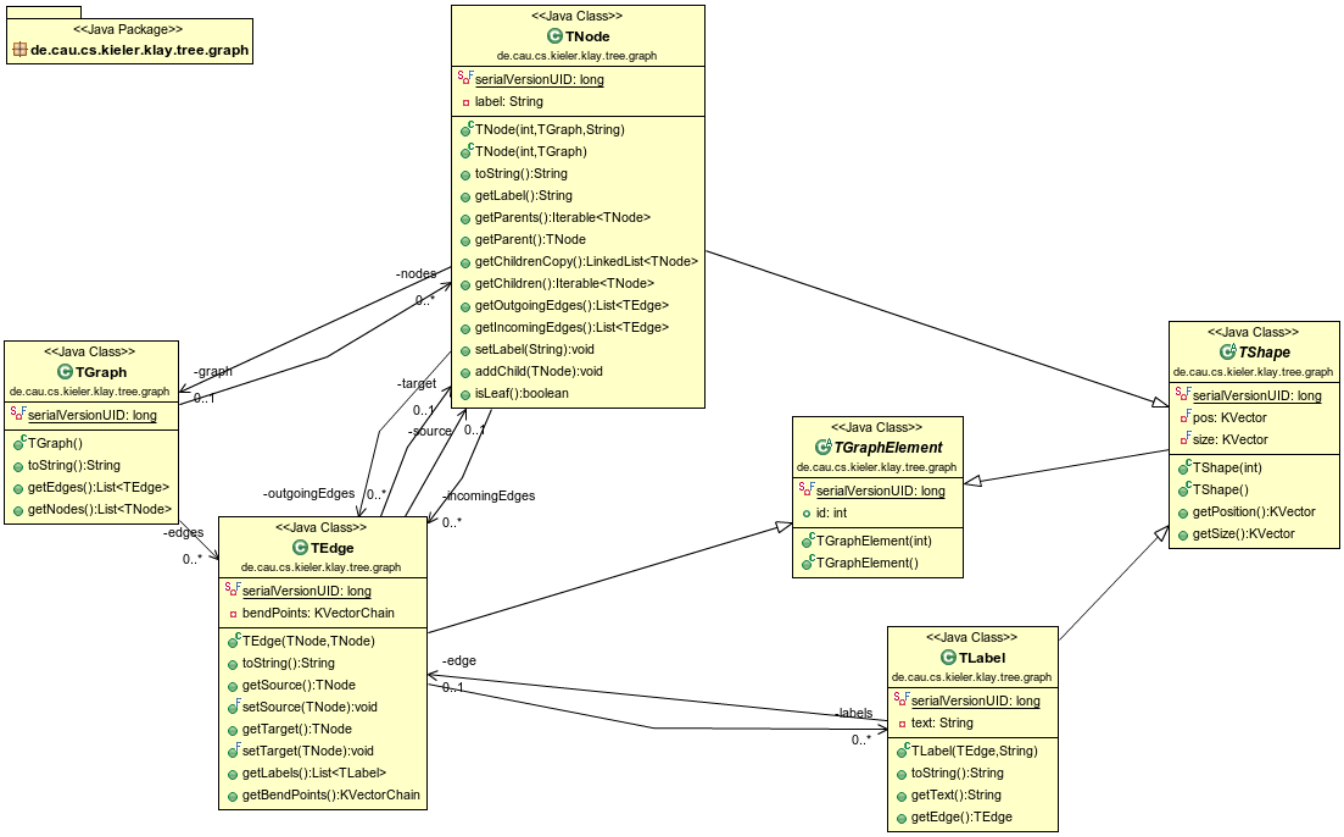
Data Structure

MrTGraph Data Structure

The MrTGraph data structure is best explained by looking at the following diagram:



The basic data structure constis of the three classes TNode, TGraph and TEdge, which contain all the necessary properties to model a tree data structure. Therefore a TGraph consits of sets of TEdges and TNodes.

The TNodes are objects of the type TShape. That means that a nodes' size and position is defined by the attributes defined in the class TShape. The class TShape is an abstract superclass for the class TGraphElement. So the class TGrahpElement provides the utilites to declare any generic graph element of which a TGraph consits of.

Since an input KGraph is transformed into a TGraph, so that our algorithms can work on that TGraph, we do want to have the opportunity to set specific properties on graph elements. That is what the class TGraphElement is for. This specific way of implementation allows us not to model every property itself, but to model a class which can set an abritrary amount of properties on the graphs' elements. This data structure provides all the needs to perform a transformation from a KGraph to a TGraph that is as easy and therefore as evident as possible.