

# Aspect-Oriented Programming (AOP)

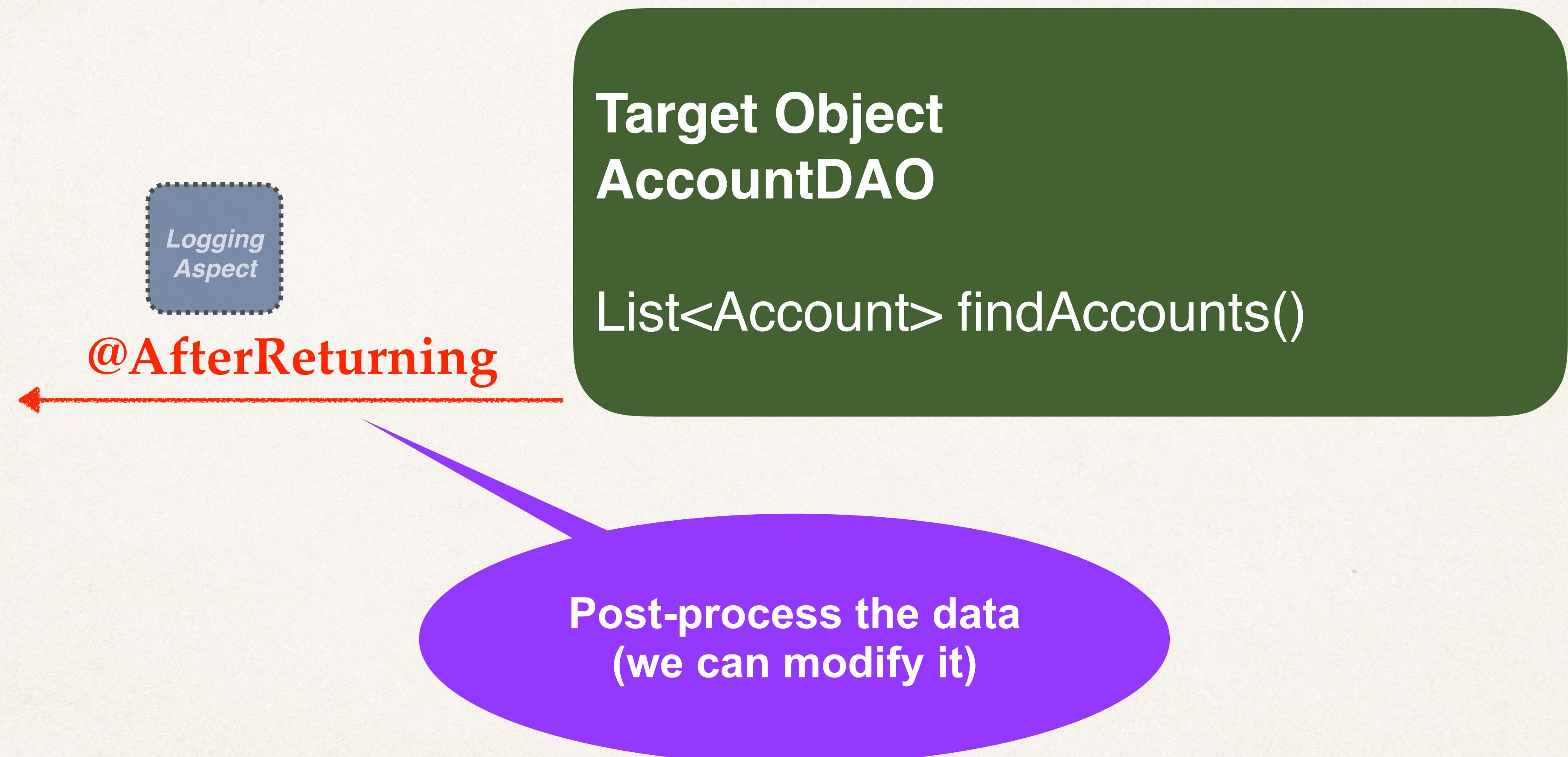
## @AfterReturning Advice - Modify Return Value



# @AfterReturning Advice - Use Cases

- **Most common**
  - logging, security, transactions
- **Audit logging**
  - who, what, when, where
- **Post-processing Data**
  - Post process the data before returning to caller
  - Format the data or enrich the data (really cool but be careful)

