



INTRODUCTION TO SPRING FRAMEWORK

Session 1

OBJECTIVES



- Describe Spring framework
- Identify the features and advantages of Spring framework
- Describe the architecture of Spring framework

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WHAT IS SPRING FRAMEWORK?

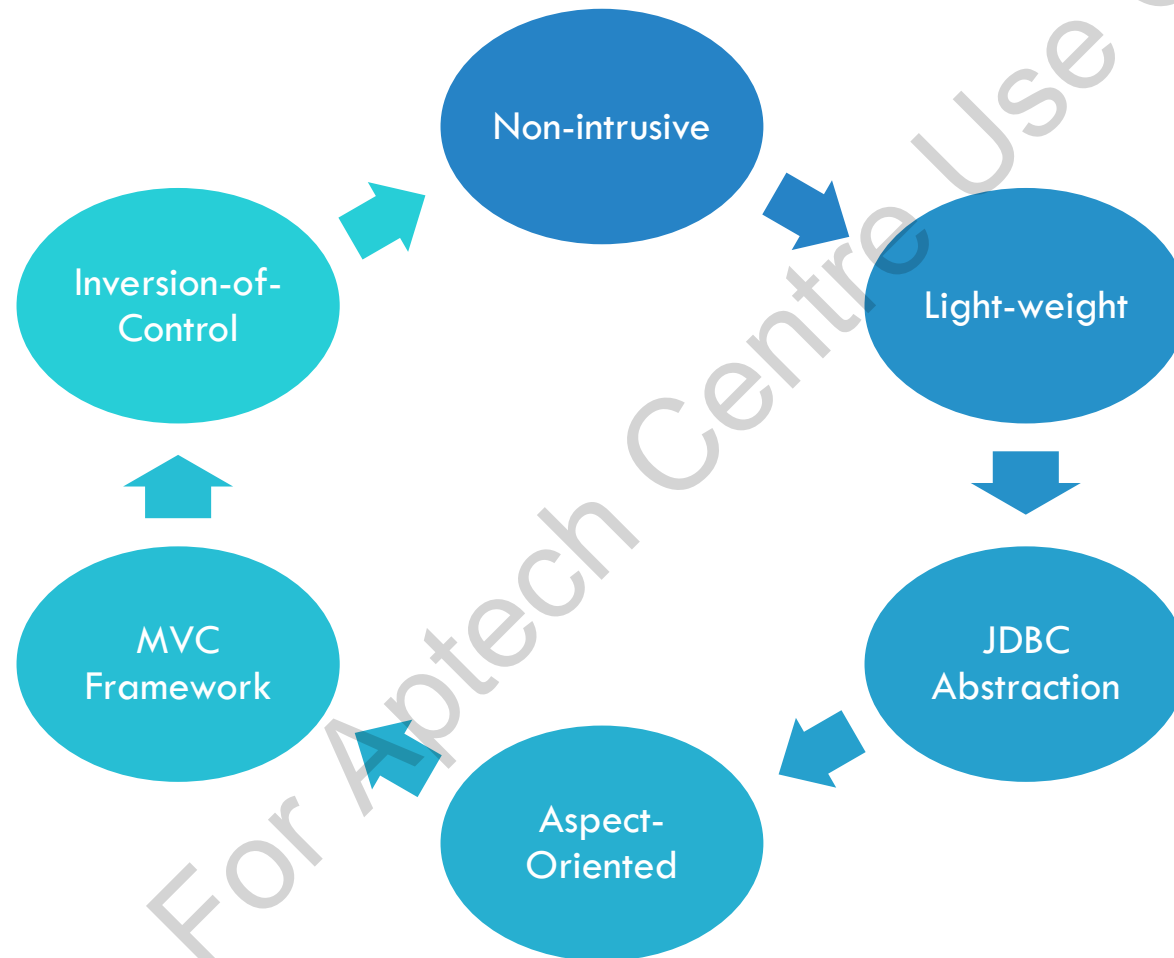


- Spring framework is an open-source application development framework that is used to develop robust enterprise-level Java applications.
- Spring framework has been developed by Pivotal for Java Virtual Machine (JVMs).
- Spring framework allows developers to concentrate on core program logic by providing infrastructural support.



Spring Framework 5

FEATURES OF SPRING FRAMEWORK



ADVANTAGES OF SPRING FRAMEWORK



Following are the advantages of using Spring framework:

Light-weight so no server required for activation

Develop loosely-coupled applications
using IoC and DI

Promotes good
programming
practices

Modular
programming
approach

Improved error
handling by using
JDBC framework

Develop robust
Web
applications
using MVC

INVERSION-OF-CONTROL AND SPRING FRAMEWORK



- Inversion-of-Control principle provides following benefits:
 - Makes the application code modular
 - Makes the application code extensible
 - Makes the application code independent of any environment
- IoC is implemented through Dependency Injection pattern.



SPRING FRAMEWORK ARCHITECTURE



- Spring Framework architecture consists of following four modules:

Spring Core Container (basic module of the framework)

Aspect-Oriented Programming (AOP) Module (provides the infrastructure logic to the framework)

Web Module (provides support to build robust Web applications)

Data Access and Integration Module (helps eliminate JDBC coding)

EVOLUTION OF SPRING FRAMEWORK



- The commonly used Spring Framework version is 4.3.x
- The latest version is Spring Framework 5.0

Earlier versions of Spring Framework are:



PRE-REQUISITES FOR CREATING A SPRING APPLICATION



Before developing a Spring Java application, perform following two steps:

1. Download the Spring Framework library from:

<http://repo.spring.io/release/org/springframework/spring/>

2. Download and install the latest version of Spring Source Tool Suite from:

<http://spring.io/tools/sts>

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SUMMARY



- Spring Framework, an open-source modular application development framework, is used to develop robust enterprise-level Java applications.
- Spring Framework allows developers to concentrate on core program logic, while providing infrastructural support.
- Spring Framework architecture includes four components, Core container, AoP module, Web module, and Data Access and Integration module.
- Spring Framework includes the following features:
 - Light-weight and non-intrusive
 - Support JDBC abstraction and MVC frameworks
 - Uses IoC and DI to develop loosely-coupled applications
- Commonly used Spring Framework version is 4.3.x, but the latest version is Spring Framework 5.0.