Advanced Java

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Spring Boot – Application Bootstraping

@SpringBootApplication = @ComponentScan + @Configuration + @EnableAutoConfiguration

@ComponentScan

- Auto detect spring bean classes
- Default basePackage is current

@Configuration

- @Bean methods to create beans
- Other config: property source, ...

@EnableAutoConfiguration

- Intelligent & automatic config depending on classes in classpath and beans created in application
- Locates @Configuration classes
- Auto-config beans internally use *Spring* @Conditional config
  - @ConditionalOnClass
  - @ConditionalOnMissingBean

```
@SpringBootApplication
public class MyApp {
    public static void main(String[] args) {
        SpringApplication.run(MyApp.class, args);
    }
}
```

main()

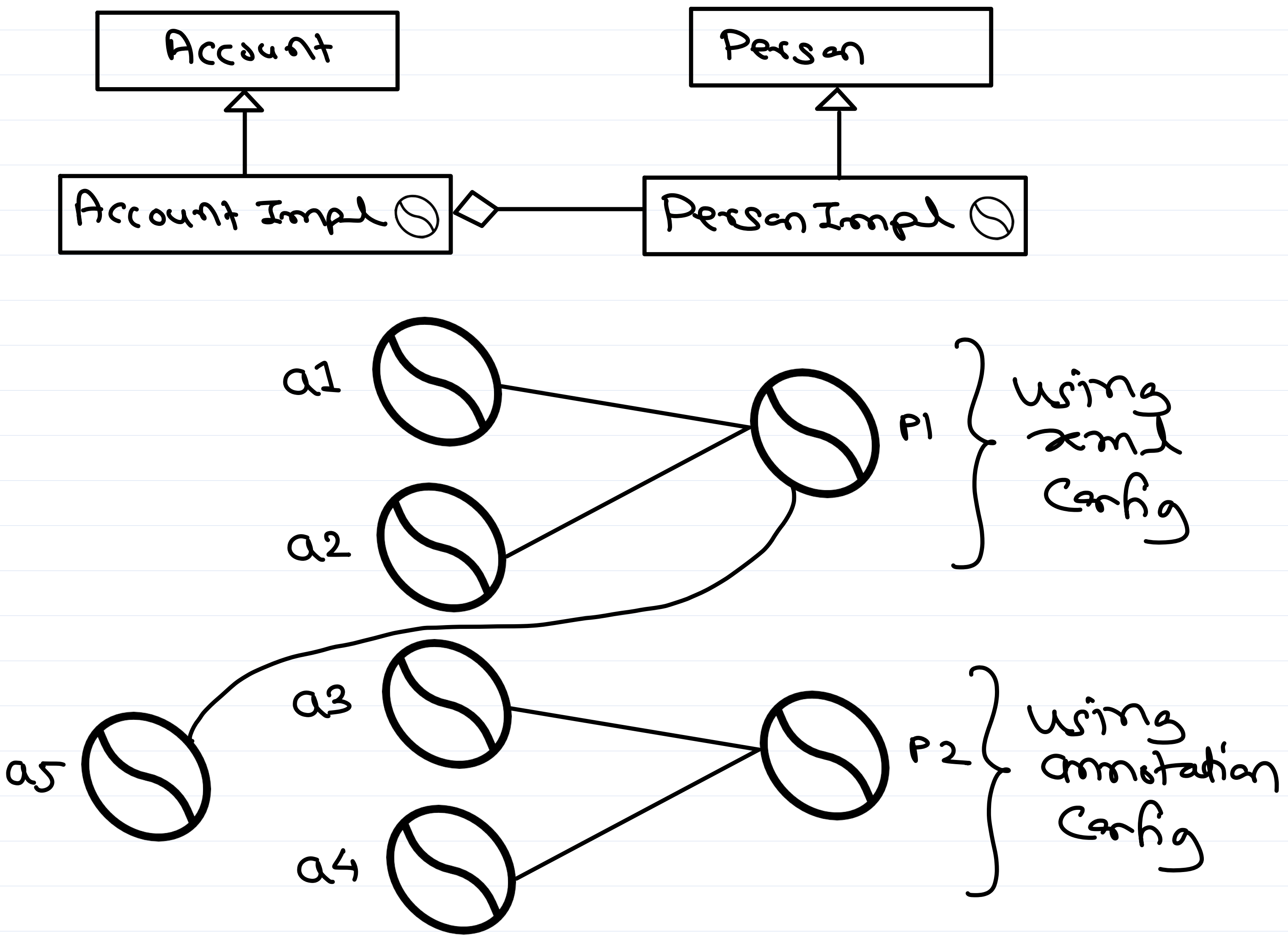
- Entry-point of Spring boot app
- Called by JVM.

