

Spring Professional Exam Tutorial v5.0

Question 06

Question 06 - How is @ContextConfiguration used?

@ContextConfiguration annotation is used on top of the class that represents Integration Test, and its purpose is to specify how to load and configure Application Context for Integration Test.

```
@RunWith(SpringRunner.class)
@ContextConfiguration(classes = ApplicationConfiguration.class)
public class ApplicationServiceIntegrationTest {

    ...

}
```

@ContextConfiguration annotation can be used in two basic modes:

- ▶ Annotated Classes Based Approach
- ▶ XML Based Approach

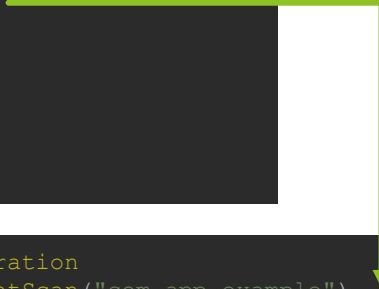
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When `@ContextConfiguration` annotation is used with Annotated Classes Approach, it is expected for `classes` field to point to class or list of classes that represents `@Configuration` classes, which will contain information about `@ComponentScan` or will provide `@Bean(s)`.

```
@RunWith(SpringRunner.class)
@ContextConfiguration(classes = ApplicationConfiguration.class)
public class ApplicationServiceIntegrationTest {

    ...

}
```



```
@Configuration
@ComponentScan("com.app.example")
public class ApplicationConfiguration {

    ...

    @Bean
    public DataSource dataSource() {
        return new EmbeddedDatabaseBuilder()
            .generateUniqueName(true)
            .build();
    }

    ...

}
```

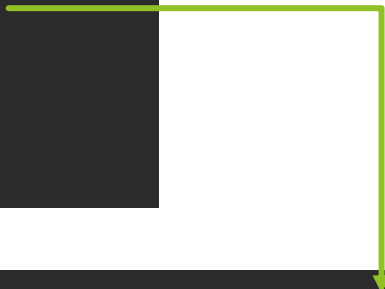
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When `@ContextConfiguration` annotation is used with XML Based Approach, it is expected for `locations` field to point to context xml definitions or list of context xml definitions.

```
@RunWith(SpringRunner.class)
@ContextConfiguration(locations = "/application-configuration.xml")
public class ApplicationServiceIntegrationTest {

    ...

}
```



```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xmlns:context="http://www.springframework.org/schema/context"
       xsi:schemaLocation="http://www.springframework.org/schema/beans
                           http://www.springframework.org/schema/beans/spring-beans.xsd
                           http://www.springframework.org/schema/context
                           http://www.springframework.org/schema/context/spring-context.xsd">

    <context:component-scan base-package="com.app.example"/>

</beans>
```

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Additionally `@ContextConfiguration` annotation also allows you to specify:

- ▶ `initializers` - list of `ApplicationContextInitializer`, used within cases that require some programmatic initialization of the application context
- ▶ `loader` - usually not used and default `DelegatingSmartContextLoader` is used, if required, this field allows you to specify custom context loader or one of the following:
 - ▶ `GenericXmlContextLoader`
 - ▶ `GenericGroovyXmlContextLoader`
 - ▶ `AnnotationConfigContextLoader`
 - ▶ `GenericXmlWebContextLoader`
 - ▶ `GenericGroovyXmlWebContextLoader`
 - ▶ `AnnotationConfigWebContextLoader`
 - ▶ ...
- ▶ `name` - name of the context hierarchy level represented by this configuration, only applicable when used within a test class hierarchy configured using `@ContextHierarchy`
- ▶ `inheritLocations` - whether or not xml locations or annotated classes from test superclasses should be inherited, default true
- ▶ `inheritInitializers` - whether or not context initializers from test superclasses should be inherited, default true

