**5. Spring REST (CRUD API, Pagination, Fetching from Multiple Tables, Image Upload/Download)**

**1. Spring REST Overview:**

• **Theory**

**1.** **Introduction to creating RESTful services in Spring Boot:-** Spring Boot simplifies the development of RESTful web services by providing built-in support for REST APIs using Spring MVC. It allows you to create lightweight, scalable, and maintainable web services.

Steps to Create a RESTful Service in Spring Boot

1️.Create a Spring Boot Project

* Use Spring Initializr to generate a Spring Boot project with Spring Web dependency.

2️.Define a REST Controller

* Use @RestController to handle HTTP requests.

3️.Map Endpoints Using @RequestMapping

* Use @GetMapping, @PostMapping, @PutMapping, and @DeleteMapping for different HTTP operations.

4️.Run the Application

* Start the Spring Boot application and test the API using Postman or a web browser.

**2. Use of @RestController to create REST APIs:-** @RestController is a Spring annotation used to create RESTful web services. It is a combination of @Controller and @ResponseBody, meaning it handles HTTP requests and returns JSON/XML responses directly**.**

**3.** **Handling HTTP requests and returning JSON or XML responses:-** In Spring Boot, RESTful APIs handle HTTP requests and return JSON or XML responses using @RestController. By default, Spring Boot uses Jackson to convert Java objects into JSON.