

| Code Smell                          | Refactorings  |
|-------------------------------------|---|
| <a href="#">Mysterious Name</a>     | <a href="#">Change Function Declaration</a> , <a href="#">Rename Variable</a> , <a href="#">Rename Field</a>  |
| <a href="#">Duplicated Code</a>     | <a href="#">Extract Function</a> (sometimes with the help of <a href="#">Slide Statements</a> first), <a href="#">Pull Up Method</a>  |
| <a href="#">Long Function</a>       | <a href="#">Extract Function</a> (sometimes with the help of <a href="#">Replace Temp with Query</a> first), <a href="#">Replace Function with Command</a> , <a href="#">Decompose Conditional</a> , <a href="#">Replace Conditional with Polymorphism</a> , <a href="#">Split Loop</a>   |
| <a href="#">Long Parameter List</a> | <a href="#">Replace Parameter with Query</a> , <a href="#">Preserve Whole Object</a> , <a href="#">Introduce Parameter Object</a> , <a href="#">Remove Flag Argument</a> , <a href="#">Combine Functions into Class</a>   |
| <a href="#">Global Data</a>         | <a href="#">Encapsulate Variable</a>  |
| <a href="#">Mutable Data</a>        | <a href="#">Encapsulate Variable</a> , <a href="#">Split Variable</a> , <a href="#">Slide Statements</a> , <a href="#">Extract Function</a> , <a href="#">Separate Query from Modifiers</a> , <a href="#">Remove Setting Method</a> , <a href="#">Replace Derived Variable with Query</a> , <a href="#">Combine Functions into Class</a> , <a href="#">Combine Functions into Transform</a> , <a href="#">Change Reference to Value</a> |
| <a href="#">Divergent Change</a>    | <a href="#">Split Phase</a> , <a href="#">Move Function</a> , <a href="#">Extract Function</a> , <a href="#">Extract Class</a>  |
| <a href="#">Shotgun Surgery</a>     | <a href="#">Move Function</a> , <a href="#">Move Field</a> , <a href="#">Combine Functions into Class</a> , <a href="#">Combine Functions into Transform</a> , <a href="#">Split Phase</a> , <a href="#">Inline Function</a> , <a href="#">Inline Class</a>   |
| <a href="#">Feature Envy</a>        | <a href="#">Move Function</a> , <a href="#">Extract Function</a>  |
| <a href="#">Data Clumps</a>         | <a href="#">Extract Class</a> , <a href="#">Introduce Parameter Object</a> , <a href="#">Preserve Whole Object</a>  |
| <a href="#">Primitive Obsession</a> | <a href="#">Replace Primitive with Object</a> , <a href="#">Replace Type Code with Subclasses</a> , <a href="#">Replace Conditional with Polymorphism</a> , <a href="#">Extract Class</a> , <a href="#">Introduce Parameter Object</a>  |
| <a href="#">Repeated Switches</a>   | <a href="#">Replace Conditional with Polymorphism</a>   |
| <a href="#">Loops</a>               | <a href="#">Replace Loop with Pipeline</a>  |
| <a href="#">Lazy Element</a>        | <a href="#">Inline Function</a> , <a href="#">Inline Class</a> , <a href="#">Collapse Hierarchy</a>   |

|  |  |
|--|--|
| <a href="#"><u>Speculative Generality</u></a>                        | <a href="#"><u><i>Collapse Hierarchy, Inline Function, Inline Class, Change Function Declaration, Remove Dead Code</i></u></a>           |
| <a href="#"><u>Temporary Field</u></a>                               | <a href="#"><u><i>Extract Class, Move Function, Introduce Special Case</i></u></a>   |
| <a href="#"><u>Message Chains</u></a>                                | <a href="#"><u><i>Hide Delegate, Extract Function, Move Function</i></u></a>   |
| <a href="#"><u>Middle Man</u></a>                                    | <a href="#"><u><i>Remove Middle Man, Replace Superclass with Delegate, Replace Subclass with Delegate</i></u></a>                        |
| <a href="#"><u>Insider Trading</u></a>                               | <a href="#"><u><i>Move Function, Move Field, Hide Delegate, Replace Subclass with Delegate, Replace Superclass with Delegate</i></u></a> |
| <a href="#"><u>Large Class</u></a>                                   | <a href="#"><u><i>Extract Class, Extract Superclass, Replace Type Code with Subclasses</i></u></a>                                       |
| <a href="#"><u>Alternative Classes with Different Interfaces</u></a> | <a href="#"><u><i>Change Function Declaration, Move Function, Extract Superclass</i></u></a>   |
| <a href="#"><u>Data Class</u></a>                                    | <a href="#"><u><i>Encapsulate Record, Remove Setting Method, Move Function, Extract Function</i></u></a>                                 |
| <a href="#"><u>Refused Bequest</u></a>                               | <a href="#"><u><i>Push Down Method, Push Down Field, Replace Subclass with Delegate, Replace Superclass with Delegate</i></u></a>        |
| <a href="#"><u>Comments</u></a>                                      | <a href="#"><u><i>Extract Function, Change Function Declaration, Introduce Assertion</i></u></a>   |