

Full Stack Developer React JS + Java Spring Boot Training

Section 1: HTML 5

- Introduction - Web
- What are the different Types of Web Apps overview?
- Introduction to HTML
- Define HTML Structure
- Difference between Tag vs Element
- Difference between Semantic vs Non-semantic elements
- Difference between Block level elements vs Inline elements
- HTML Elements
- HTML Forms & its Attributes
- HTML Input Elements
- HTML Global Attributes
- HTML Element Specific Attributes

Section 2: CSS & Bootstrap

- What is CSS?
- Understanding the CSS Syntax.
- CSS Selectors
- How To Add CSS in HTML
- CSS Colors & Backgrounds
- CSS Borders, Margins, Padding, Height and Width
- Responsive Web Design – Media queries
- What is Bootstrap?
- Get Start with Bootstrap

- Containers
- Grid System
- Structure of a Bootstrap Grid
- Bootstrap Colors
- Bootstrap Tables
- Bootstrap Jumbotron
- Bootstrap Alerts
- Bootstrap Buttons

Section 3: JavaScript

- Introduction – Javascript
- JavaScript Events
- JavaScript Functions
- Inbuilt methods in JS
- Arrays in JavaScript
- Objects in JavaScript
- Conditional and loops in JavaScript
- HTML DOM Manipulation

Section 4: ES6 JavaScript

- History of JavaScript
- Features
- let & const and its example
- Arrow Functions
- Alternative
- Tips and Arrow Functions

- Exports and Imports
- Tips for exports and imports
- Classes
- Classes example
- Inheritance
- Spread and rest Parameter
- Destructing

Section 5: Getting Started with React

- What is ReactJS?
- Installation or Setup
- Create React App
- Advantages Of React JS
- Workflow Of React JS
- Node Setup
- How to use NPM and its purpose
- ES6 Introduction
- JS vs JSX vs TS vs TSX

Section 6: Components

- Creating Components
- Basic Component
- Nesting Components
- Higher order components

Section 7: OVERVIEW OF JSX

- Introduction of Virtual DOM.
- Difference between JS and JSX.
- Why use JSX?
- JSX Attributes
- JSX Styling

Section 8: Props in React

- Introduction
- Default props
- PropTypes
- Passing down props using spread operator
- Props.children and component composition
- Detecting the type of Children components
- Props Drilling

Section 9: State in React

- Basic State
- Common Antipattern
- setState()
- State, Events And Managed Controls

Section 10: React Component Lifecycle

- Component willmount
- Component UnMount
- Component Update

- Lifecycle method call in different states
- React Component Container

Section 11: Handling Events

- Event handling in React
- Binding event handlers
- Arrow functions vs. regular functions
- Primary Events
- Sharing the events between components

Section 12: Communicate Between Components

- Child to Parent Components
- Parent to Child Components
- Not-related Components

Section 13: Conditional Rendering

- Conditional rendering with if statements
- Conditional Rendering using logical && in JSX
- Conditional Rendering using ternary operator
- Preventing Component from Rendering

Section 14: Lists and Keys

- Steps to Create and Traverse React JS Lists
- Rendering lists inside Components
- Key in React List

Section 15: React JS Keys

- What is a key in React ?
- Assigning keys to the list
- Difference between keys and props in React

Section 16: React Hooks

- useState()
- useEffect()
- useContext()
- useRef()
- useReducer()
- Custom React Hooks
- useDispatch(), useSelector, useMemo, useLayoutEffect()

Section 17: Styling in React

- CSS in React
- Different approaches for styling (CSS, CSS-in-JS, CSS Modules)
- Inline styles
- Styling Libraries
- Popular CSS frameworks (e.g., Bootstrap, Material-UI)

Section 18: Router

- Introduction to React Router
- Setting up React Router
- Creating routes
- Navigating with React Router
- Using Link and NavLink

- Nested Routes and Dynamic Routing
- Nested routes
- Passing parameters to routes
- Query String, accessing current URL

Section 19: React JS forms

- React Forms
- Lists of Form components
- Control Input elements.
- Controlled and Uncontrolled form components
- Adding Forms in React
- Handling React Forms
- Submitting React Forms
- Multiple Input Fields
- React JS Form validations
- Custom Validations