# Post-Process / Modify Data



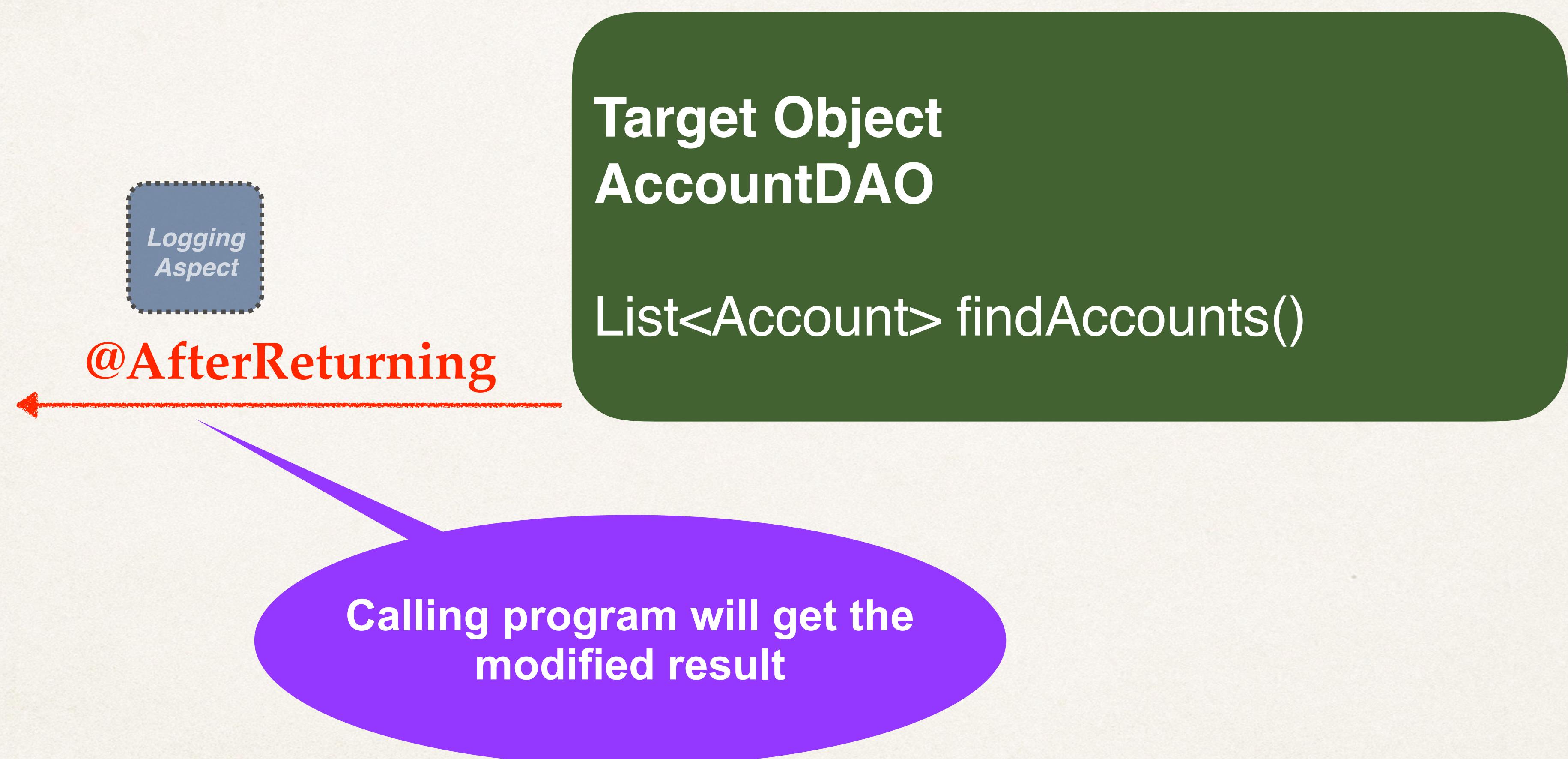
# Modify the Return Value

```
@AfterReturning(  
    pointcut="execution(* com.luv2code.aopdemo.dao.AccountDAO.findAccounts(..))",  
    returning="result")  
public void afterReturningFindAccountsAdvice(  
    JoinPoint theJoinPoint, List<Account> result) {  
  
    // modify "result" list: add, remove, update, etc ...  
  
}
```

# Modify the Return Value

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@AfterReturning(  
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    returning="result")  
public void afterReturningFindAccountsAdvice(  
    JoinPoint theJoinPoint, List<Account> result) {  
  
    // modify "result" list: add, remove, update, etc ...  
    if (!result.isEmpty()) {  
  
        Account tempAccount = result.get(0);  
  
        tempAccount.setName("Daffy Duck");  
    }  
}
```

# Post-Process / Modify Data



# Calling program

```
// call method to find the accounts  
List<Account> theAccounts = theAccountDAO.findAccounts();
```



@AfterReturning

Calling program will get the modified result