

Spring MVC Complete Roadmap (Basic to Advanced – Industry Level)

LEVEL 1: Spring MVC Basics

- Introduction to Spring MVC
- Spring MVC vs Struts
- Spring MVC vs Spring Boot MVC
- Use cases in industry

LEVEL 2: MVC Architecture

- Model, View, Controller
- Front Controller Pattern
- DispatcherServlet overview
- Request–Response lifecycle

LEVEL 3: Project Setup (Non-Boot)

- Maven dependencies
- web.xml configuration
- DispatcherServlet mapping
- spring-mvc.xml
- Component scanning

LEVEL 4: DispatcherServlet Internals

- HandlerMapping
- Controller invocation
- ViewResolver
- View rendering flow

LEVEL 5: Controllers & Request Mapping

- @Controller vs @RestController
- @RequestMapping
- @GetMapping, @PostMapping
- Class-level vs method-level mapping

LEVEL 6: Request Data Handling

- @RequestParam
- @PathVariable
- @RequestBody
- @ModelAttribute
- @RequestHeader, @CookieValue

LEVEL 7: Model & View

- Model
- ModelMap
- ModelAndView
- Redirect vs Forward

LEVEL 8: View Technologies

- JSP & JSTL
- Thymeleaf integration
- ViewResolver types

LEVEL 9: Form Handling & Data Binding

- Form submission flow

- POJO binding
- Custom editors & formatters

LEVEL 10: Validation

- @Valid & @Validated
- BindingResult
- JSR-303 annotations
- Custom validators

LEVEL 11: Exception Handling

- @ExceptionHandler
- @ControllerAdvice
- @RestControllerAdvice

LEVEL 12: REST with Spring MVC

- REST principles
- @ResponseBody
- ResponseEntity
- Status codes
- Pagination & sorting

LEVEL 13: Interceptors, Filters & Listeners

- HandlerInterceptor
- Servlet Filters
- Context & Session listeners

LEVEL 14: File Handling & Localization

- File upload & download
- MultipartResolver
- i18n & localization

LEVEL 15: Async, Caching & Performance

- Async controllers
- @Cacheable
- Performance best practices

LEVEL 16: Testing Spring MVC

- MockMvc
- Controller testing
- Validation testing

LEVEL 17: Industry Best Practices

- Layered architecture
- DTO usage
- Logging standards
- API documentation (Swagger)