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|  | **Topic** | **Coverage** |
| Week 1 | **Core Java - Made Easy** | 1. Course Introduction 2. Introduction to Java & OOP |
|  | 3. S/W Installation & First Java Program |
|  | 4. Static Members and Execution control Flow 5. Non-static Members and their Execution control Flow 6. Data Types, Literals, variables, Type Conversion |
|  | 7. Wrapper classes with Autoboxing and unboxing  8. Operators & Assignments  9. Flow control statements |
|  | 10. Access Modifiers  11. Packages  12. Event Management Usecase |
|  | **Core Java - Made Easy** | 13. Inheritance |
|  | 14. Abstraction |
|  | 15. Polymorphism |
| week 2 | 16. Encapsulation  17. Exception handling and Assertions |
|  | 18. Multithreading |
|  | 19. Execution Framework Quick Start  20. Garbage Collection and Type of Objects 21. Inner Classes |
|  | 22. String Handling |
|  | 23. IO Streams |
|  | 24. Arrays 25. Object class methods |
|  | 26. Collections with Generics |
|  | 27. Concurrent Collections  28. Enums |
|  | 29. Java 8 features |
|  | 30. JVM Architecture  31. Internationalization  32. Annotations |
|  |  | 33. Reflection API 34. Regular Expression |
| Week 3 | **Core Java - Deep Dive** | Quick Recap Java Basics OOPS Deep Dive  Support on setting upthe required S/W or virtual lab setup |
|  | Hands - on Labs virtual lab or local set-up |
|  | 35 Dating App Use Case 36. Flight Reservation App |
|  | Wrapper classes with Autoboxing and unboxing Operators & Assignments   Flow control statements |
|  | **Mentor Connect** |
|  | Hands-on |
|  | 37. Interview questions  38. Java 9 features |
|  | Exception handling & Assertions  Inner classes |
|  | Hands -on Labs |
|  | Java 10, 11 and 12 features |
|  | Arrays Object class methods  Collection with Generics  Concurrent Collections and Enum |
|  | **Mentor Connect** |
|  | Hands-on Labs |
|  | Java 13, 14, 15, 16 and 17 new features |
|  | Annotations  Java New Features |
|  | Skilling Evaluation |
|  | Hands on Labs |
|  |  |
|  |  | Spring Framework in Depth |
| Week 4 Spring MVC |  | Spring Frame Work and IOC container Spring Beans- Definition,Scope,life cycle,call back methods and inheritance Spring Dependecy Injection Spring Injecting Inner Beans |
|  |  | Hands - on Labs virtual lab or local set-up |
|  |  | Spring AOP |
|  |  | Spring Injecting collection Autowiring of Spring Beans Spring Configuration Using Annotations Aspect Oriented Programming (AOP) Spring JDBC framework |
|  |  | **Mentor Connect** |
|  |  | Hands-on |
|  |  | Testing Frameworks |
|  |  | Spring Transaction management ResourceBundleMessageSource PropertyPlaceholderConfigurer |
|  |  | Hands -on Labs |
| Week 5 Hibernate |  | Spring MVC Architecture - Part I |
|  |  | Spring MVC Architecture - Part I |
|  |  | **Mentor Connect** |
|  |  | Hands-on Labs |
|  |  | Spring MVC Architecture - Part 2 |
|  |  | Spring MVC Architecture - Part I |
|  |  | Skilling Evaluation |
|  |  | Hands on Labs |
|  |  |  |
|  |  | ORM Basics, Fundamentals of Hibernate |
|  |  | ORM Basics, Fundamentals of Hibernate |
|  |  |  |
|  |  | Hibernate Query Language |
|  |  | Hibernate Query Language |
|  |  | **Mentor Connect** |
|  |  | Hands-on |
|  |  | Relationship and Caching in Hibernate |
|  |  | Relationship and Caching in Hibernate |
|  |  | Hands -on Labs |
|  |  | Transaction Management |
|  |  | Connecting with Multiple Databases |
|  |  | Transaction Management & Connecting with Multiple Databases |
|  |  | **Mentor Connect** |
