



CS544 EA  
Spring

AOP: All XML

# All XML

- It is possible to do AOP without annotations

```
<?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:aop="http://www.springframework.org/schema/aop"
xsi:schemaLocation="
    http://www.springframework.org/schema/beans
    http://www.springframework.org/schema/beans/spring-beans.xsd
    http://www.springframework.org/schema/aop
    http://www.springframework.org/schema/aop/spring-aop.xsd">

    <bean id="accountService" class="cs544.spring44.aop.xml.AccountService"/>
    <bean id="traceAspect" class="cs544.spring44.aop.xml.TraceAspect"/>

    <aop:config>
        <aop:aspect id="tracebeforeAspect" ref="traceAspect">
            <aop:before method="tracebeforemethod"
                pointcut="execution(* cs544.spring44.aop.xml.AccountService.addAccount(..))" />
        </aop:aspect>

        <aop:aspect id="traceafterAspect" ref="traceAspect">
            <aop:after method="traceaftermethod"
                pointcut="execution(* cs544.spring44.aop.xml.AccountService.addAccount(..))" />
        </aop:aspect>
    </aop:config>
</beans>
```

```
package cs544.spring44.aop.xml;

import java.util.ArrayList;
import java.util.Collection;

public class AccountService implements IAccountService {
    private Collection<Account> accountList = new ArrayList<>();

    @Override
    public void addAccount(int accountNumber, Customer customer) {
        Account account = new Account(accountNumber, customer);
        accountList.add(account);
        System.out.println("in execution of method addAccount");
    }
}
```

```
package cs544.spring44.aop.xml;

import org.aspectj.lang.JoinPoint;

public class TraceAspect {

    public void tracebeforemethod(JoinPoint joinpoint) {
        System.out.println("before execution of method " + joinpoint.getSignature().getName());
    }

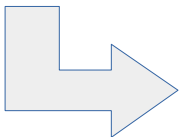
    public void traceaftermethod(JoinPoint joinpoint) {
        System.out.println("after execution of method " + joinpoint.getSignature().getName());
    }
}
```

# In Action

```
package cs544.spring44.aop.xml;

import org.springframework.context.ConfigurableApplicationContext;
import org.springframework.context.support.ClassPathXmlApplicationContext;

public class App {
    public static void main(String[] args) {
        ConfigurableApplicationContext context;
        context = new ClassPathXmlApplicationContext("cs544/spring44/aop/xml/springconfig.xml");
        IAccountService as = context.getBean(IAccountService.class);
        as.addAccount(12345, new Customer());
        context.close();
    }
}
```



before execution of method addAccount  
in execution of method addAccount  
after execution of method addAccount