**SPRING**

ProjectSDK : 11

Language Level : 8

**Graphical user interface, application

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**Dependency Injection**

**Dependency injection is basically providing the objects that an object needs (its dependencies) instead of having it construct them itself**

**Dependency injection is very useful because it is dealt with by springboot itself.**

**For instance, if we have a UserService and a UserController and we want to declare the service inside the controller, we only have to say**

**private final UserService userService; without also typing = new UserService(…) because we don’t need to create this dependency. The spring container is injecting it for us.**

**Spring Beans**

**A bean is like an instance of a class that is managed by the spring container.**

**The spring container decides when to create this instance and when to kill this instance, how to set the instance, how to initialize this instance. 🡺 Everything is decided by the Spring Container.**

**Spring IOC(Inversion of Control) Container**

* **Part of the core of the Spring Container**
* **Responsible for managing all the beans**
* **Performs Dependency Injection**

**You will need all Bean Components to also be initialized with Bean Components**

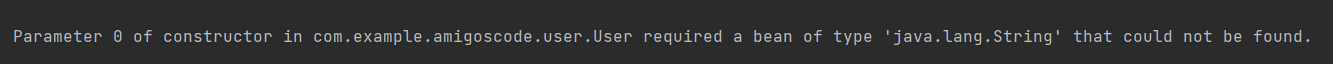
**For instance, if I were to have a class User and annotate it with @Component**

**Text

Description automatically generated with medium confidence**

**I would instantly get the errors that there are no beans found for the datatypes used in the constructor.**

**Or we would receive this error when trying to run the springboot app.**

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**REST**

**Each time we send objects to the server, or receive objects from the server, we operate with DTOs.**

**These DTOs**