SpringApplication.run()

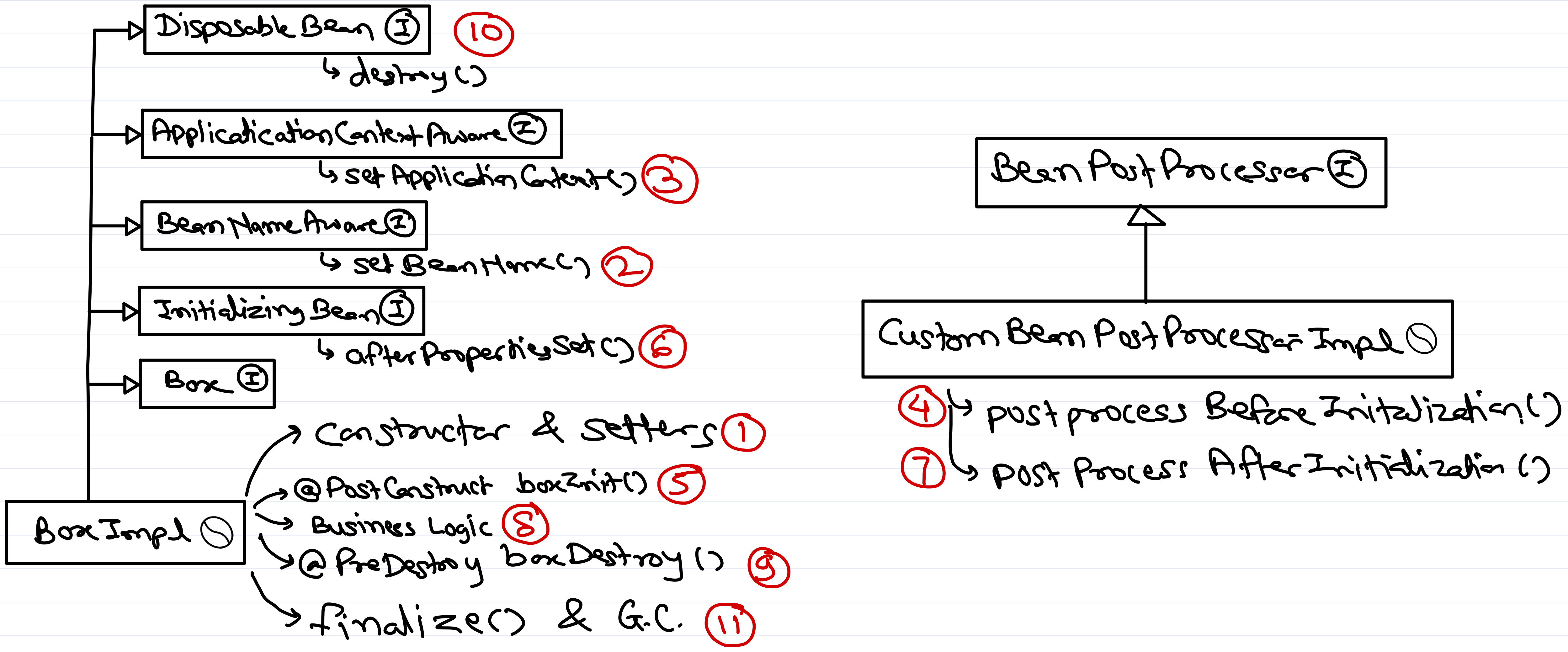
- Creates *Spring* ApplicationContext (as per auto-configuration)
- Expose command-line args as *Spring* properties
- Prepare spring container for bean life-cycle management
- Load all *Spring* singleton beans
- Runs CommandLineRunner (if any)

SpringApplication class used to bootstrap and launch Spring application from main()