Section 20: State Management with Redux

- Introduction to Redux
- Understanding the need for state management
- Basic concepts: actions, reducers, store
- Setting Up Redux
- Installing Redux and setting up a store
- Creating actions and reducers
- Connecting React with Redux
- Using connect to connect components to the store

- Dispatching actions

Section 21: Asynchronous Programming and API Integration

- AJAX and Fetch API
- Making HTTP requests in React
- Fetching data from an API
- Async/Await and Promises

Section 22: Handling errors in React application

- Error Handling and Debugging
- Debugging React apps
- Performance Optimization
- Memoization
- React.memo and PureComponent

Section 23: React JS Virtual DOM

- What is DOM ?
- Disadvantages of real DOM
- Virtual DOM
- How does virtual DOM actually make things faster?
- How virtual DOM Helps React?
- Virtual DOM Key Concepts
- Differences between Virtual DOM and Real DOM

Section 24: Unit Testing Overview

Section 25: Lazy Loading

Section 26: Code Splitting

Section 27: Server-Side Rendering

Section 28: Micro FrontEnd Overview

Section 29: Deploying a React application

Section 30: Introduction - Java

- Introduction about Programming Language Paradigms
- Why Java?
- Flavors of Java.
- Java Designing Goal.
- Difference between JDK,JRE and JVM
- JVM –The heart of Java .
- Java Architecture
- Java’s Magic Bytecode.

Section 31: Programming Fundamentals

- Data types
- Difference between Primitive & Non Primitive Datatypes
- Variable Declaration & Initialization
- Type Casting
- Operators and its types

Section 32: Control Structure and Looping Statements

- IF conditions
- IF-ELSE conditions

- ELSE-IF Ladder conditions
- SWITCH-CASE statements
- “FOR” Loop
- “WHILE” Loop
- “DO-WHILE” Loop
- ENHANCED “FOR” Loop

Section 33: OOPS INTRODUCTION AND BASICS

- What is OOPS?
- Necessity and Advantage of OOPS
- OOPS Designs with real-time examples.
- What is mean by class and object?
- Relation between a Class and an Object
- How to create class and object

Section 34: OOPS BASICS (CLASSES & OBJECTS)

- Components of a Class
- Types of Variables and its uses.
- Constructor advantages and its types
- Ways to initialize the Object
- “this” keyword
- Static Block & Instance Block

Section 35: OOPS CONCEPTS - INHERITANCE

- Inheritance and its advantages
- The “extends” keyword

- Types of Inheritance
- Single Inheritance
- Use of “super” keyword and forms of “super” keyword

Section 36: OOPS CONCEPTS – ENCAPSULATION ALONG WITH PACKAGES

- What is package and its advantages
- Types of packages
- Static Import
- Access Modifiers
- Encapsulation

Section 37: ARRAYS AND STRINGS

- What is Array and its advantages
- Types of Array
- Jagged Array
- String, String Buffer, String Builder

Section 38: EXCEPTION HANDLING

- What is Exception and its types
- How to handle exception?
- Multiple catch blocks
- Finally block
- Difference between throw and throws
- Custom Exception

Section 39: DATABASE

- What is Database?
- What is MySQL?
- Parts of MySQL
- Operators and Clauses in MYSQL.
- Functions and procedures in MYSQL.

Section 40: JDBC

- What is JDBC?
- Types of Drivers
- Loading the drivers
- Connection, Statement, PreparedStatement, CallableStatement,
- ResultSet Interfaces
- Batch Updates

Section 41: UTIL PACKAGE – COLLECTIONS FRAMEWORK

- The “Collection” Interface
- List, Set and Map Interfaces
- Cursors in java and its differences
- Difference between the implementation classes of List, Set and Map

Section 42: GENERICS IN COLLECTIONS FRAMEWORK

- Generics in Java
- Types of Generics
- Uses and Limitations of Generics
- Custom objects with Generic collections

- Sorting in Collections

Section 43: SPRING BOOT ARCHITECTURE

- Spring Boot Framework definition
- Spring Boot Framework design principals
- Spring Boot interfaces
- Bean Factory
- Application Context
- Factory methods

Section 44: INVERSION OF CONTROL

- Dependency Injection advantages
- Setter Injection
- Constructor Injection
- Bean Life Cycle
- Inner Beans
- References to other beans
- Scopes in Spring

