2025년 상반기 K-디지털 트레이닝

AOP

[KB] IT's Your Life

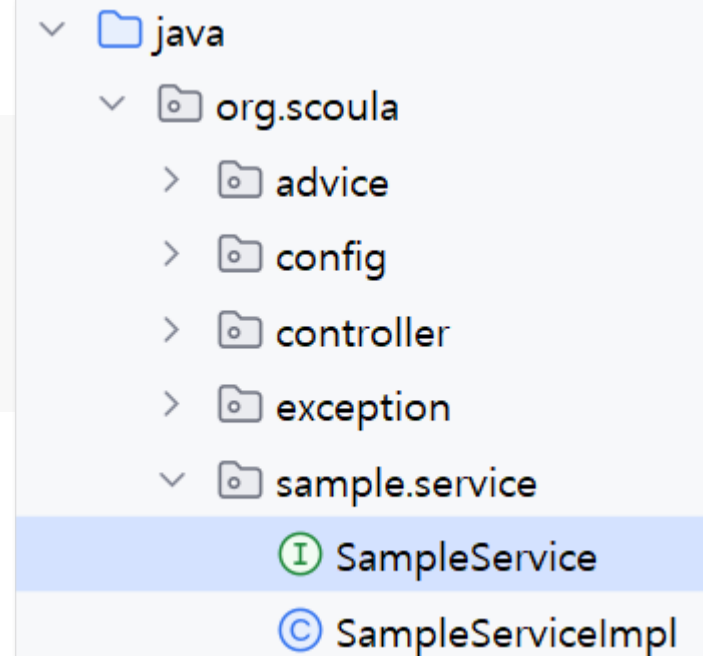# AOP

☑ **다음 프로젝트를 생성하세요.**

- 템플릿: SpringLegacy
- name: aopex

✍ 다음과 같이 SampleService를 추가하세요.

```
package org.scoula.sample.service;

public interface SampleService {
    public Integer doAdd(String str1, String str2) throws Exception;
}
```
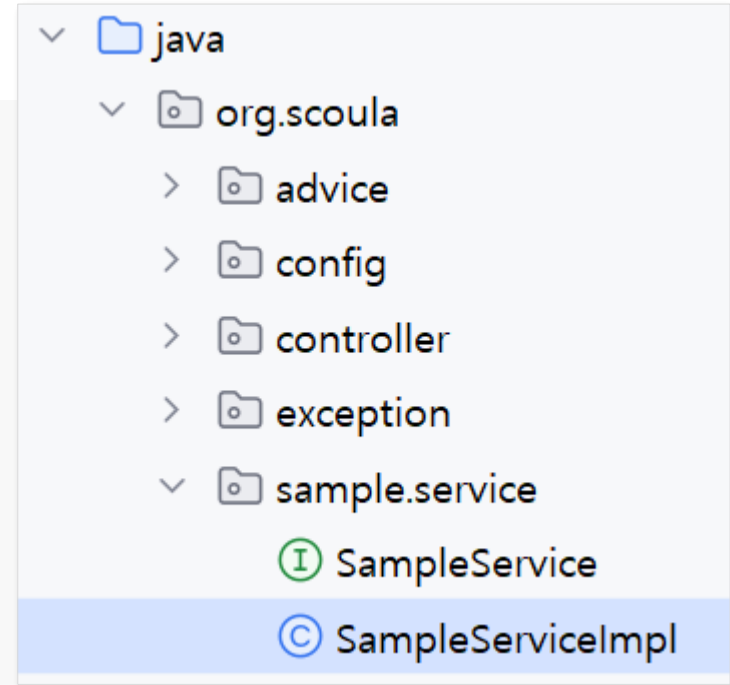
✏️ 다음과 같이 SampleServiceImpl.java를 추가하세요.

```java
package org.scoula.sample.service;

import org.springframework.stereotype.Service;

@Service
public class SampleServiceImpl implements SampleService {

    @Override
    public Integer doAdd(String str1, String str2) throws Exception {
        return Integer.parseInt(str1) + Integer.parseInt(str2);
    }
}
```

java
- org.scoula
  - advice
  - config
  - controller
  - exception
  - sample.service
    - Ⓘ SampleService
    - Ⓒ SampleServiceImpl

