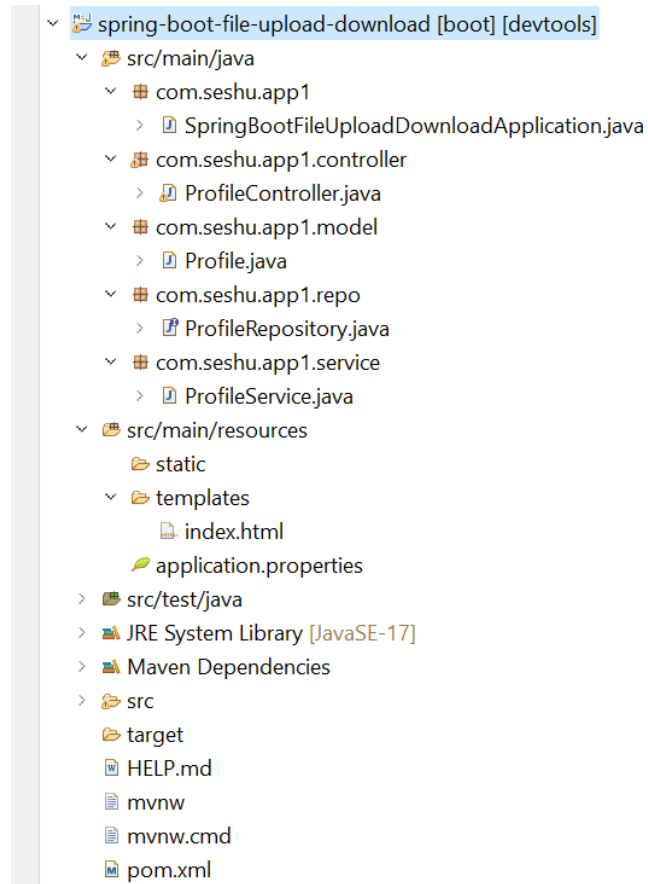


Spring Boot File Upload and Download

Example:



Step 1: Create Spring Starter Project with following dependencies
(Spring Web, Spring Data JPA, MySQL Driver, Thymeleaf, DevTools)

Step 2: Update the **application.properties** file with the following properties.

```
spring.jpa.hibernate.ddl-auto=create
spring.datasource.url=jdbc:mysql://localhost:3306/adiDB
spring.datasource.username=root
spring.datasource.password=seshu

spring.servlet.multipart.enabled=true
spring.servlet.multipart.file-size-threshold=2KB
spring.servlet.multipart.max-file-size=200MB
spring.servlet.multipart.max-request-size=200MB
```

Step 3: Create Profile model class.

```
package com.seshu.appl.model;

import javax.persistence.Entity;
import javax.persistence.GeneratedValue;
import javax.persistence.Id;
import javax.persistence.Lob;
import javax.persistence.Table;

@Entity
@Table(name="profile")
public class Profile {
    @Id
    @GeneratedValue
    private Integer id;
    private String name;
    private String email;
    private String mobile;
    private String docType;
    private String docName;

    @Lob
    private byte[] docData;

    public String getDocType() {
        return docType;
    }

    public void setDocType(String docType) {
        this.docType = docType;
    }

    public byte[] getDocData() {
        return docData;
    }

    public void setDocData(byte[] docData) {
        this.docData = docData;
    }

    public String getDocName() {
        return docName;
    }

    public void setDocName(String docName) {
```

```
        this.docName = docName;
    }

    public Integer getId() {
        return id;
    }

    public void setId(Integer id) {
        this.id = id;
    }

    public String getName() {
        return name;
    }

    public void setName(String name) {
        this.name = name;
    }

    public String getEmail() {
        return email;
    }

    public void setEmail(String email) {
        this.email = email;
    }

    public String getMobile() {
        return mobile;
    }

    public void setMobile(String mobile) {
        this.mobile = mobile;
    }
}
```

Step 4: Create ProfileRepository class.

```
package com.seshu.app1.repo;

import org.springframework.data.jpa.repository.JpaRepository;

import com.seshu.app1.model.Profile;

public interface ProfileRepository extends
    JpaRepository<Profile,Integer>{}
```

Step 5: Create ProfileService class.

```
package com.seshu.appl.service;

import java.util.List;
import java.util.Optional;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Service;
import org.springframework.web.multipart.MultipartFile;

import com.seshu.appl.model.Profile;
import com.seshu.appl.repo.ProfileRepository;

@Service
public class ProfileService {
    @Autowired
    private ProfileRepository profileRepository;

    public Profile saveProfile(Profile p, MultipartFile file) {
        try {
            Profile profile = new Profile();
            profile.setName(p.getName());
            profile.setEmail(p.getEmail());
            profile.setMobile(p.getMobile());
            profile.setDocData(file.getBytes());
            profile.setDocType(file.getContentType());
            profile.setDocName(file.getOriginalFilename());
            return profileRepository.save(profile);
        } catch (Exception e) {
            e.printStackTrace();
        }
        return null;
    }

    public Optional<Profile> getProfile(Integer id) {
        return profileRepository.findById(id);
    }

    public List<Profile> getProfiles() {
        return profileRepository.findAll();
    }
}
```

