

Java Full stack Development Course Content

This course covers a wide range of topics, including Java programming language, front-end development, back-end development, and more. It provides hands-on experience with real-world projects, helping you to apply what you've learned in a practical setting.

Introduction

1. What is Front End Development
2. Front End Technologies
3. What is Back End Development
4. Backend Development Technologies
5. What is Full stack Development
6. Advantages of Full stack Development
7. Roles of Full stack Developer

Module-1: Backend Development

Core Java

8. What is Programming Language?
9. Types of programming languages
10. Java Introduction
11. History of Java
12. Principles of Java
13. Java Installation
14. Java Program Execution Flow
15. JDK vs JRE
16. JVM Architecture
17. Identifiers & Keywords
18. Data Types

19. Variables
20. Methods
21. Arrays
22. Strings Handling
23. Object Oriented Principles
24. Constructors
25. Interfaces
26. Programs related to OOPs
27. Final classes
28. Abstract Class
29. Exception handling
30. Multi-Threading
31. Wrapper classes
32. Auto Boxing, Un-Boxing
33. Java Memory Management
34. Introduction to Collection Framework
35. List
36. Set
37. Map
38. Properties
39. Java 8 Features Introduction
40. Lambda Expressions

- 41. Functional Interfaces
- 42. Default & Static Methods
- 43. Method References
- 44. Date and Time API changes
- 45. Stream API

Advanced Java

- 1. Introduction to Advanced Java
- 2. Introduction to Database
- 3. Types of databases
- 4. Database Environment Setup
- 5. DB Table Creation
- 6. Table Altering
- 7. CRUD Operations
- 8. Primary Keys
- 9. Foreign Keys
- 10. JDBC Introduction
- 11. JDBC API Details
- 12. JDBC Architecture
- 13. JDBC Driver
- 14. Driver Manager
- 15. Connection
- 16. Statement
- 17. Prepared Statement
- 18. Callable Statement
- 19. Result Set
- 20. What is Dao Layer?
- 21. Steps to create JDBC Application
- 22. JDBC Applications Development
- 23. CRUD Operations

- 24. Connection Pooling
- 25. Most common exceptions in JDBC apps
- 26. Servlets
- 27. What is web application?
- 28. Web application architecture
- 29. Client & Server
- 30. Http Protocol
- 31. What is Servlet?
- 32. Servlet API
- 33. Servlet Life Cycle
- 34. Steps to create Servlet
- 35. Deployment Descriptor
- 36. Servlet interface
- 37. Generic Servlet class
- 38. HttpServlet class
- 39. HttpServletRequest
- 40. HttpServletResponse
- 41. ServletConfig
- 42. ServletContext
- 43. Init Params
- 44. Forms development
- 45. Cookies
- 46. Hidden variables
- 47. JSP
- 48. Introduction to User interface
- 49. Introduction to JSP
- 50. Servlets vs. JSP
- 51. Life Cycle of JSP
- 52. JSP Implicit Objects
- 53. JSP Directives
- 54. JSP Scripting Elements

55. MVC Architecture Introduction

56. Forms Development

57. Mini Projects Development

Web Development

HTML

1. Web Development Overview

2. HTML Introduction

3. HTML Document Structure

4. Headings

5. Paragraphs

6. Typography

7. HTML Links

8. Images in HTML

9. Attributes

10. Lists

11. HTML Tables

12. Forms & Inputs

13. Block & Inline elements

14. Divs

15. Spans

16. Classes & Ids

17. HTML 5 Semantics

CSS

19. CSS Introduction

20. Basic CSS Selectors

21. Dev Tools Introduction

22. Fonts

23. Colors

24. Backgrounds

25. Borders

26. Box Model

27. Margin & Padding

28. Display, Alignment & Positioning

29. Pseudo Selectors

30. Responsive Layouts

31. Introduction to FlexBox

32. Building Responsive Website

JAVA SCRIPT

51. Introduction to Java Script

52. Script Tags

53. Console Output

54. Variables

55. Data Types

56. Strings & Strings Methods

57. Arrays

58. Java Script Objects

59. JSON

60. Arrays

61. Loops

62. Array Helpers

63. Conditionals

64. Functions

65. Constructor Functions

SPRING BOOT & MICRO SERVICES COURSE

SPRING BOOT

1) What is Spring Framework

2) What is Spring Boot

3) Differences between Spring & Spring
Boot

4) Spring Boot Overview

5) Pros & Cons of Spring Boot

6) Approaches to create Spring Boot
Application

a) Spring Initializer (start.spring.io)

b) Spring Starter Wizard in STS IDE

7) Introduction to Spring Boot Starters

a) Spring Boot Parent Starter

b) Spring-boot-starter

c) Spring-boot-starter-web

d) Spring-boot-starter-webflux

e) Spring-boot-starter-data-jpa

f) Spring-boot-devtools

g) Spring-boot-starter-mail

h) Spring-boot-actuator

i) Spring-boot-starter-test etc.

8) What is Start Class in Spring Boot

9) @SpringBootApplication annotation
internals

10) SpringApplication.run(..) method
internals

11) Spring Boot Application Boot
strapping

12) AutoConfiguration in Spring Boot

13) IOC container

14) Dependency Injection

a) Setter Injection

b) Constructor Injection

c) Field Injection

15) Stereotype Annotations

a) @Component

b) @Service

c) @Repository

d) @Controller

16) Base Package Naming convention

17) Component Scanning

18) Auto wiring

a) byType

b) byname

c) constructor

d) none

19) @Qualifier annotation

20) @Primary annotation

21) Introduction to @Configuration
annotation

22) Details of @Bean annotation

23) Bean Life Cycle

24) Bean Scopes

25) Banner in Spring Boot

26) Standalone application
development

27) Standalone application with layered
architecture

28) Runner in Spring Boot

a) Application Runner

b) CommandLine Runner

* SPRING DATA JPA

* SPRING WEB MVC

* SPRING REST