SPRING BOOT 2

Spring Boot 2 and Swagger

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DDLAB INC
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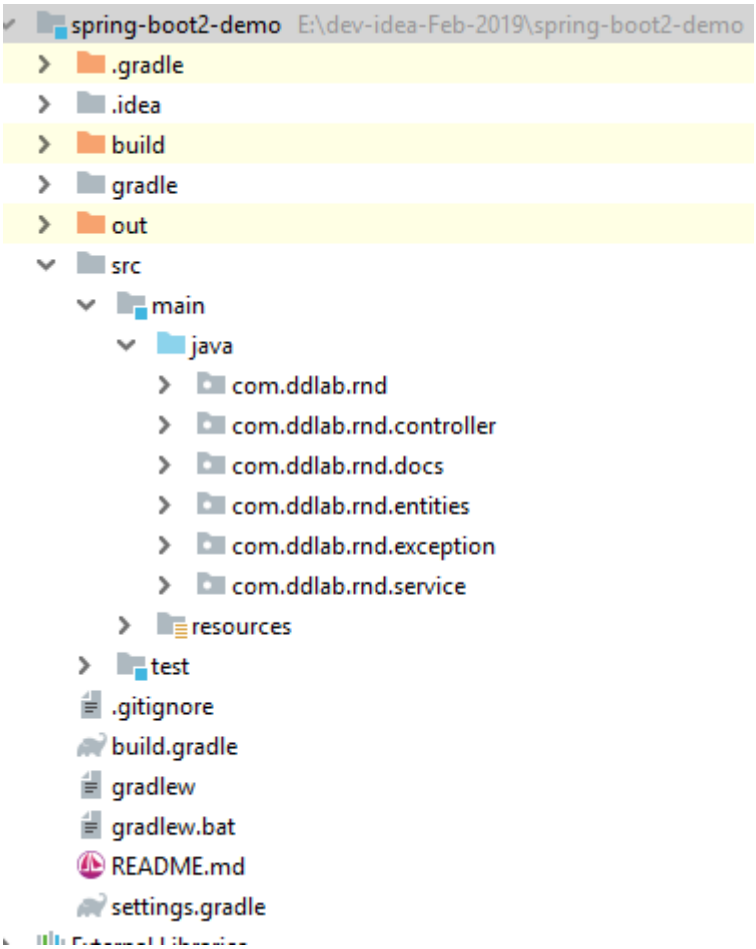
Spring Boot 2.1.3 Version with Spring Fox as Swagger

Project Structure



Build Structure (build.gradle)

```
plugins {
    id 'org.springframework.boot' version '2.1.3.RELEASE'
    id 'java'
}

apply plugin: 'io.spring.dependency-management'

group = 'com.ddlab.rnd'
version = '0.0.1-SNAPSHOT'
sourceCompatibility = '1.8'

repositories {
    mavenCentral()
}

dependencies {
    implementation 'org.springframework.boot:spring-boot-starter'
    implementation 'org.springframework.boot:spring-boot-starter-
web'

    implementation 'io.springfox:springfox-swagger2:2.9.2'
    implementation 'io.springfox:springfox-swagger-ui:2.9.2'

    implementation 'org.projectlombok:lombok:1.18.4'
    annotationProcessor 'org.projectlombok:lombok:1.18.4'

    implementation 'org.apache.commons:commons-io:1.3.2'

    testImplementation 'org.springframework.boot:spring-boot-
starter-test'
}
```

Spring Boot Application (DDLABSpringBootApplication.java)

```
package com.ddlab.rnd;

import org.springframework.boot.SpringApplication;
import org.springframework.boot.autoconfigure.SpringBootApplication;
import org.springframework.context.annotation.ComponentScan;

@SpringBootApplication
@ComponentScan(basePackages = {"com.ddlab.rnd.*"})
public class DDLABSpringBootApplication {
  public static void main(String[] args) {
    SpringApplication.run(DDLABSpringBootApplication.class, args);
  }
}
```

