

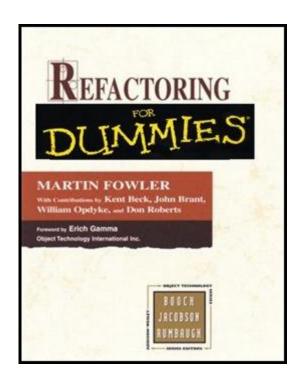
### Refactoring

**Dung Le Hoang** 

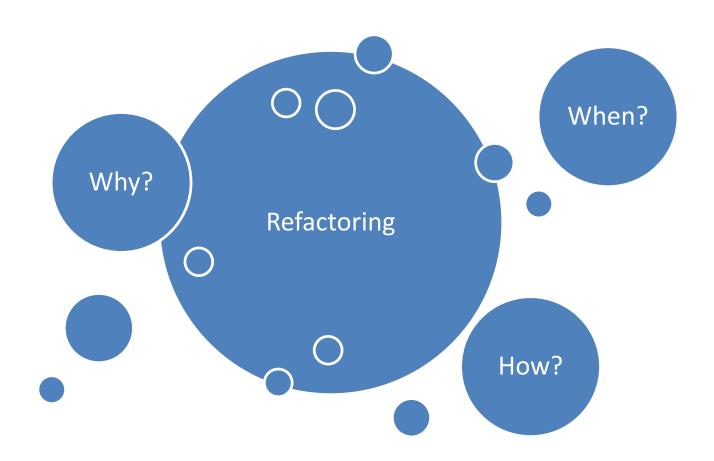


### Refactoring software

Changing the internal implementation without changing the external functionality

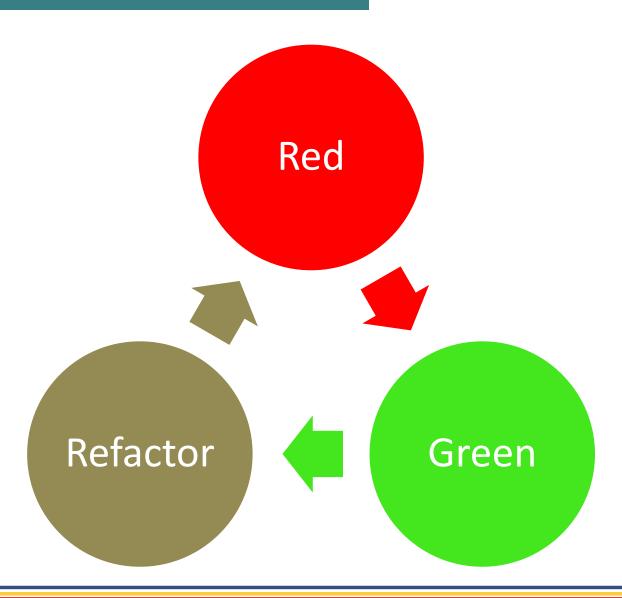


# Topics





### The cycle





## When refactoring done?





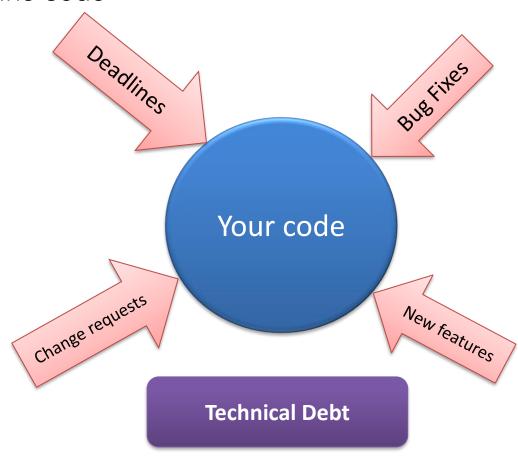
### Why refactor?

To improve the quality of the code

Readability

Maintainability

- Scalability
- Extensibility



#### When to refactor?

- After fixing a failing test
- Before adding a new feature

• After identifying a quality problem

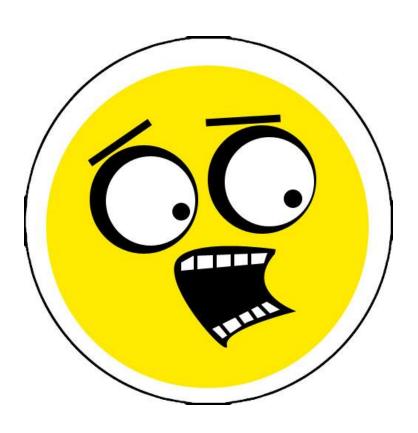
Comment

Complex if else

Complex if else

#### When not to refactor?

You have a fear of breaking the software



There are no unit test for this code

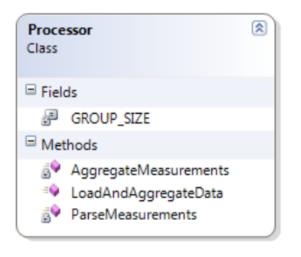
### Simple Refactoring

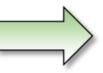
- Rename
- Introduce Parameter
- Extract method

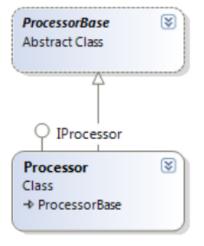


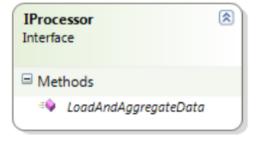
### Refactoring to abstraction

- Extract interface
- Extract superclass



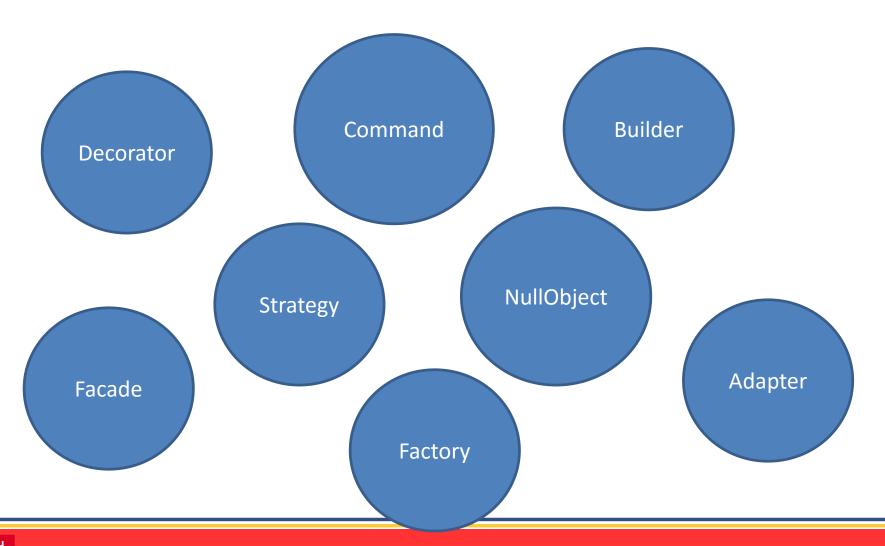








### Refactoring to Design Pattern





#### Code Smells Long Long Method Duplicated Parameter Code List Conditional Large **Bad Name** Complexity Class Long Method Dead Comments Code Switch Statement



## Summary