|  |  | Hands-on Labs |
|  |  | Mapping Collections with Hibernate & Mapping Components |
|  |  | Mapping components |
|  |  | Mapping Collections with Hibernate & Mapping Components |
|  |  | Skilling Evaluation |
|  |  | Hands on Labs |
|  |  |  |
| Week 6,7,8 | Spring Boot Topics | Introduction and Web Application with Spring Boot |
|  |  | Spring Boot Fundamentals |
|  |  | Hands-on |
|  |  | Introduction and Web Application with Spring Boot |
|  |  | REST Fundamentals |
|  |  | Hands-on Labs |
|  |  | Spring Boot with Web API - Continued |
|  |  | Developing Web Applications using REST End Points with Spring Boot in Spring MVC |
|  |  | Skilling Evaluation |
|  |  | Hands on Labs |
|  |  | Spring Boot with Web API - Continued |
|  |  | Externalized Configurations and Spring Boot Actuator |
|  |  | Hands-on Labs |
|  |  | JPA Connectivity in Spring Boot |
|  |  | Testing Spring Boot Project & Developer Tools |
|  |  | Hands-on |
|  |  | Microservices- Designing Highly scalable systems |
|  |  | Microservices - Introduction |
|  |  | Hands -on Labs |
|  |  | Design Micro Services Architecture with Patterns & Principles |
|  |  | Principles & Patterns |
|  |  | Hands-on Labs |
|  |  | Design Micro Services Architecture with Patterns & Principles |
|  |  | Ribbon & feign |
|  |  | Skilling Evaluation |
|  |  | Hands on Labs |
|  |  | Design Micro Services Architecture with Patterns & Principles |
|  |  | Eureka service registry & Zuul API gateway |
|  |  | Hands-on Labs |
|  |  | Design Micro Services Architecture with Patterns & Principles |
|  |  | Spring cloud config server and Spring cloud bus |
|  |  | Design Micro Services Architecture with Patterns & Principles |
|  |  | Spring cloud config server and Spring cloud bus |
|  |  | Hands -on Labs |
|  |  | Best Practices |
|  |  | Distributed tracing using Sleuth and zipkin |
|  |  | Best Practices |
|  |  | Fault tolerance using hystrix |
|  |  | Skilling Evaluation |
|  |  | Hands on Labs |
|  |  |  |
|  |  | HTML5, CSS3 Javascript - The Big picture |
| Week 9 ,10 | Angular | HTML5, CSS3 Javascript - The Big picture |
|  |  | Hands-on Labs |
|  |  | Building Web Sites with HTML5, CSS3, Javascript |
|  |  | HTML5 - Basics |
|  |  | Hands-on Labs |
|  |  | Creating Forms in HTML5, styling with CSS3 |
|  |  | CSS 3 - Basics |
|  |  | Hands -on Labs |
|  |  | Building Web Sites with HTML5, CSS3, Javascript |
|  |  | Javascript and Typescript - Pre-requisite for Angular |
|  |  | Hands-on Labs |
|  |  | Introduction to Angular |
|  |  | Angular Introduction - Angular Features, Angular CLI |
|  |  | Skilling Evaluation |
|  |  | Hands on Labs |
|  |  | Introduction to Angular |
|  |  | Angular Components and Templates , Angular Lifecycle Hooks |
|  |  | Hands-on Labs |
|  |  | Component Interaction and Data Binding DI, Directives |
|  |  | Component Interaction and Data Binding DI, Directives |
|  |  | **Mentor Connect** |
|  |  | Hands-on |
|  |  | Lazy Loading , Lifecycle Hooks, Routing, Operator, Pipes, RxJS, Service • Structural directives |
|  |  | Lazy Loading , Lifecycle Hooks, Routing, Operator, Pipes, RxJS, Service • Structural directives |
|  |  | Hands -on Labs |
|  |  | Unit Testing, Scenarios - Component, service, API call, Pipe, directives  • Web workers • Differential loading |
|  |  | Unit Testing, Scenarios - Component, service, API call, Pipe, directives  • Web workers • Differential loading |
|  |  | **Mentor Connect** |
|  |  | Skilling Evaluation |
|  |  | Hands-on Labs |