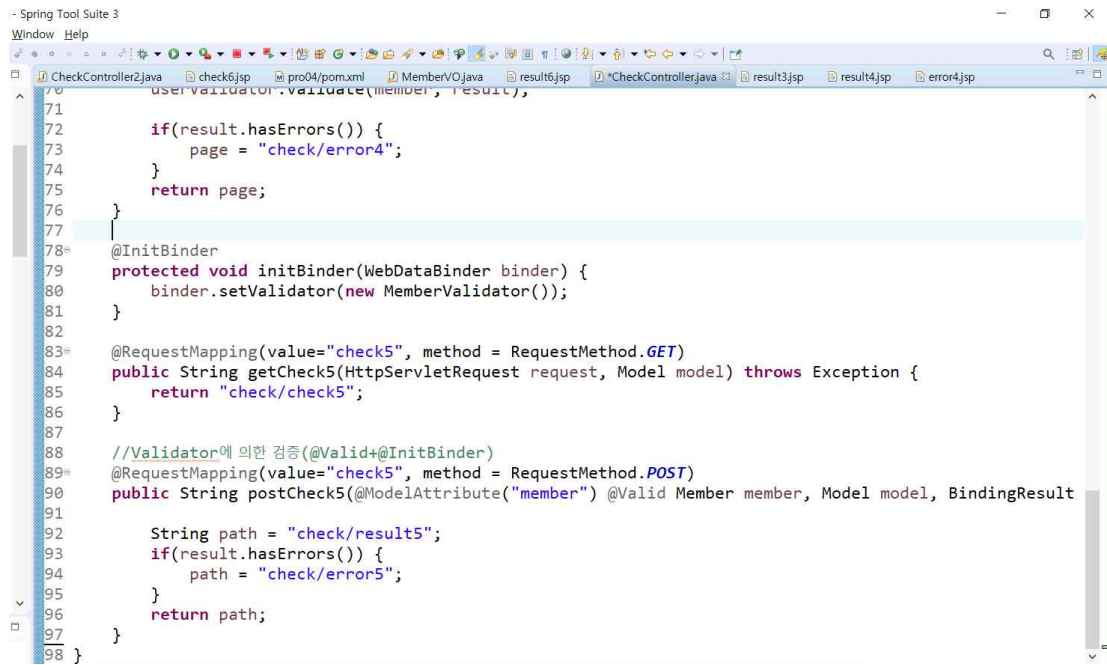
5-2. 결과 페이지인 pro04/src/main/webapp/WEB-INF/views/check/result5.jsp 작성

```jsp
1  <%@ page language="java" contentType="text/html; charset=UTF-8"
2      pageEncoding="UTF-8"%>
3  <%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"  %>
4  <%@ taglib prefix="fmt" uri="http://java.sun.com/jsp/jstl/fmt" %>
5  <%@ taglib prefix="fn" uri = "http://java.sun.com/jsp/jstl/functions"%>
6  <!DOCTYPE html>
7  <html>
8  <head>
9      <meta charset="UTF-8">
10     <meta http-equiv="X-UA-Compatible" content="IE=edge">
11     <meta name="viewport" content="width=device-width, initial-scale=1.0">
12     <title>결과5</title>
13 </head>
14 <body>
15     <h2>결과5</h2>
16     <div>
17         <p>${member.id }</p>
18         <p>${member.pw }</p>
19     </div>
20 </body>
21 </html>
```

5-3. 에러 페이지인 pro04/src/main/webapp/WEB-INF/views/check/error5.jsp를 작성

```jsp
1  <%@ page language="java" contentType="text/html; charset=UTF-8"
2      pageEncoding="UTF-8"%>
3  <%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"  %>
4  <%@ taglib prefix="fmt" uri="http://java.sun.com/jsp/jstl/fmt" %>
5  <%@ taglib prefix="fn" uri = "http://java.sun.com/jsp/jstl/functions"%>
6  <!DOCTYPE html>
7  <html>
8  <head>
9      <meta charset="UTF-8">
10     <meta http-equiv="X-UA-Compatible" content="IE=edge">
11     <meta name="viewport" content="width=device-width, initial-scale=1.0">
12     <title>에러 페이지</title>
13 </head>
14 <body>
15     <h2>에러페이지5</h2>
16     <div>
17         <p>아이디 또는 비밀번호를 입력하지 않으셨거나 비밀번호 형식이 잘못되었습니다.</p>
18     </div>
19 </body>
20 </html>
```

5-4. pro04/src/main/java/com.cj.util.CheckController.java 에 check5의 요청 컨트롤러 작성하기

CheckController2.java | check6.jsp | pro04/pom.xml | MemberVO.java | result6.jsp | *CheckController.java ⊠ | result3.jsp | result4.jsp | error4.jsp

```java
70        userValidator.validate(member, result);
71
72        if(result.hasErrors()) {
73            page = "check/error4";
74        }
75        return page;
76    }
77    |
78    @InitBinder
79    protected void initBinder(WebDataBinder binder) {
80        binder.setValidator(new MemberValidator());
81    }
82
83    @RequestMapping(value="check5", method = RequestMethod.GET)
84    public String getCheck5(HttpServletRequest request, Model model) throws Exception {
85        return "check/check5";
86    }
87
88    //Validator에 의한 검증(@Valid+@InitBinder)
89    @RequestMapping(value="check5", method = RequestMethod.POST)
90    public String postCheck5(@ModelAttribute("member") @Valid Member member, Model model, BindingResult
91
92        String path = "check/result5";
93        if(result.hasErrors()) {
94            path = "check/error5";
95        }
96        return path;
97    }
98 }
```