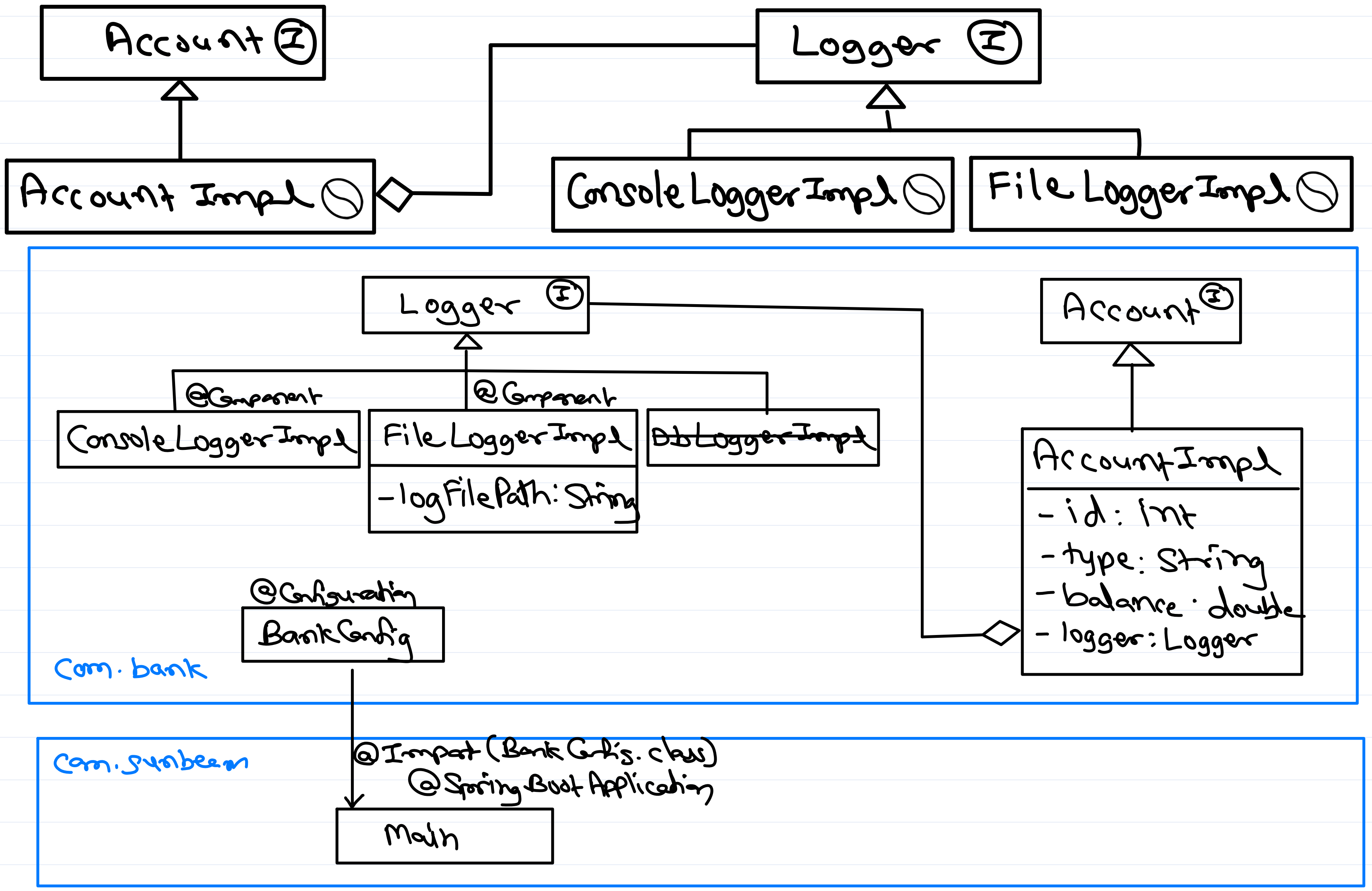
Dependency Injection- sb02 demo



Bean Life Cycle


DisposableBean (I)
10
↳ destroy()
ApplicationContextAware (I)
↳ setApplicationContext() 3
BeanNameAware (I)
↳ setBeanName() 2
InitializingBean (I)
↳ afterPropertiesSet() 6
Box (I)
BoxImpl
constructor & setters 1
@PostConstruct boxInit() 5
Business Logic 8
@PreDestroy boxDestroy() 9
finalize() & G.C. 11
BeanPostProcessor (I)
CustomBeanPostProcessorImpl
4 ↳ postProcessBeforeInitialization()
7 ↳ postProcessAfterInitialization()

Stereotype Annotations



Bean classes with stereo-type anns will be auto detected as spring beans. No need to give explicit bean defn in xml or ann config.

Stereotype annotations

1. @Component
2. @Service
3. @Repository
4. @Controller
5. @RestController
6. @Configuration

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Thank you!

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