Step 6: Create ProfileController class.

```
package com.seshu.appl.controller;

import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.core.io.ByteArrayResource;
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.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.PostMapping;
import org.springframework.web.bind.annotation.RequestParam;
import org.springframework.web.multipart.MultipartFile;

import com.seshu.appl.model.Profile;
import com.seshu.appl.service.ProfileService;

@Controller
public class ProfileController {

    @Autowired
    private ProfileService profileService;

    @GetMapping("/")
    public String showHomePage(Model model) {
        List<Profile> profiles = profileService.getProfiles();
        model.addAttribute("profiles", profiles);
        return "index";
    }

    @PostMapping("/upload")
    public String uploadMultipleFiles(@RequestParam("name") String name,
    @RequestParam("email") String email,
        @RequestParam("mobile") String mobile,
    @RequestParam("file") MultipartFile file) {
        Profile profile = new Profile();
        profile.setName(name);
        profile.setEmail(email);
        profile.setMobile(mobile);
        profileService.saveProfile(profile, file);
        return "redirect:/";
    }
}
```

```

    @GetMapping("/downloadFile/{id}")
    public ResponseEntity<ByteArrayResource> downloadFile(@PathVariable
Integer id) {
        Profile profile = profileService.getProfile(id).get();
        return
ResponseEntity.ok().contentType(MediaType.parseMediaType(profile.getDocType()))
                .header(HttpHeaders.CONTENT_DISPOSITION,
"attachment;filename=\"" + profile.getDocName() + "\"")
                .body(new ByteArrayResource(profile.getDocData()));
    }
}

```

Step 7: Create index.html

```

<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml"
xmlns:th="http://www.thymeleaf.org">

<head>
    <meta charset="utf-8" />
    <title>Create New Product</title>
    <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min
.css" rel="stylesheet"
        integrity="sha384-
EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOMLASjC"
crossorigin="anonymous">
    <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle
.min.js"
        integrity="sha384-
MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsPlUyJoMp4YLEuNSfAP+JcXn/tWtIaxVXM"
        crossorigin="anonymous"></script>
</head>

<body>
    <div class="container mt-5">
        <h3>Fill Up Profile Details</h3>
        <form method="post" th:action=@{/upload}
encType="multipart/form-data">
            <div class="col-4">
                <label class="form-label">Name</label>
                <input type="text" name="name" class="form-control">
            </div>
            <div class="col-4">
                <label class="form-label">Email</label>

```

```

        <input type="text" name="email" class="form-control">
    </div>
    <div class="col-4">
        <label class="form-label">Mobile</label>
        <input type="text" name="mobile" class="form-
control">

    </div>
    <div class="col-4">
        <label class="form-label">Upload File</label>
        <input type="file" name="file" class="form-control">
    </div>
    <div class="col-4">
        <button type="submit" class="btn btn-primary mt-
2">Submit</button>
    </div>
</form>
<h3>List of Documents</h3>
<table class="table table-striped">
    <thead>
        <tr>
            <th>Id</th>
            <th>Name</th>
            <th>Email</th>
            <th>Mobile</th>
            <th>Download Link</th>
        </tr>
    </thead>
    <tbody>
        <tr th:each="profile :${profiles}">
            <td th:text="${profile.id}" />
            <td th:text="${profile.name}" />
            <td th:text="${profile.email}" />
            <td th:text="${profile.mobile}" />
            <td><a
th:href="@{'/downloadFile/' + ${profile.id}}">Download</a></td>
        </tr>
    </tbody>
</table>
</div>
</body>

</html>

```


Step 8: Run the spring starter.

```
package com.seshu.app1;

import org.springframework.boot.SpringApplication;
import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication
public class SpringBootFileUploadDownloadApplication {

    public static void main(String[] args) {

        SpringApplication.run(SpringBootFileUploadDownloadApplication.class,
args);
    }
}
```



Fill Up Profile Details

Name

Email

Mobile

Upload File

Choose File

No file chosen

List of Documents

Id	Name	Email	Mobile	Download Link
----	------	-------	--------	---------------



Fill Up Profile Details

Name

Jones

Email

jones@gmail.com

Mobile

8877665544

Upload File

Choose File

Agile.txt

Submit

List of Documents

Id	Name	Email	Mobile	Download Link
1	Jones	jones@gmail.com	8877665544	Download