

Spring REST

```
import org.springframework.http.HttpStatus;
import org.springframework.http.ResponseEntity;
import org.springframework.web.bind.annotation.*;
import org.springframework.web.multipart.MultipartFile;

import java.io.File;
import java.io.IOException;
import java.nio.file.Files;
import java.nio.file.Path;
import java.nio.file.Paths;

@RestController
@RequestMapping("/api/files")
public class FileUploadController {

    // Directory to save uploaded files
    private static final String UPLOAD_DIR = "D:/files";

    public FileUploadController() {
        // Create the upload directory if it doesn't exist
        File uploadDir = new File(UPLOAD_DIR);
        if (!uploadDir.exists()) {
            uploadDir.mkdirs();
        }
    }

    @PostMapping("/upload")
    public ResponseEntity<String>
    uploadFile(@RequestParam("file") MultipartFile file) {
        if (file.isEmpty()) {
            return
            ResponseEntity.status(HttpStatus.BAD_REQUEST).body("No file
            provided");
        }

        try {
            // Save the file to the server
```

```

        Path filePath = Paths.get(UPLOAD_DIR,
file.getOriginalFilename());
        Files.write(filePath, file.getBytes());

        return ResponseEntity.ok("File uploaded
successfully: " + file.getOriginalFilename());
    } catch (IOException e) {
        e.printStackTrace();
        return
ResponseEntity.status(HttpStatus.INTERNAL_SERVER_ERROR).body
("File upload failed");
    }
}

```

1. Set Up Angular Service

Create a service to handle the file upload.

```

// file-upload.service.ts
import { Injectable } from '@angular/core';
import { HttpClient, HttpHeaders } from '@angular/common/http';
import { Observable } from 'rxjs';

@Injectable({
  providedIn: 'root',
})
export class FileUploadService {
  private uploadUrl = 'http://localhost:2024/api/files/upload'; // Spring
  Boot backend URL

  constructor(private http: HttpClient) {}

  uploadFile(file: File): Observable<any> {
    const formData = new FormData();
    formData.append('file', file);

    return this.http.post(this.uploadUrl, formData, {
      responseType: 'text', // Adjust based on backend response
    });
  }
}

```

2. Create the Component

This component contains the HTML and logic to upload a file.

```
// file-upload.component.ts
import { Component } from '@angular/core';
import { FileUploadService } from '../file-upload.service';

@Component({
  selector: 'app-file-upload',
  templateUrl: '../file-upload.component.html',
  styleUrls: ['../file-upload.component.css'],
})
export class FileUploadComponent {
  selectedFile?: File;
  uploadResponse = '';

  constructor(private fileUploadService: FileUploadService) {}

  onFileSelected(event: Event): void {
    const input = event.target as HTMLInputElement;
    if (input.files && input.files.length > 0) {
      this.selectedFile = input.files[0];
    }
  }

  uploadFile(): void {
    if (this.selectedFile) {
      this.fileUploadService.uploadFile(this.selectedFile).subscribe({
        next: (response) => {
          this.uploadResponse = response;
        },
        error: (error) => {
          this.uploadResponse = `Error: ${error.message}`;
        },
      });
    } else {
      this.uploadResponse = 'Please select a file first.';
    }
  }
}
```

3. Add HTML Template

Create a basic template for the file upload UI.

```
<div class="file-upload-container">
  <h2>File Upload</h2>
  <input type="file" (change)="onFileSelected($event)" />
  <button (click)="uploadFile()">Upload</button>
  <p>{{ uploadResponse }}</p>
</div>
```

4. Add Styles (Optional)

```
/* You can add global styles to this file, and also import other style files */
/* file-upload.component.css */
.file-upload-container {
  width: 300px;
  margin: 20px auto;
  text-align: center;
}

input[type='file'] {
  margin-bottom: 10px;
}

button {
  padding: 5px 15px;
  background-color: #007bff;
  color: white;
  border: none;
  cursor: pointer;
}

button:hover {
  background-color: #0056b3;
}

p {
  margin-top: 10px;
}
```

5. App Module

Add the necessary imports in your `app.module.ts`:

```
// app.module.ts
import { NgModule } from '@angular/core';
import { BrowserModule } from '@angular/platform-browser';
import { HttpClientModule } from '@angular/common/http';
import { FormsModule } from '@angular/forms';

import { AppComponent } from './app.component';
import { FileUploadComponent } from './file-upload/file-upload.component';

@NgModule({
  declarations: [AppComponent, FileUploadComponent],
  imports: [BrowserModule, HttpClientModule, FormsModule],
  providers: [],
  bootstrap: [AppComponent],
})
export class AppModule {}
```