3. Create a project to upload and download a file in Spring Boot.

Source Code :

Application.properties

# File Storage upload.dir=/path/to/upload/directory

**FileController.java package** Controller;

**import** org.springframework.beans.factory.annotation.Value;

**import** org.springframework.core.io.Resource; **import** org.springframework.core.io.UrlResource; **import** org.springframework.http.HttpHeaders; **import** org.springframework.http.MediaType; **import** org.springframework.http.ResponseEntity;

**import** org.springframework.stereotype.Controller;

**import** org.springframework.ui.Model;

**import** org.springframework.util.StringUtils;

**import** org.springframework.web.bind.annotation.\*; **import** org.springframework.web.multipart.MultipartFile; **import** java.io.IOException;

**import** java.nio.file.Files; **import** java.nio.file.Path; **import** java.nio.file.Paths;

@Controller

**public class** FileController {

@Value("${upload.dir}")

**private** String uploadDir;

@GetMapping("/")

**public** String listUploadedFiles(Model model) **throws** IOException {

// Load all files from the upload directory

**try** (**var** stream = Files.*walk*(Paths.*get*(uploadDir))) {

**var** fileList = stream

.filter(file -> !Files.*isDirectory*(file))

.map(Path::toAbsolutePath)

.map(Path::toString)

.map(path -> path.replace(uploadDir, ""))

.map(path -> path.replace("\\", "/"))

.toArray(String[]::**new**); model.addAttribute("files", fileList);

}

**return** "uploadForm";

}

@PostMapping("/upload")

**public** String handleFileUpload(@RequestParam("file") MultipartFile file)

**throws** IOException {

// Generate a unique file name

String fileName = StringUtils.*cleanPath*(file.getOriginalFilename()); String filePath = uploadDir + "/" + fileName;

// Save the file to the upload directory Files.*createDirectories*(Paths.*get*(uploadDir)); file.transferTo(Paths.*get*(filePath));

**return** "redirect:/";

}

@GetMapping("/download/{fileName:.+}")

**public** ResponseEntity<Resource> downloadFile(@PathVariable String fileName) **throws** IOException {

// Load the file resource

Path filePath = Paths.*get*(uploadDir).resolve(fileName); Resource resource = **new** UrlResource(filePath.toUri());

// Set the content type and attachment header for the response String contentType = Files.*probeContentType*(filePath); HttpHeaders headers = **new** HttpHeaders(); headers.setContentType(MediaType.*parseMediaType*(contentType)); headers.setContentDispositionFormData("attachment", fileName);

**return** ResponseEntity.*ok*()

.headers(headers)

.body(resource);

}

}

**uploadForm.html**

<!DOCTYPE html>

<html lang=*"en"* xmlns:th=*"*[*http://www.thymeleaf.org*](http://www.thymeleaf.org/)*"*>

<head>

<meta charset=*"UTF-8"*>

<title>File Upload</title>

</head>

<body>

<h2>File Upload</h2>

<form action=*"/upload"* method=*"post"* enctype=*"multipart/form-data"*>

<input type=*"file"* name=*"file"* />

<button type=*"submit"*>Upload</button>

</form>

<h2>Uploaded Files</h2>

<table>

<thead>

<tr>

<th>File Name</th>

<th>Actions</th>

</tr>

</thead>

<tbody>

<tr th:each=*"file : ${files}"*>

<td th:text=*"${file}"*></td>

<td>

<a th:href=*"@{/download/{fileName}(fileName=${file})}"*>Download</a>

</td>

</tr>

</tbody>

</table>

</body>

</html>



