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**Engenharia de Software**

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**Code Smells**

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1. Long Method

(src/net/sf/freecol/server/ai/ColonyPlan.java)

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Figure 1. ColonyPlan’s if statements.

* This method has various substeps with multiple *if* statements and *for* cycles making the method extremely long and hard to comprehend. A possible solution could be to turn some of it’s *if* statements into other methods to enhance the method’s readability and lower it’s complexity.

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1. Data Class

(src/net/sf/freecol/server/control/FreeColServerHolder.java)

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Figure 2. FreeColServerHolder class’ methods.

* This class only has getter methods. It serves no other purpose other than holding the server object. A solution would be to give it more meaning, for example by adding more complex methods apart from the simple getters.

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1. Large Class (src/net/sf/freecol/client/control/InGameController.java)

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Figure 3. InGameController class’s first and last lines of code

* This class has over five thousand lines of code. It is very hard to read it thoroughly. A solution would be to split it into multiple classes to better enhance it’s readability and lower it’s complexity.