Section 45: AUTOWIRING & SPRING BOOT MISCELLANEOUS

- Autowiring advantages and modes
- Spring Boot with Collections
- Reading values from Properties file
- Expression Language in Spring Boot
- Events Handling in Spring Boot

Section 46: AOP

- Spring Boot AOP Advantages
- AOP Configuration
- AOP Terms
- AOP Types of Advices

Section 47: SPRING BOOT JDBC

- JDBC Templates
- Row Mapper
- BeanProperty Row Mapper
- Bean Row Mapper
- Resultset Extractor

Section 48: SPRING BOOT ORM

- Database access layer for object, relational databases
- Spring Boot Framework Benefits with hibernate
- Spring Boot with Hibernate configuration files
- SpringData JPA
- Crud Repository and JPA Repository

Section 49: SPRING WEB MVC AND SPRING BOOT

- MVC Architecture in Spring
- About Dispatcher Servlet
- Types of Handler Mappings
- Types of Controller
- Types of View Resolver

- Spring MVC Annotations
- Spring MVC with CRUD operations
- Spring with Web Services
- Spring Boot Application
- Difference between Spring and Spring Boot
- Spring Boot Annotations

Section 50: SPRING BOOT - OVERVIEW

- What is Spring Boot?
- Developing a Project with Spring Boot Initializer
- Developing a REST API Controller with Spring Boot
- Examining the Spring Boot Project Structure - Part 1
- Examining the Spring Boot Project Structure - Part 2
- Spring Boot Starters - A Curated List of Dependencies
- Parents for Spring Boot Starters

Section 51: SPRING BOOT DEV TOOLS AND SPRING BOOT ACTUATOR

- Spring Boot Dev Tools - Overview
- Spring Boot Actuator - Overview
- Spring Boot Actuator - Accessing Actuator Endpoints
- Spring Boot Actuator - Applying Security to Actuator Endpoints

Section 52: SPRING BOOT - RUNNING SPRING BOOT APPS FROM THE COMMAND LINE

- Running Spring Boot Apps from the Command Line - Overview
- Running Spring Boot Apps from the Command Line - Coding

Section 53: SPRING BOOT - APPLICATION PROPERTIES

- Injecting Custom Application Properties
- Configuring the Spring Boot Server

Section 54: Real Time Projects

- 5+ Real-time projects (Full stack coverage)
- Setup Git for local repository
- Create a GitHub account
- Sync the code base with GitHub repo
- Firebase Hosting Overview
- Setting up Firebase in local
- Host your project in Firebase

Section 55: Placements

- Build your Professional Resume
- Update LinkedIn Profile
- Interview-based Training – GD, Tech round, HR panel
- Minimum 5 Mock interviews before Real interview
- 100% Placement Guaranteed
- Join your Dream Job

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AWS – Cloud Computing:

Section 1: Cloud Computing Introduction

- History of Cloud Computing
- What is Cloud Computing?
- Why Cloud Computing?
- Advantages of Cloud Computing

Section 2: Cloud Computing Service Models

- What is Software as a Service (SaaS)?
- Platform as a Service (PaaS)?
- Infrastructure as a Service (IaaS)?

Section 3: Introduction to AWS Architecture

- Key Considerations for Web Hosting in AWS

Section 4: AWS – Management Console & Account

- How to Access AWS?
- AWS Identity & Access Management (IAM).
- Creating Free Tier Account in AWS
- Introduction of AWS Management Console / CLI / SDK

Section 5: Compute Services in AWS

- AWS EC2
- AWS Lambda

Section 6: Storage and Content Delivery Services

- AWS S3
- AWS EBS

Section 7: Database Services

- Amazon RDS
- AWS DynamoDB

Section 8: Networking Services in AWS

- VPC AWS
- Route 53

Agile Scrum

Section 1: Definition of SCRUM

Section 2: Agile Manifesto

- Scrum Master
- Product Owner

Section 3: Scrum Roles and Responsibilities

- Development Team

Section 4: Typical Sprint Phases

- Product Backlog

- Sprint Planning
- Sprint Backlog
- Sprint
- Daily Scrum
- Sprint Review
- Sprint Retrospective