Swagger Configuration (SwaggerConfig.java)

```
package com.ddlab.rnd.docs;
import org.springframework.context.annotation.Bean;
import org.springframework.context.annotation.Configuration;
import springfox.documentation.builders.ApiInfoBuilder;
import springfox.documentation.builders.PathSelectors;
import springfox.documentation.builders.RequestHandlerSelectors;
import springfox.documentation.service.ApiInfo;
import springfox.documentation.service.Contact;
import springfox.documentation.spi.DocumentationType;
import springfox.documentation.spring.web.plugins.Docket;
import springfox.documentation.swagger2.annotations.EnableSwagger2;

@Configuration
@EnableSwagger2
public class SwaggerConfig {

  @Bean
  public Docket api() {
    return new Docket(DocumentationType.SWAGGER_2)
        .select()
        .apis(RequestHandlerSelectors.basePackage("com.ddlab.rnd"))
        .paths(PathSelectors.any())
        .build()
        .apiInfo(apiInfo());
  }

  /**
   * Provides the basic api meta data information.
   *
   * @return the api info
   */
  private ApiInfo apiInfo() {
    return new ApiInfoBuilder()
        .title("REST API for Spring Boot 2.1.3 Version")
        .description("Demo Application for Spring Boot")
        .termsOfServiceUrl("http://springfox.io")
        .contact(new Contact("DDLab INC",
"http://www.github.com/debjava", "deba.java@gmail.com"))
        .license("Spring Boot 2.1.3 Version")
        .licenseUrl("http://www.github.com/debjava")
        .version("0.0.1")
        .build();
  }
}
```

Exception Handler with @ControllerAdvice(ResponseExceptionHandler.java)

```
package com.ddlab.rnd.exception;

import com.fasterxml.jackson.databind.ObjectMapper;
import org.springframework.http.HttpHeaders;
import org.springframework.http.HttpStatus;
import org.springframework.http.ResponseEntity;
import org.springframework.web.bind.annotation.ControllerAdvice;
import org.springframework.web.bind.annotation.ExceptionHandler;
import org.springframework.web.context.request.WebRequest;
import
org.springframework.web.servlet.mvc.method.annotation.ResponseEntity
ExceptionHandler;

import java.io.IOException;
import java.nio.file.AccessDeniedException;

@ControllerAdvice
public class ResponseExceptionHandler extends
ResponseEntityExceptionHandler {

  @ExceptionHandler({AccessDeniedException.class})
  public ResponseEntity<Object>
handleAccessDeniedException(Exception ex, WebRequest request) {
    return new ResponseEntity<Object>(
        toJSON("Access denied message here"), new HttpHeaders(),
HttpStatus.FORBIDDEN);
  }

  @ExceptionHandler({NullPointerException.class})
  public ResponseEntity<Object> handleNullPointerException(Exception
ex, WebRequest request) {
    return new ResponseEntity<Object>(
        toJSON(ex.getMessage()), new HttpHeaders(),
HttpStatus.INTERNAL_SERVER_ERROR);
  }

  @ExceptionHandler({IllegalArgumentException.class})
  public ResponseEntity<Object>
handleIllegalArgumentException(Exception ex, WebRequest request) {
    return new ResponseEntity<Object>(
        toJSON(ex.getMessage()), new HttpHeaders(),
HttpStatus.BAD_REQUEST);
  }
```

```
  private static String toJSON(Object obj) {
    ObjectMapper mapper = new ObjectMapper();
    String toJson = null;
    try {
      toJson =
mapper.writerWithDefaultPrettyPrinter().writeValueAsString(obj);
    } catch (IOException e) {
      e.printStackTrace();
    }
    return toJson;
  }
}
```

Service Layer(EmpService.java)

```
package com.ddlab.rnd.service;

import com.ddlab.rnd.entities.Employee;

import java.util.List;

public interface EmpService {

  List<Employee> getAllEmployees();

  List<Employee> getAllEmpsException1();

  Employee getEmployeeById(String empId);

  Employee searchEmpByName(String firstName, String lastName);

  void createEmployee(Employee emp);

  void deleteEmployee(int id);

  Employee updateEmployeeInfo(Employee emp);

  Employee updateEmployeeLogin(Employee emp);
}
```

