

Ch13

-pom.xml 에 추가

```
7         <scope>test</scope>
8     </dependency>
9     <!-- 파일업로드 -->
10     <dependency>
11         <groupId>commons-fileupload</groupId>
12         <artifactId>commons-fileupload</artifactId>
13         <version>1.3.1</version>
14     </dependency>
15
16     <!-- https://mvnrepository.com/artifact/org.projectlombok/lombok -->
17     <dependency>
18         <groupId>org.projectlombok</groupId>
19         <artifactId>lombok</artifactId>
20         <version>1.18.24</version>
21         <scope>provided</scope>
22     </dependency>
```

Web.xml 한글처리

추가

```
</servlet-mapping>
<!-- 한글처리 -->
<filter>
    <filter-name>encodingFilter</filter-name>
    <filter-class>org.springframework.web.filter.CharacterEncodingFilter</filter-class>
    <init-param>
        <param-name>encoding</param-name>
        <param-value>UTF-8</param-value>
    </init-param>
    <init-param>
        <param-name>forceEncoding</param-name>
        <param-value>true</param-value>
    </init-param>
</filter>
<filter-mapping>
```

파일첨부 클래스 소스 CommonsMultipartResolver

```
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestMethod;
import org.springframework.web.multipart.commons.CommonsMultipartResolver;

/**
 * Handles requests for the application home page.
 */
@Controller
public class HomeController {

    private static final Logger logger = LoggerFactory.getLogger(HomeController.class);
    CommonsMultipartResolver multipartResolver;

    /**
```

- Servlet-context 에 빈 생성 추가 , root-context에 해도 상관 없으나 Servlet에 많이 사용

```
ch13_fileupload/pom.xml  web.xml  servlet-context.xml  root-context.xml  HomeController.java
1 <?xml version="1.0" encoding="UTF-8"?>
2 <beans:beans xmlns="http://www.springframework.org/schema/mvc"
3   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4   xmlns:beans="http://www.springframework.org/schema/beans"
5   xmlns:context="http://www.springframework.org/schema/context"
6   xsi:schemaLocation="http://www.springframework.org/schema/mvc http://www.springframework.org/schema/mvc.xsd
7   http://www.springframework.org/schema/beans http://www.springframework.org/schema/beans.xsd
8   http://www.springframework.org/schema/context http://www.springframework.org/schema/context.xsd">
9
10  <!-- DispatcherServlet Context: defines this servlet's request-processing infrastructure -->
11
12  <!-- Enables the Spring MVC @Controller programming model -->
13  <annotation-driven />
14
15  <!-- Handles HTTP GET requests for /resources/** by efficiently serving up static resources in the
16  <resources mapping="/resources/**" location="/resources/" />
17
18  <!-- Resolves views selected for rendering by @Controllers to .jsp resources in the
19  <beans:bean class="org.springframework.web.servlet.view.InternalResourceViewResolver">
20    <beans:property name="prefix" value="/WEB-INF/views/" />
21    <beans:property name="suffix" value=".jsp" />
22  </beans:bean>
23
24  <context:component-scan base-package="com.lect.ch13" />
25
26  <beans:bean id="multipartResolver"
27    class="org.springframework.web.multipart.commons.CommonsMultipartResolver">
28    <beans:property name="maxUploadSize" value="1048576"/>
29  </beans:bean>
30
31  </beans:beans>
32
33
```

- Index.jsp *.do 를 안했으니 이렇게

```
ch13_fileupload/pom.xml  web.xml  servlet-context.xml  root-context.xml  index.jsp x
1 <%@ page language="java" contentType="text/html; charset=UTF-8"
2   pageEncoding="UTF-8"%>
3 <!DOCTYPE html>
4 <html>
5 <head>
6   <meta charset="UTF-8">
7   <title>Insert title here</title>
8 </head>
9 <body>
10   <jsp:forward page="fileInput"></jsp:forward>
11 </body>
12 </html>
```

FileUploadService

```
@Service
public class FileUploadService {

}
```

@Service 애는 서비스야

- 컨트롤러에서 임포트

```
import com.lec.ch13.service.FileUploadService;

@Controller
public class FileController {
    @Autowired
    private FileUploadService fService;
    @RequestMapping(value="fileInput", method = Req
    public String fileInput() {
```

