# Poor Style Confusing Naming Defect SOP

It is confusing to have a member field and a method with the same name. It makes it easy for a programmer to accidentally call the method when attempting to access the field or vice versa. It can also be confusing to use common or reserved words in variable names.

# Poor Style Confusing Naming Prevention

Rename either the method or the field. If the method returns the field, consider following the standard getter/setter naming convention.

# Example

public class Totaller {

private int total;

public int total() {

...

}

}

This could be rewritten as

public class Totaller {

private int total;

public int getTotal() {

...

}

}

# SonarSource Alternate Explanation

Looking at the set of methods in a class, including superclass methods, and finding two methods or fields that differ only by capitalization is confusing to users of the class. It is similarly confusing to have a method and a field which differ only in capitalization or a method and a field with exactly the same name and visibility.

In the case of methods, it may have been a mistake on the part of the original developer, who intended to override a superclass method, but instead added a new method with nearly the same name.

Otherwise, this situation simply indicates poor naming. Method names should be action-oriented, and thus contain a verb, which is unlikely in the case where both a method and a member have the same name (with or without capitalization differences). However, renaming a public method could be disruptive to callers. Therefore renaming the member is the recommended action.

# References

1. <http://www.hpenterprisesecurity.com/vulncat/en/vulncat/java/poor_style_confusing_naming_class_and_member.html>
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3. <https://vulncat.fortify.com/en/detail?id=desc.structural.java.poor_style_confusing_naming.member_and_method>
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