

# Spring Framework 3.0

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**Course Duration: 2 Days**

**Prerequisites:** Participants should be comfortable with J2EE application development

Following is a day-wise breakup of the different topics to be covered during the training program.

## Day 1

- Introduction to Spring framework
  - Spring as a solution for business logic implementation
  - Benefits of using POJO (Plain Old Java Object) approach in Spring
  - Spring and its lightweight container
- Understanding IoC (Inversion of Control) and DI (Dependency Injection)
  - Exploring types of DI
    - Setter approach
    - Constructor approach
    - Lookup method approach
- Lifecycle of beans managed by Spring and different callbacks methods
- AOP (Aspect Oriented Programming)
  - Understanding Aspects, Advices, Interceptors, Pointcuts, Joinpoints & Advisors
  - Configuring proxies for executing Aspects
  - AspectJ support in Spring
  - Using AspectJ expressions for configuring pointcuts

## Day 2

- Spring DAO (Data Access Object) support
  - Spring's abstraction for dao classes
  - JDBC support
    - Issues while writing JDBC code
    - Using JdbcDaoSupport & JdbcTemplate class
    - Using SimpleJdbcDaoSupport & SimpleJdbcTemplate class
    - Benefits of the same
  - Hibernate support
    - Issues while using Hibernate in an application
    - Using HibernateDaoSupport & HibernateTemplate class
    - Benefits of the same
  - JPA support

- JPA abstraction for ORM like Hibernate
- Using JpaDaoSupport & JpaTemplate class
- Benefits of the same
- Transaction management
  - Understanding transaction support in an application using Spring
  - Role of CMT (Container Managed Transactions)
  - Using Spring's PlatformTransactionManager
  - Configuring proxies for transaction management
  - Understanding transactional attributes supported by Spring
  - Handling exceptions in a transactional code
  - Configuring isolation levels & timeouts
  - Using annotations for configuring transactions in beans
- Integrating Spring with other enterprise technologies (overview)
  - Struts
  - JSF
  - EJB
  - JMS
  - WebServices
  - JUnit