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☑ **RootConfig 설정을 다음과 같이 수정하세요.**

- AOP 기능 활성화
- 컴포넌트 스캔
  - org.scoula.advice
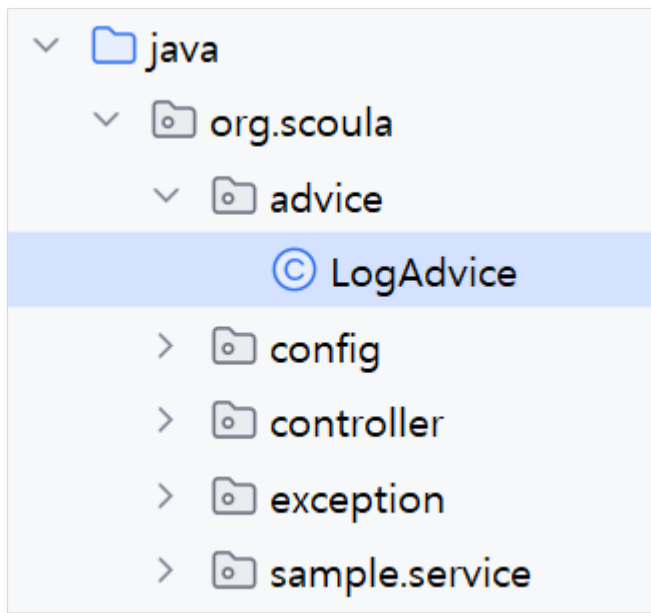 - org.scoula.sample.service

✍ Rootconfig

```
@Configuration
@ComponentScan(basePackages = {
        "org.scoula.advice",
        "org.scoula.sample.service"
})
@EnableAspectJAutoProxy
public class RootConfig {


}
```

☑ **LogAdvice를 추가하고, SampleService의 모든 메서드에 대해 Before Advice 설정하고, 해당 메서드가 호출됐을 때, 로그를 출력하세요.**

