Luís Abreu – nº 60157

**Code Smell 1: Data Class**

Uma imagem com texto

Descrição gerada automaticamente

Location:



Lines: whole class, but more important methods in betwenn 26-39

Rationale: Inside these class there is only data, no real functionality, only getter and setters methods.

Refactor: I would create a better abstraction: see if i could put something else in this class (other methods), see what classes are manipulating this data. If I failed to solve the problem, I would delete this class and try to figure out if this data would be better store in other class.

**Code Smell 2: Long Method**

Uma imagem com texto

Descrição gerada automaticamente

Location:



Lines: 40-72

Rationale: This method is way too big, which can lead to bad understanding of the code and can be a sign of being more complex than it needs to be.

Refactor: I would create smaller private methods that would be called inside the method *public JComponent getComponent()*.

This method will be better documentated and will provide better understanding of the code, for example one of this smaller privade methods could be named *putConstraint()* and would be responsible for the lines 51-56.

**Code Smell 3: Duplicated Code**

Uma imagem com texto

Descrição gerada automaticamente

Location: 

Lines: 189-194 and 201-206

Rationale: Inside these two red boxes there is duplicated code so if we needed to alter something in the way the code deals with the fact that there is or is not a previous/next sibling we would need to do it in two different places.

Refactor: I would create a new method that has this code and call inside both methods *moveUp()* and *moveDown().* By doing this the program would perform the same tasks but with less code.