

## Day - 1

- **Morning Session: Introduction to Java**
  - Introduction to Java programming language
  - Setting up the Java development environment
  - Java syntax and basic data types
  - Variables and operators in Java
  - Control flow and decision-making in Java
- **Afternoon Session: Object-Oriented Programming (OOP) in Java**
  - Object-oriented programming principles
  - Classes and objects in Java
  - Inheritance, polymorphism, and encapsulation
  - Abstract classes and interfaces
  - Exception handling in Java

## Day - 2

- **Morning Session: Introduction to Spring Framework**
  - Introduction to the Spring framework
  - Dependency injection and inversion of control (IoC)
  - Configuring Spring beans using XML or annotations
  - Bean scopes and lifecycle in Spring
  - Spring Core and Spring Context modules
- **Afternoon Session: Spring Boot Fundamentals**
  - Introduction to Spring Boot framework
  - Creating a basic Spring Boot application
  - Auto-configuration and opinionated defaults
  - Packaging and running Spring Boot applications
  - Configuration properties in Spring Boot

## Day - 3

- **Morning Session: Building RESTful APIs with Spring Boot**
  - RESTful architecture and principles
  - Creating RESTful APIs using Spring Boot
  - Mapping requests and handling responses
  - Request/response serialization with JSON
  - Error handling and exception mapping
- **Afternoon Session: Database Integration with Spring Boot**
  - Connecting Spring Boot application to a database
  - Working with Spring Data JPA for data access
  - Mapping entities and relationships
  - Querying the database using Spring Data JPA
  - Transaction management in Spring Boot

## Day - 4

- **Morning Session: Security and Authentication with Spring Boot**
  - Securing Spring Boot applications
  - Authentication and authorization using Spring Security
  - Implementing role-based access control
  - User registration and password encryption
  - Handling security exceptions and access denied scenarios
- **Afternoon Session: Testing and Debugging in Spring Boot**
  - Unit testing with JUnit and Mockito
  - Integration testing in Spring Boot
  - Testing RESTful APIs using Spring MVC Test
  - Debugging Spring Boot applications
  - Logging and monitoring with Spring Boot Actuator

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