  ○ **로그 내용: "==================================="**

✏️ LogAdvice

```java
package org.scoula.advice;

import lombok.extern.log4j.Log4j2;
import org.aspectj.lang.annotation.Aspect;
import org.aspectj.lang.annotation.Before;
import org.springframework.stereotype.Component;

@Aspect
@Log4j2
@Component
public class LogAdvice {

    @Before("execution(* org.scoula.sample.service.SampleService*.*(..))")
    public void logBefore() {
        log.info("================================");
    }

}
```
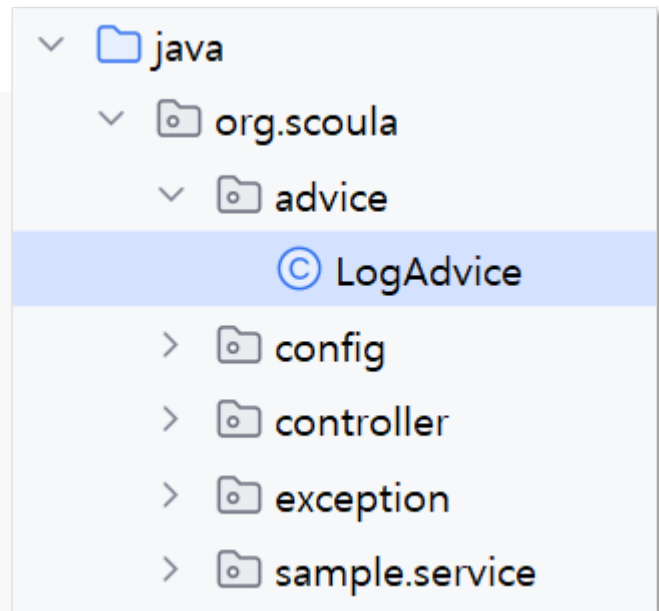
java
  org.scoula
    advice
      © LogAdvice
    config
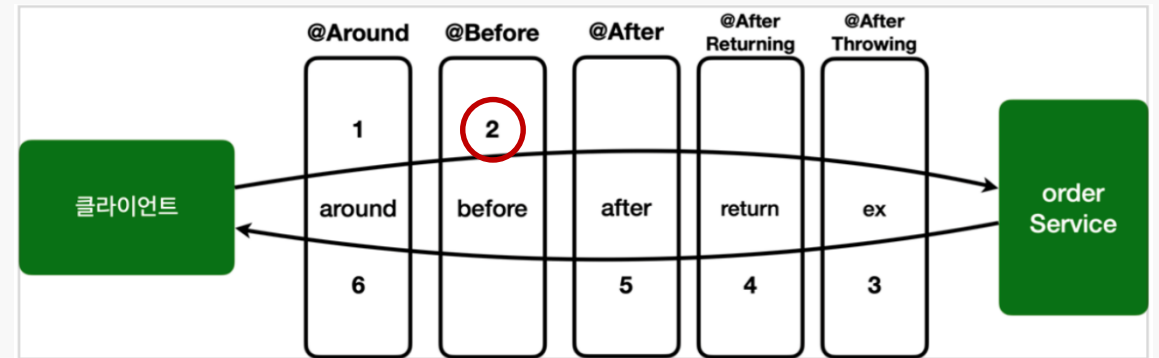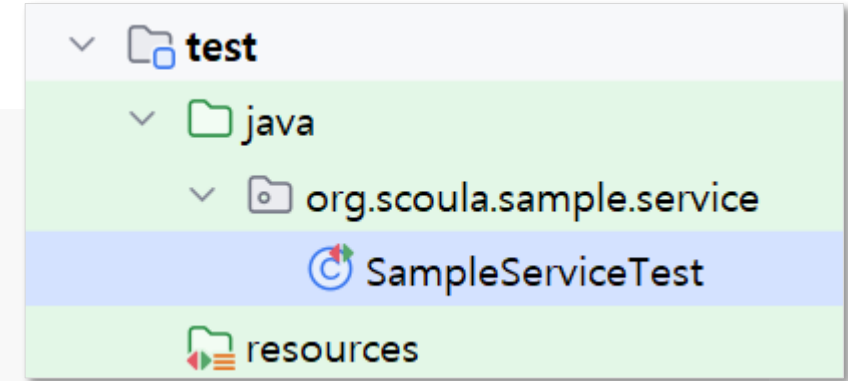   controller
    exception
    sample.service

AOP

☑ **테스트 클래스 SampleServiceTest를 추가하고, Before Advice 동작을 확인하세요.**

✏️ test::SampleServiceTest.java

```
package org.scoula.sample.service;
...
@ExtendWith(SpringExtension.class)
@ContextConfiguration(classes = { RootConfig.class })
@Log4j2
class SampleServiceTest {
    @Autowired
    private SampleService service;

    @Test
    public void doAdd() throws Exception {
        log.info(service.doAdd("123", "456"));
    }
}
```

```
test
  java
    org.scoula.sample.service
      SampleServiceTest
    resources
```


INFO : org.scoula.advice.LogAdvice - ======================================
INFO : org.scoula.sample.service.SampleServiceTest - 579
> Task :test

☑ **SampleService의 doAdd 메서드에 대해 매개변수를 체크하는 Before Advice 추가하고, 단위 테스트로 확인하세요.**

○ 로그 내용:

  ▪ 매개변수명: 실제값

```
...

public class LogAdvice {

  @Before("execution(* org.scoula.sample.service.SampleService*.doAdd(String, String)) && args(str1, str2)")
  public void logBeforeWithParam(String str1, String str2) {
    log.info("str1:" + str1);
    log.info("str2:" + str2);
  }

}
```

INFO : org.scoula.advice.LogAdvice - ============================
INFO : org.scoula.advice.LogAdvice - str1:123
INFO : org.scoula.advice.LogAdvice - str2:456
INFO : org.scoula.sample.service.SampleServiceTest - 579