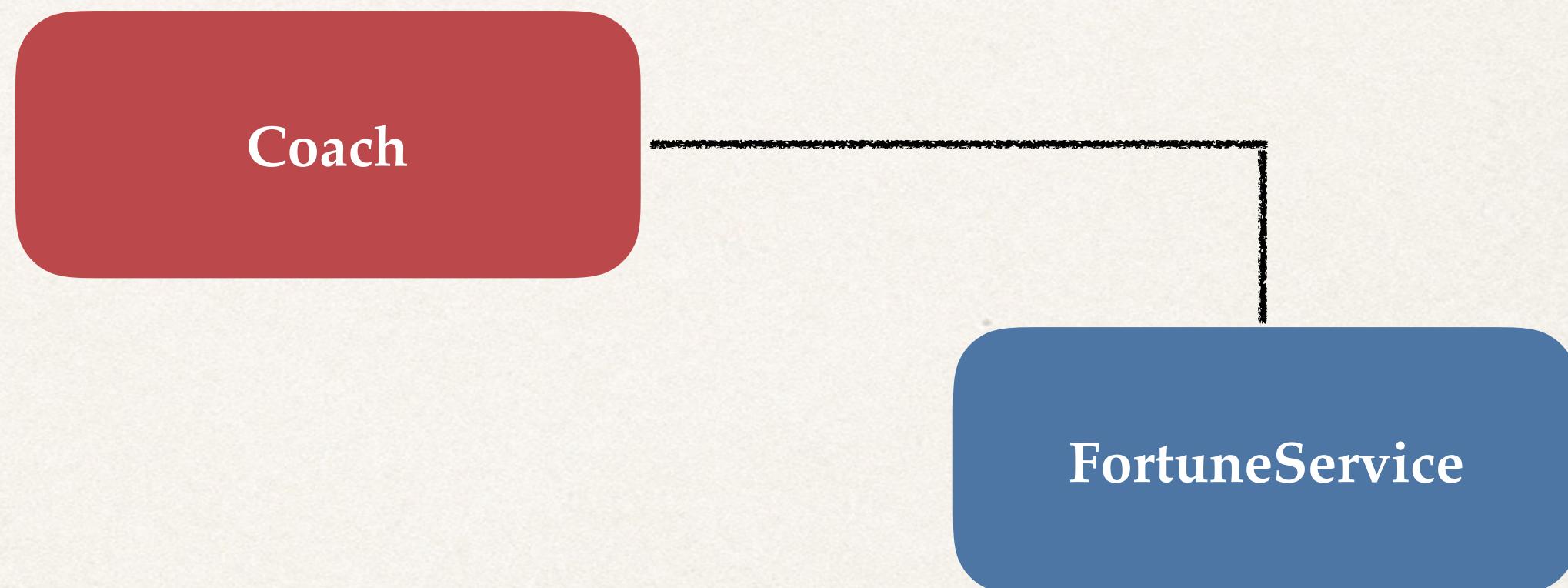


Spring Dependency Injection with Annotations and Autowiring



Demo Example

- Our **Coach** already provides daily workouts
- Now will also provide daily fortunes
 - New helper: **FortuneService**
 - This is a *dependency*



What is Spring AutoWiring?

Coach

FortuneService

- For dependency injection, Spring can use auto wiring
- Spring will look for a class that *matches* the property
 - *matches by type*: class or interface
- Spring will inject it automatically ... hence it is autowired

Autowiring Example

Coach

FortuneService

- Injecting FortuneService into a Coach implementation
- Spring will scan @Components
- Any one implements FortuneService interface???
- If so, let's inject them. For example: *HappyFortuneService*

Autowiring Injection Types

- Constructor Injection
- Setter Injection
- Field Injections

Development Process - Constructor Injection

1. Define the dependency interface and class
2. Create a constructor in your class for injections
3. Configure the dependency injection with **@Autowired Annotation**

Step-By-Step

Step 1: Define the dependency interface and class

File: FortuneService.java

```
public interface FortuneService {  
  
    public String getFortune();  
  
}
```

File: HappyFortuneService.java

```
@Component  
public class HappyFortuneService implements FortuneService {  
  
    public String getFortune() {  
        return "Today is your lucky day!";  
    }  
}
```

Step 2: Create a constructor in your class for injections

File: TennisCoach.java

```
@Component  
public class TennisCoach implements Coach {  
  
    private FortuneService fortuneService;  
  
    public TennisCoach(FortuneService theFortuneService) {  
        fortuneService = theFortuneService;  
    }  
    ...  
}
```

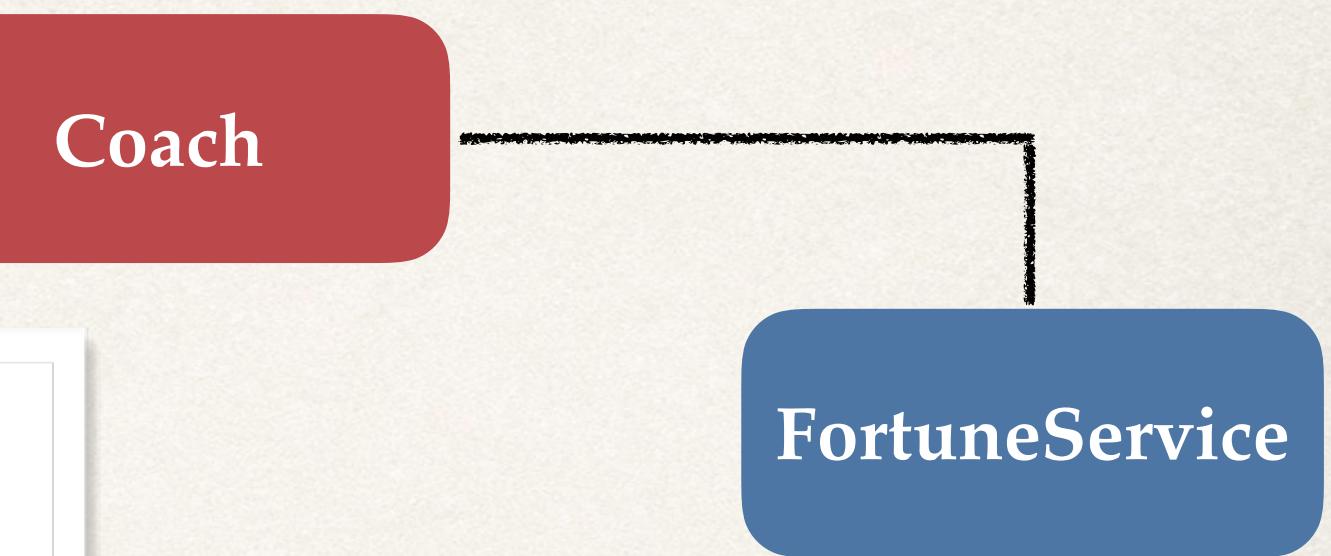
Coach

FortuneService

Step 3: Configure the dependency injection @Autowired annotation

File: TennisCoach.java

```
@Component  
public class TennisCoach implements Coach {  
  
    private FortuneService fortuneService;  
  
    @Autowired  
    public TennisCoach(FortuneService theFortuneService) {  
        fortuneService = theFortuneService;  
    }  
    ...  
}
```



Spring Container