Service Implementation (EmpServiceImpl.java)

```
package com.ddlab.rnd.service;

import com.ddlab.rnd.entities.Employee;
import org.springframework.context.annotation.Primary;
import org.springframework.stereotype.Service;

import java.util.Arrays;
import java.util.List;

@Service
@Primary
public class EmpServiceImpl implements EmpService {

  @Override
  public List<Employee> getAllEmployees() {
    return Arrays.asList(
        new Employee(1, "John", "Abraham"),
        new Employee(2, "Vidya", "Balan"),
        new Employee(3, "Debadatta", "Mishra"));
  }

  @Override
  public Employee getEmployeeById(String empId) {
    Employee emp = null;
    try {
      int id = Integer.parseInt(empId);
      emp = new Employee(id, "Deb", "Mishra");
    } catch (NumberFormatException nfe) {
      throw new IllegalArgumentException("Invalid emp Id, unable to
create an employee");
    }
    return emp;
  }

  @Override
  public Employee searchEmpByName(String firstName, String lastName)
{
    if (firstName == null || lastName == null)
      throw new IllegalArgumentException("Invalid search criteria");
    return new Employee(13, firstName, lastName);
  }

  @Override
  public void createEmployee(Employee emp) {
    System.out.println("emp = " + emp);
    System.out.println("Employee created successfully...");
  }
```

```
  @Override
  public void deleteEmployee(int id) {}

  @Override
  public Employee updateEmployeeInfo(Employee emp) {
    return emp;
  }

  @Override
  public List<Employee> getAllEmpsException1() {
    throw new NullPointerException("Unable to retrieve the employee
details, emp server is down");
  }

  @Override
  public Employee updateEmployeeLogin(Employee emp) {
    return emp;
  }
}
```

Entity Layer(Employee.java)

```
package com.ddlab.rnd.entities;

import io.swagger.annotations.ApiModelProperty;
import lombok.AllArgsConstructor;
import lombok.Data;
import lombok.NoArgsConstructor;

@Data
@NoArgsConstructor
@AllArgsConstructor
public class Employee {
  @ApiModelProperty(required = true, example = "123")
  private int empId;

  @ApiModelProperty(required = true, example = "Deb")
  private String firstName;

  @ApiModelProperty(required = true, example = "Mishra")
  private String lastName;
}
```

GetController.java

```
package com.ddlab.rnd.controller;

import com.ddlab.rnd.entities.Employee;
import com.ddlab.rnd.service.EmpService;
import io.swagger.annotations.Api;
import io.swagger.annotations.ApiOperation;
import io.swagger.annotations.ApiResponse;
import io.swagger.annotations.ApiResponses;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.http.MediaType;
import org.springframework.http.ResponseEntity;
import org.springframework.web.bind.annotation.*;

import java.util.List;

@Api(
    value = "All Employees in an Organization",
    description = "API for all Employees",
    tags = {"All Employees"})
@RequestMapping(value = "/get")
@RestController
public class GetController {

  @Autowired private EmpService empService;

  @ApiOperation(
      value = "Provides list of Employees in an organization",
      tags = {"All Employees"})
  @ApiResponses(
      value = {
        @ApiResponse(code = 200, response = Employee[].class,
message = "Retrieved"),
        @ApiResponse(code = 500, message = "Unable to retrieve
employees")
      })
 @GetMapping(path = "/allEmps")
  public ResponseEntity<?> getAllEmployees() {
    List<Employee> allEmps = empService.getAllEmployees();
    return ResponseEntity.ok(allEmps);
  }
```

```
  @ApiOperation(
      value = "Provides list of Employees with NullPointer
Exception",
      tags = {"All Employees"})
  @ApiResponses(
      value = {
        @ApiResponse(code = 200, response = Employee[].class,
message = "Received"),
        @ApiResponse(code = 500, message = "Unable to retrieve
employees")
      })
  @GetMapping(path = "/allEmpException1")
  public ResponseEntity<?> getAllEmpsWithException1() {
    List<Employee> allEmps = empService.getAllEmpsException1();
    return ResponseEntity.ok(allEmps);
  }

  @ApiOperation(
      value = "Provides Employee by Id",
      tags = {"All Employees"})
  @ApiResponses(
      value = {
        @ApiResponse(code = 200, response = Employee.class, message
= "Received"),
        @ApiResponse(code = 400, response = String.class, message =
"Bad request to get emp info"),
        @ApiResponse(code = 500, message = "Unable to retrieve
employees")
      })
  @GetMapping(
      path = "/emp/id/{id}",
      produces = {MediaType.APPLICATION_JSON_VALUE})
  public ResponseEntity<?> getEmployeePerId(
      @PathVariable(value = "id", required = true) String id) {
    Employee empById = empService.getEmployeeById(id);
    return ResponseEntity.ok(empById);
  }
```

```
  @ApiOperation(
      value = "Search Employee by name",
      tags = {"All Employees"})
  @ApiResponses(
      value = {
        @ApiResponse(code = 200, response = Employee.class, message
= "Received"),
        @ApiResponse(code = 400, response = String.class, message =
"Bad request to get emp info"),
        @ApiResponse(code = 500, message = "Unable to retrieve
employees")
      })
  @GetMapping(
      path = "/emp/name",
      produces = {MediaType.APPLICATION_JSON_VALUE})
  public ResponseEntity<?> getEmployeeByName(
      @RequestParam(value = "firstName", required = false) String
firstName,
      @RequestParam(value = "lastName", required = false) String
lastName) {
    Employee empById = empService.searchEmpByName(firstName,
lastName);
    return ResponseEntity.ok(empById);
  }
}
```

