

# Aspect-Oriented Programming (AOP)

## Pointcut Declarations



# Problem

- How can we reuse a pointcut expression?
  - Want to apply to multiple advices

```
@Before("execution(* com.luv2code.aopdemo.dao.*.*(..))")
public void beforeAddAccountAdvice() {
    ...
}
```

# Possible Solution

- Could just do the old copy/paste method ... yuk!

```
@Before("execution(* com.luv2code.aopdemo.dao.*.*(..))")  
public void beforeAddAccountAdvice() {  
    ...  
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```

# Possible Solution

- Could just do the old copy/paste method ... yuk!

```
@Before("execution(* com.luv2code.aopdemo.dao.*.*(..))")  
public void beforeAddAccountAdvice() {  
    ...  
}  
  
@Before("execution(* com.luv2code.aopdemo.dao.*.*(..))")  
public void performApiAnalytics() {  
    ...  
}
```

# Ideal Solution

- Create a pointcut declaration once
- Apply it to multiple advices

# Development Process

*Step-By-Step*

- 1. Create a pointcut declaration**
- 2. Apply pointcut declaration to advice(s)**

# Step 1- Create Pointcut Declaration

- Create a pointcut declaration once

```
@Pointcut("execution(* com.luv2code.aopdemo.dao.*.*(..))")  
private void forDaoPackage() {}
```

# Step 1- Create Pointcut Declaration

```
@Aspect  
@Component  
public class MyDemoLoggingAspect {  
  
}
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@Aspect  
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public class MyDemoLoggingAspect {  
  
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    private void forDaoPackage() {}  
  
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# Step 2 - Apply to Multiple Advices

```
@Aspect  
@Component  
public class MyDemoLoggingAspect {  
  
    @Pointcut("execution(* com.luv2code.aopdemo.dao.*.*(..))")  
    private void forDaoPackage() {}  
  
    @Before("forDaoPackage()")  
    public void beforeAddAccountAdvice() {  
        ...  
    }  
  
}
```

# Step 2 - Apply to Multiple Advices

```
@Aspect  
@Component  
public class MyDemoLoggingAspect {  
  
    @Pointcut("execution(* com.luv2code.aopdemo.dao.*.*(..))")  
    private void forDaoPackage() {}  
  
    @Before("forDaoPackage()")  
    public void beforeAddAccountAdvice() {  
        ...  
    }  
  
    @Before("forDaoPackage()")  
    public void performApiAnalytics() {  
        ...  
    }  
}
```

# Benefits of Pointcut Declarations

- Easily reuse pointcut expressions
- Update pointcut in one location
- Can also share and combine pointcut expressions (coming up later)