

# API Documentation

## Base URL

➤ /api/files

## Endpoints

### 1. Upload File

**URL:** /api/files/upload

**Method:** POST

**Description:** This endpoint allows clients to upload a text file containing environmental data for analysis.

**Request Parameters:**

**file (multipart/form-data):** The text file to be uploaded.

**Request Example (using cURL):** curl -X POST

http://localhost:8080/api/files/upload \

-F "file=@path/to/yourfile.txt"

**Response:**

**Success:**

**Status Code:** 200 OK

**Body:**

```
{
  "status": "success",
  "message": "File uploaded successfully"
}
```

**Error:**

**Status Code:** 400 Bad Request

**Body (duplicate file):**

```
{
  "status": "error",
  "message": "Duplicate file"
}
```

```
}
```

**Body (file size exceeds limit):**

```
{  
  "status": "error",  
  "message": "File size exceeds limit of 2MB"  
}
```

**Body (unsupported file type):**

```
{  
  "status": "error",  
  "message": "Only text files are allowed"  
}
```

## 2. Get Processed File

**URL:** /api/files/{id}

**Method:** GET

**Description:** This endpoint allows clients to retrieve the processed data of a previously uploaded file using its ID.

**Path Variables:**

**id (Long):** The ID of the file.

**Request Example (using cURL):**

```
curl -X GET http://localhost:8080/api/files/1
```

**Response:**

**Success:**

**Status Code:** 200 OK

**Body:**

```
{  
  "id": 1,  
  "fileName": "air_quality.txt",  
  "processedData": "Date,Location,PM2.5,PM10,NO2,O3,CO\n2024-05-20,City Center,35,45,20,60,0.5\n..."  
}
```

**Error:**

**Status Code:** 404 Not Found

**Body:**

```
{  
  "status": "error",  
  "message": "File not found"  
}
```

**Error Handling**

The application employs robust error handling mechanisms to manage invalid requests, file processing errors, and other exceptional conditions. Below is a summary of the error handling procedures:

**Duplicate File Error:**

**Condition:** When a file with the same name has already been uploaded.

**Response:**

**Status Code:** 400 Bad Request

**Body:**

```
{  
  "status": "error",  
  "message": "Duplicate file"  
}
```

**File Size Exceeds Limit:**

**Condition:** When the uploaded file size exceeds 2 MB.

**Response:**

**Status Code:** 400 Bad Request

**Body:**

```
{  
  "status": "error",  
  "message": "File size exceeds limit of 2MB"
```

```
}
```

### **Unsupported File Type:**

**Condition:** When the uploaded file is not a text file.

#### **Response:**

**Status Code:** 400 Bad Request

#### **Body:**

```
{  
  "status": "error",  
  "message": "Only text files are allowed"  
}
```

### **File Not Found:**

**Condition:** When trying to retrieve a file that does not exist.

#### **Response:**

**Status Code:** 404 Not Found

#### **Body:**

```
{  
  "status": "error",  
  "message": "File not found"  
}
```

The END!!!