PostController

```
package com.ddlab.rnd.controller;

import com.ddlab.rnd.entities.Employee;
import com.ddlab.rnd.service.EmpService;
import io.swagger.annotations.Api;
import io.swagger.annotations.ApiOperation;
import io.swagger.annotations.ApiResponse;
import io.swagger.annotations.ApiResponses;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.http.HttpHeaders;
import org.springframework.http.HttpStatus;
import org.springframework.http.MediaType;
import org.springframework.http.ResponseEntity;
import org.springframework.web.bind.annotation.*;
import
org.springframework.web.servlet.support.ServletUriComponentsBuilder;
import org.springframework.web.util.UriComponentsBuilder;

import java.net.URI;
import java.util.Map;

@Api(
    value = "Add Employee in Organization",
    description = "API for add employee in organisation",
    tags = {"Employee creation"})
@RequestMapping(value = "/post")
@RestController
public class PostController {

  @Autowired private EmpService empService;
```

```
  @ApiOperation(
      value = "Create an employee in organization",
      tags = {"Employee creation"})
  @ApiResponses(
      value = {
        @ApiResponse(code = 201, response = Void.class, message =
"Created"),
        @ApiResponse(code = 500, message = "Unable to create
employees")
      })
  @PostMapping(
      path = "/createEmp",
      consumes = {MediaType.APPLICATION_JSON_VALUE})
  public ResponseEntity<Void> createEmployee(@RequestBody(required =
true) Employee emp) {
    empService.createEmployee(emp);
    //    URI location =
    //        ServletUriComponentsBuilder.fromCurrentRequest()
    //            .path("/{id}")
    //            .buildAndExpand(emp.getEmpId())
    //            .toUri();
    //    return ResponseEntity.created(location).build();
    UriComponentsBuilder builder =
UriComponentsBuilder.fromPath("/ddlab/get");
    HttpHeaders headers = new HttpHeaders();

headers.setLocation(builder.path("/emp/id/{id}").buildAndExpand(emp.
getEmpId()).toUri());
    return new ResponseEntity<Void>(headers, HttpStatus.CREATED);
  }
```

```
@ApiOperation(
      value = "Saves employee information in database",
      tags = {"Employee creation"})
  @ApiResponses(
      value = {
        @ApiResponse(code = 201, response = Void.class, message =
"Created"),
        @ApiResponse(code = 500, message = "Unable to create
employees")
      })
  @PostMapping(
      path = "/saveEmp",
      consumes = {MediaType.APPLICATION_FORM_URLENCODED_VALUE})
  public ResponseEntity<Void> saveEmployee(
      @RequestParam(value = "id", required = false) int id,
      @RequestParam(value = "firstName", required = true) String
firstName,
      @RequestParam(value = "lastName", required = true) String
lastName) {
    Employee emp = new Employee(id, firstName, lastName);
    // It works like @FormParam in Jersey
    System.out.println("emp = " + emp);
    empService.createEmployee(emp);
    UriComponentsBuilder builder =
UriComponentsBuilder.fromPath("/ddlab/get");
    HttpHeaders headers = new HttpHeaders();

headers.setLocation(builder.path("/emp/id/{id}").buildAndExpand(emp.
getEmpId()).toUri());
    return new ResponseEntity<Void>(headers, HttpStatus.CREATED);
  }
```

```
@ApiOperation(
      value = "Saves all employees information in database with an
admin key",
      tags = {"Employee creation"})
  @ApiResponses(
      value = {
        @ApiResponse(code = 201, response = Void.class, message =
"Created"),
        @ApiResponse(code = 500, message = "Unable to create
employees")
      })
  @PostMapping(
      path = "/createEmpKey",
      consumes = {MediaType.APPLICATION_JSON_VALUE})
  public ResponseEntity<Void> createEmployeeKey(
      @RequestHeader("key") String Key, @RequestBody(required =
true) Employee emp) {
    System.out.println("Key = " + Key);
    UriComponentsBuilder builder =
UriComponentsBuilder.fromPath("/ddlab/get");
    HttpHeaders headers = new HttpHeaders();

headers.setLocation(builder.path("/emp/id/{id}").buildAndExpand(111)
.toUri());
    return new ResponseEntity<Void>(headers, HttpStatus.CREATED);
  }
}
```