6-1. Hibernate 와 spring form에 의한 검증

pro04/src/main/webapp/WEB-INF/views/check/check6.jsp를 작성

```jsp
1  <%@ page language="java" contentType="text/html; charset=UTF-8"
2      pageEncoding="UTF-8"%>
3  <%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"  %>
4  <%@ taglib prefix="fmt" uri="http://java.sun.com/jsp/jstl/fmt" %>
5  <%@ taglib prefix="fn" uri = "http://java.sun.com/jsp/jstl/functions"%>
6  <%@ taglib prefix="spring" uri="http://www.springframework.org/tags" %>
7  <%@ taglib prefix="form" uri="http://www.springframework.org/tags/form" %>
8  <c:set var="path1" value="${pageContext.servletContext.contextPath }" />
9  <!DOCTYPE html>
10 <html>
11 <head>
12     <meta charset="UTF-8">
13     <meta http-equiv="X-UA-Compatible" content="IE=edge">
14     <meta name="viewport" content="width=device-width, initial-scale=1.0">
15     <title>폼 유효성 검사6</title>
16 </head>
17 <body>
18     <h2>FORM 유효성 검사6</h2>
19     <form:form action="${path1 }/check/check6.do" method="post" modelAttribute="memberVO">
20         <form:input path="id"/>
21         <form:errors path="id" element="div" delimiter=" "/>
22
23         <form:password path="pw"/>
24         <form:errors path="pw" element="div" delimiter=" "/>
25
26         <button class="btn" type="submit"> 전송 </button>
27     </form:form>
28 </body>
29 </html>
```

6-2. 결과 페이지인 pro04/src/main/webapp/WEB-INF/views/check/result6.jsp 작성

```jsp
1  <%@ page language="java" contentType="text/html; charset=UTF-8"
2      pageEncoding="UTF-8"%>
3  <%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"  %>
4  <%@ taglib prefix="fmt" uri="http://java.sun.com/jsp/jstl/fmt" %>
5  <%@ taglib prefix="fn" uri = "http://java.sun.com/jsp/jstl/functions"%>
6  <!DOCTYPE html>
7  <html>
8  <head>
9      <meta charset="UTF-8">
10     <meta http-equiv="X-UA-Compatible" content="IE=edge">
11     <meta name="viewport" content="width=device-width, initial-scale=1.0">
12     <title>결과6</title>
13 </head>
14 <body>
15     <h2>결과6</h2>
16     <div>
17         <p>${memberVO.id }</p>
18         <p>${memberVO.pw }</p>
19     </div>
20 </body>
21 </html>
```

6-3. 에러 페이지인 pro04/src/main/webapp/WEB-INF/views/check/error6.jsp를 작성

```jsp
1  <%@ page language="java" contentType="text/html; charset=UTF-8"
2      pageEncoding="UTF-8"%>
3  <%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"  %>
4  <%@ taglib prefix="fmt" uri="http://java.sun.com/jsp/jstl/fmt" %>
5  <%@ taglib prefix="fn" uri = "http://java.sun.com/jsp/jstl/functions"%>
6  <!DOCTYPE html>
7  <html>
8  <head>
9      <meta charset="UTF-8">
10     <meta http-equiv="X-UA-Compatible" content="IE=edge">
11     <meta name="viewport" content="width=device-width, initial-scale=1.0">
12     <title>에러 페이지6</title>
13 </head>
14 <body>
15     <h2>에러페이지6</h2>
16     <div>
17         <p>아이디 또는 비밀번호를 입력하지 않으셨거나 비밀번호 형식이 잘못되었습니다.</p>
18     </div>
19 </body>
20 </html>
```

6-4. pro04/src/main/java/com.cj.util.CheckController2.java 에 check6의 요청 컨트롤러 작성하기

```java
package com.cj.util;

import javax.servlet.http.HttpServletRequest;

//http://localhost:8092/check/
@Controller
@RequestMapping("/check/*")
public class CheckController2 {

    @RequestMapping(value="check6", method = RequestMethod.GET)
    public String getCheck6(MemberVO memberVO) throws Exception {
        return "check/check6";
    }

    //Hibernate 와 spring form에 의한 검증
    @RequestMapping(value="check6.do", method = RequestMethod.POST)
    public String postCheck6(@Valid MemberVO memberVO, BindingResult result) throws Exception {

        String path = "check/result6";
        if(result.hasErrors()) {
            path = "check/error6";
        }
        return path;
    }
}
```

6-5. pro04/src/main/javacom.cj.util.MemberVO 작성

```java
import javax.persistence.Column;

public class MemberVO {

    @Id       //primary key인 필드에 지정
    @Size(min=5, max =12, message="아이디는 5~12자로 작성해야함")
    String id;

    @Column
    @NotNull
    @Size(min=6, max =12, message="비밀번호는 8~12자로 작성해야함")
    @Pattern(regexp="(^[A-Za-z0-9]{8,12}$)")
    //(^(?=.*[A-Za-z])(?=.*[0-9])(?=.*[$@$!%*#?&])[A-Za-z0-9]$@$!%*#?&]{8,10}$)
    String pw;

    public String getId() {
        return id;
    }
    public void setId(String id) {
        this.id = id;
    }
    public String getPw() {
        return pw;
    }
    public void setPw(String pw) {
        this.pw = pw;
    }
}
```