-다시 서비스로

```
7 @Service
8 public class FileUploadService {
9     public boolean FileUp(MultipartHttpServletRequest mRequest,
10         ModelAndView mav) {
11         boolean isUpload = false;
12         // 파일 업로드된 파일명 받아, 서버에 업로드, 프로젝트 폴더에 복사
13         return isUpload;
14     }
15 }
```

```
1 package com.lec.ch13.service;
2
3 import java.util.Iterator;
4
5 import org.springframework.stereotype.Service;
6 import org.springframework.web.multipart.MultipartHttpServletRequest;
7 import org.springframework.web.servlet.ModelAndView;
8
9 @Service
10 public class FileUploadService {
11     public boolean FileUp(MultipartHttpServletRequest mRequest,
12         ModelAndView mav) {
13         boolean isUpload = false;
14         // 파일 업로드된 파일명 받아, 서버에 업로드, 프로젝트 폴더에 복사
15         String uploadPath = mRequest.getRealPath("upload/"); // 루트 밑에 upload에 저장
16         String backupPath = "D:\\webPro\\source\\08_Spring\\ch13_fileupload\\src\\main
17         // 프로젝트에 복사 저장할 폴더 : upload 주소
18         String[] filenames = new String[3]; // 파일 3개이니 배열로 받는다
19         int i = 0;
20         Iterator<String> params = mRequest.getFileNames(); // file1, file2, file3
21         return isUpload;
22     }
23 }
24
```

```
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 <c:set var="conPath" value="${pageContext.request.contextPath }"/>
5 <!DOCTYPE html>
6 <html>
7 <head>
8     <meta charset="UTF-8">
9     <title>Insert title here</title>
10 </head>
11 <body>
12     <div align="center">
13         <hr width="500" color="green">
14         <h2>파일 UPLOAD</h2>
15         <hr width="500" color="green">
16         <form action="fileupload" method="post" enctype="multipart/form-data">
17             <p>첨부파일1 <input type="file" name="file1"></p>
18             <p>첨부파일2 <input type="file" name="file2"></p>
19             <p>첨부파일3 <input type="file" name="file3"></p>
20             <input type="submit" value="전송">
21         </form>
22     </div>
23 </body>
24 </html>
```

"filenames" 를 안고 result.jsp 로 넘어간다

```
13 FileUploadService.java
14 Iterator<String> params = mRequest.getFileNames(); // file1, file2, file3
15 while(params.hasNext()){
16     String param = params.next();
17     System.out.println("받기 파라미터 이름 : " + param);
18     MultipartFile mFile = mRequest.getFile(param);
19     filenames[i] = mFile.getOriginalFilename(); // param으로 첨부한 파일의 오리지널
20     if(filenames[i]!=null && filenames[i].equals("")) { // 첨부한 파일이 있을 경
21         if(new File(uploadPath + filenames[i]).exists()) {
22             filenames[i] = System.currentTimeMillis() + filenames[i]; // cur
23         } // if - 중복된 파일명일 경우 변경
24         try {
25             mFile.transferTo(new File(uploadPath + filenames[i])); // 서버에 파
26             System.out.println("서버에 저장된 파일 : " + uploadPath + filenames[i]
27             System.out.println("백업 복사 파일 : " + backupPath + filenames[i]);
28             isUpload = filecopy(uploadPath + filenames[i], backupPath + fi
29         } catch (IOException e) {
30             System.out.println(e.getMessage());
31         } // 서버에 파일 저장
32     } // -if - 첨부여부
33     i++;
34 } // while
35 mav.addObject("filenames", filenames);
36 return isUpload;
37 }
38
39 private boolean filecopy(String serverFile, String backupFile) {
40     boolean isCopy = false;
41     InputStream is = null;
42     OutputStream os = null;
43     try {
44         File file = new File(serverFile);
45         is = new FileInputStream(file);
46         os = new FileOutputStream(backupFile);
47         byte[] buff = new byte[(int) file.length()];
48         while(true) {
49             int nReadByte = is.read(buff);
50             if(nReadByte == -1) break;
51             os.write(buff, 0, nReadByte);
52         }
53     } catch (Exception e) {
54         System.out.println(e.getMessage());
55     } finally {
56         if(is != null) is.close();
57         if(os != null) os.close();
58     }
59     return isCopy;
60 }
```

```
3 <%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
4 <c:set var="conPath" value="${pageContext.request.contextPath }"/>
5 <!DOCTYPE html>
6 <html>
7 <head>
8 <meta charset="UTF-8">
9 <title>Insert title here:</title>
10 <link href="${conPath }/css/style.css" rel="stylesheet">
11 <script src="http://code.jquery.com/jquery-3.6.0.js"></script>
12 <script>
13 $(document).ready(function(){
14
15 });
16 </script>
17 </head>
18 <body>
19 <h2>파일 업로드 결과 : ${fileResult }</h2>
20 </body>
21 </html>
```

```
13 public class FileController {
14     @Autowired
15     private FileUploadService fService;
16     @RequestMapping(value="fileInput", method = RequestMethod.GET)
17     public String fileInput() {
18         return "fileInput";
19     }
20     @RequestMapping(value="fileupload", method = RequestMethod.POST)
21     public ModelAndView fileupload(MultipartHttpServletRequest mRequest,
22     ModelAndView mav) {
23         if(fService.fileUp(mRequest, mav)) {
24             mav.addObject("fileResult", "파일 업로드 성공");
25         } else {
26             mav.addObject("fileResult", "파일 업로드 실패");
27         }
28         mav.setViewName("fileResult");
29         return mav;
30     }
31 }
```