PutController

```
package com.ddlab.rnd.controller;

import com.ddlab.rnd.entities.Employee;
import com.ddlab.rnd.service.EmpService;
import io.swagger.annotations.Api;
import io.swagger.annotations.ApiOperation;
import io.swagger.annotations.ApiResponse;
import io.swagger.annotations.ApiResponses;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.http.MediaType;
import org.springframework.http.ResponseEntity;
import org.springframework.web.bind.annotation.PutMapping;
import org.springframework.web.bind.annotation.RequestBody;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RestController;

@Api(
    value = "Update Employee in Organization",
    description = "API for employee updation in organisation",
    tags = {"Employee updation"})
@RequestMapping(value = "/put")
@RestController
public class PutController {

  @Autowired private EmpService empService;

  @ApiOperation(
      value = "Create an employee in organization",
      tags = {"Employee updation"})
  @ApiResponses(
      value = {
        @ApiResponse(code = 200, response = Employee.class, message
= "Ok"),
        @ApiResponse(code = 500, message = "Unable to create
employees")
      })
  @PutMapping(
      path = "/updateEmp",
      consumes = {MediaType.APPLICATION_JSON_VALUE})
  public ResponseEntity<?> updateEmployee(@RequestBody(required =
true) Employee emp) {
    Employee updatedEmp = empService.updateEmployeeInfo(emp);
    return ResponseEntity.ok(updatedEmp);
  }
}
```

PatchController

```
package com.ddlab.rnd.controller;
import com.ddlab.rnd.entities.Employee;
import com.ddlab.rnd.service.EmpService;
import io.swagger.annotations.Api;
import io.swagger.annotations.ApiOperation;
import io.swagger.annotations.ApiResponse;
import io.swagger.annotations.ApiResponses;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.http.MediaType;
import org.springframework.http.ResponseEntity;
import org.springframework.web.bind.annotation.PatchMapping;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestParam;
import org.springframework.web.bind.annotation.RestController;

@Api(
    value = "Update Employee Partially in Organization",
    description = "API for employee updation partially in
organisation",
    tags = {"Employee Patch updation"})
@RequestMapping(value = "/patch")
@RestController
public class PatchController {

  @Autowired private EmpService empService;

  @ApiOperation(
      value = "Create an employee in organization",
      tags = {"Employee Patch updation"})
  @ApiResponses(
      value = {
        @ApiResponse(code = 200, response = Employee.class, message = "Ok"),
        @ApiResponse(code = 500, message = "Unable to update employees")
      })
  @PatchMapping(
       path = "/updatePartialEmp",
       produces = {MediaType.APPLICATION_JSON_VALUE})
  public ResponseEntity<?> createEmployee(
      @RequestParam(value = "id", required = true) String id,
      @RequestParam(value = "loginName", required = true) String
loginName) {
    // First find the emp by id
    Employee empById = empService.getEmployeeById(id);
    empById.setFirstName(loginName);
    Employee updatedEmp = empService.updateEmployeeLogin(empById);
    System.out.println("updatedEmp = " + updatedEmp);
    return ResponseEntity.ok(updatedEmp);
  }
}
```

