Say Hello with......

https://spring.io/

MILESTONES

What is an API? ✓

Java EE ✓

Java ✓

JAKARTA EE ✓

spring ✓

spring boot

AJAX (Asynchronous JavaScript and XML) ✓

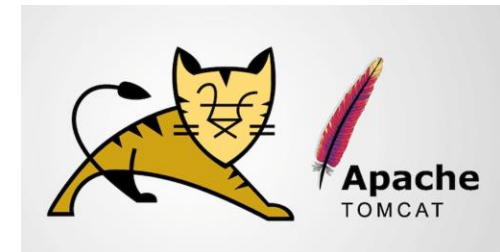Apache TOMCAT ✓

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Why Spring

Alternative for Java EE

Learning curve is short

No need some additional infra: as Servers or web containers

Both Desktop and web support

Later, inherit the Spring FW characters for Java EE

Java EE has limitations. - Should extend HttpServlet class

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Spring Framework Runtime

Data Access/Integration
- JDBC
- ORM
- OXM
- JMS
- Transactions

Web (MVC / Remoting)
- Web
- Servlet
- Portlet
- Struts

AOP | Aspects | Instrumentation

Core Container
- Beans
- Core
- Context
- Expression Language

Test

Some concepts that related to the Spring FW

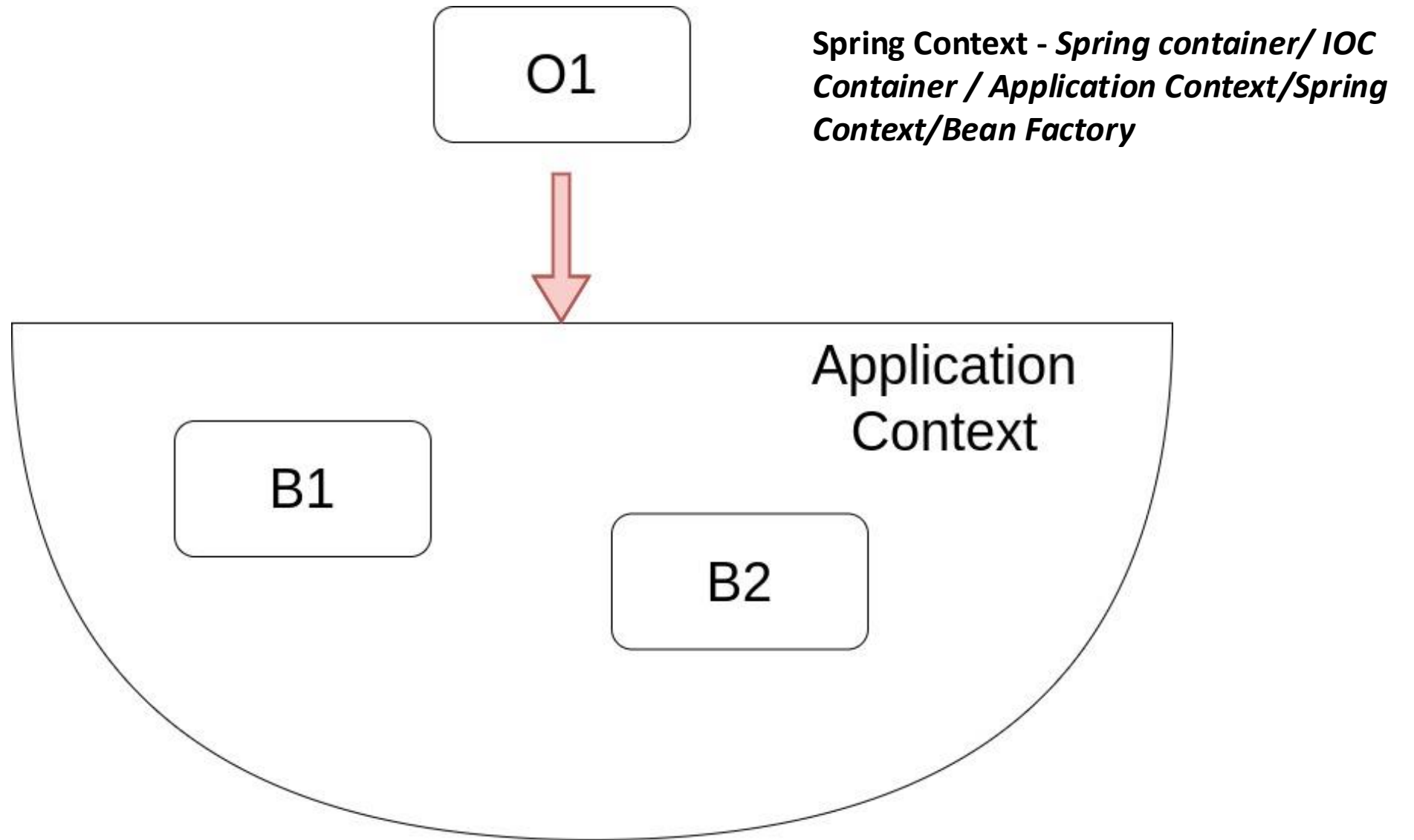**Dependency Injection**

IOC

Component

Bean

Context

Programming paradigm of Spring FW

- Inspired declarative programming paradigm

- Declarative programming is a programming paradigm that focuses on describing what a program should accomplish, rather than explicitly specifying how to achieve it

- Configs and Annotations are cater the declarative role

Spring Context - *Spring container/ IOC Container / Application Context/Spring Context/Bean Factory*

Application Context

O1

B1

B2

HOW IT IS WORKS
🤔

Spring Bean

- **Spring Beans:** Any Java object, preferably POJO (Plain Old Java Object
- **Java Beans:** An object created from a class that follows the Bean specification.
- Earlier, it was called Bean Factory, and Application Context is an extension of it.
- Bean Factory behaves as a factory for creating Spring Beans.
- Application Context provides more functionalities than Bean Factory.

Context types

- **AnnotationConfigurationApplicationContext –** Configs from annotations

- **ClassPathXMLApplicationContext** - Based on an internal source

- **FIleSystemXMLAppicationContext** - Based on an external source

- **AnnotationConfigurationWebApplicationContext** - Get configs from Annotations (Specialized to web apps)

- **XMLWebApplicationContext** - Get configs from XML

Key classes

AppInitializer – Naming convention for entry point class

Create the context and register the config class

Configuration class - A source for bean definition

What's happen with these classes and contexts?

Is that a magic??

See the white board ..
Process of Spring CORE

Annotations !!

- **@Component**

- **@ComponentScan**

- **@Bean**

Annotations !!

- **@RestController**

- **@EnableWebMvc**

- **@PostMapping | @GetMapping | @DeleteMaping…..**

- **@RequestMapping**

- **@CrosOrigin**

Ready for Coding!!