DeleteController

```
package com.ddlab.rnd.controller;

import com.ddlab.rnd.service.EmpService;
import io.swagger.annotations.Api;
import io.swagger.annotations.ApiOperation;
import io.swagger.annotations.ApiResponse;
import io.swagger.annotations.ApiResponses;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.http.HttpStatus;
import org.springframework.http.ResponseEntity;
import org.springframework.web.bind.annotation.DeleteMapping;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RestController;

@Api(
    value = "Delete Employee Info in an Organization",
    description = "API for all Employees",
    tags = {"Employee deletion"})
@RequestMapping(value = "/delete")
@RestController
public class DeleteController {

  @Autowired private EmpService empService;

  @ApiOperation(
      value = "Create an employee in organization",
      tags = {"Employee deletion"})
  @ApiResponses(
      value = {
        @ApiResponse(code = 204, response = Void.class, message =
"Deleted"),
        @ApiResponse(code = 500, message = "Unable to create
employees")
      })
  @DeleteMapping("emp/{id}")
  public ResponseEntity<Void> deleteArticle(@PathVariable("id")
Integer id) {
    empService.deleteEmployee(id);
    return new ResponseEntity<Void>(HttpStatus.NO_CONTENT);
  }
}
```

FileUploadController

```
package com.ddlab.rnd.controller;
import com.ddlab.rnd.entities.Employee;
import com.ddlab.rnd.service.EmpService;
import com.fasterxml.jackson.databind.ObjectMapper;
import io.swagger.annotations.*;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.http.*;
import org.springframework.web.bind.annotation.*;
import org.springframework.web.multipart.MultipartFile;
import java.io.File;
import java.io.IOException;

@Api(
    value = "Upload Employee Resume in Organization",
    description = "API for employee resume upload in organisation",
    tags = {"Employee Resume upload"})
@RequestMapping(value = "/upload")
@RestController
public class FileUploadController {

  @Autowired private EmpService empService;

  @ApiOperation(
      value = "Upload Employee Resume",
      tags = {"Employee Resume upload"})
  @ApiResponses(
      value = {
        @ApiResponse(code = 201, response = String.class, message =
"Uploaded"),
        @ApiResponse(code = 500, message = "Unable to upload employee's
resume")
      })
  @PostMapping(value = "/singleFile", consumes =
MediaType.MULTIPART_FORM_DATA_VALUE)
  public ResponseEntity<?> handleFileUpload(@RequestParam("file")
MultipartFile multipartFile) {
    long fileSize = multipartFile.getSize();
    System.out.println("fileSize = " + fileSize);
    System.out.println("File Name = " +
multipartFile.getOriginalFilename());
    File file = new File("E:/sure-delete/" +
multipartFile.getOriginalFilename());
    try {
      multipartFile.transferTo(file);
    } catch (IOException e) {
      e.printStackTrace();
    }
    return ResponseEntity.ok("File uploaded with size " + fileSize +
" successfully");
  }
```

```
  @ApiOperation(
      value = "Upload Employee and Resume",
      tags = {"Employee Resume upload"})
  @ApiResponses(
      value = {
        @ApiResponse(
            code = 201,
            response = String.class,
            message = "Emp Created and Resume Uploaded"),
        @ApiResponse(code = 500, message = "Unable to upload
employee's resume")
      })
  @PostMapping(
      value = "/empIdAndResume",
      consumes = {MediaType.MULTIPART_FORM_DATA_VALUE},
      produces = MediaType.TEXT_PLAIN_VALUE)
  public ResponseEntity<?> handleEmployeAndResume(
      @RequestPart("file") MultipartFile multipartFile,
      @RequestPart(value = "emp", required = true) String
empJsonTxt) {
    System.out.println("multipartFile = " + multipartFile);
    System.out.println("EMP as Json String = " + empJsonTxt);
    ObjectMapper objectMapper = new ObjectMapper();
    try {
      Employee emp = objectMapper.readValue(empJsonTxt,
Employee.class);
      System.out.println("Now emp = " + emp);
    } catch (IOException e) {
      e.printStackTrace();
    }
    long fileSize = multipartFile.getSize();
    System.out.println("fileSize = " + fileSize);
    System.out.println("File Name = " +
multipartFile.getOriginalFilename());
    File file = new File("E:/sure-delete/" +
multipartFile.getOriginalFilename());
    try {
      multipartFile.transferTo(file);
    } catch (IOException e) {
      e.printStackTrace();
    }
    return ResponseEntity.ok("File uploaded with size " + fileSize +
" successfully");
  }
```

```
  @ApiOperation(
      value = "Upload multiple resumes upload",
      tags = {"Employee Resume upload"})
  @ApiResponses(
      value = {
        @ApiResponse(code = 201, response = String.class, message =
"Emp Resume Uploaded"),
        @ApiResponse(code = 500, message = "Unable to upload
employee's resume")
      })
  @PostMapping(
      value = "/multiUpload",
      consumes = {MediaType.MULTIPART_FORM_DATA_VALUE},
      produces = MediaType.TEXT_PLAIN_VALUE)
  public ResponseEntity<?> uploadingMultipleFiles(
      @RequestParam("files") MultipartFile[] uploadingFiles) {
    for (MultipartFile uploadedFile : uploadingFiles) {
      System.out.println("Uploaded File Name = " +
uploadedFile.getOriginalFilename());
      File file = new File("E:/sure-delete/" +
uploadedFile.getOriginalFilename());
      try {
        uploadedFile.transferTo(file);
      } catch (IOException e) {
        e.printStackTrace();
      }
    }
    return ResponseEntity.ok("All Files uploaded successfully ...");
  }
}
```

Note: Multiple files upload does not work with Swagger as per documentation, you can check in internet. You can use PostMan client to test. To test, select browse button and select multiple files at a time.

Besides, if you want to upload a photo along with json data like employee information, you have to give two parameters. One as MultiPartFile and another as RequestParam . In request param variable, receive the employee json information as String and then convert into Employee object. This is the only way to achieve it.

FileDownloadController

```
package com.ddlab.rnd.controller;
import io.swagger.annotations.*;
import org.apache.commons.io.IOUtils;
import org.springframework.http.HttpHeaders;
import org.springframework.http.HttpStatus;
import org.springframework.http.MediaType;
import org.springframework.http.ResponseEntity;
import org.springframework.web.bind.annotation.*;
import java.io.*;
import java.nio.file.Files;
import java.nio.file.Paths;

@Api(
    value = "Download File",
    description = "API for file download",
    tags = {"File download"})
@RequestMapping(value = "/download")
@RestController
public class FileDownloadController {

  @ApiOperation(
      value = "Download file",
      tags = {"File download"})
  @ApiResponses(
      value = {
        @ApiResponse(code = 200, response = String.class, message =
"Downloaded"),
        @ApiResponse(code = 500, message = "Unable to download
employee's resume")
      })
  @PostMapping(value = "/file", produces =
MediaType.APPLICATION_OCTET_STREAM_VALUE)
  public ResponseEntity<?> downloadFile(@RequestParam("fileName")
String fileName) {
    String dirPath = "E:/sure-delete/";
    byte[] fileBytes = null;
    try {
      fileBytes = Files.readAllBytes(Paths.get(dirPath + fileName));
    } catch (IOException e) {
      e.printStackTrace();
    }
    return ResponseEntity.ok()
        .contentType(MediaType.APPLICATION_OCTET_STREAM)
        .header(HttpHeaders.CONTENT_DISPOSITION, "attachment;
filename=\"" + fileName + "\"")
        .body(fileBytes);
  }
```

```
  @ApiOperation(
      value = "Show file",
      tags = {"File download"})
  @ApiResponses(
      value = {
        @ApiResponse(code = 200, response = String.class, message =
"Show"),
        @ApiResponse(code = 500, message = "Unable to show
employee's resume")
      })
  @GetMapping(value = "/showImage", produces = "image/jpg")
  public ResponseEntity<byte[]> getImageAsResponseEntity(
      @RequestParam("fileName") String fileName) {
    String dirPath = "E:/sure-delete/";
    HttpHeaders headers = new HttpHeaders();
    InputStream in = null;
    byte[] media = new byte[0];
    try {
      in = new FileInputStream(dirPath + fileName);
      media = IOUtils.toByteArray(in);
    } catch (IOException e) {
      e.printStackTrace();
    }
    ResponseEntity<byte[]> responseEntity = new
ResponseEntity<>(media, headers, HttpStatus.OK);
    return responseEntity;
  }
}
```

Here, you can directly hit the url in browser and can see the image. It also works in Swagger.

Application.Properties

```
server.servlet.context-path=/ddlab
```