

# KLay Force

## Project Overview

Responsible:

- Christoph Daniel Schulze

KLay Force is an implementation of the force-based layout approach where edges are regarded as springs pulling together the nodes they connect, while unconnected nodes are pushed apart from one another. The objective is to compute a state where this physical system reaches an equilibrium.

This page describes the available layout options as well as the general architecture of the algorithm.

## Contents

- [Layout Options](#)
- [Architecture](#)
  - [Graph Model](#)
  - [Algorithm](#)

**Error rendering macro 'excerpt-include'**

No link could be created for 'Downloads - KIELER Layout Algorithms'.

## Layout Options



**ToDo**

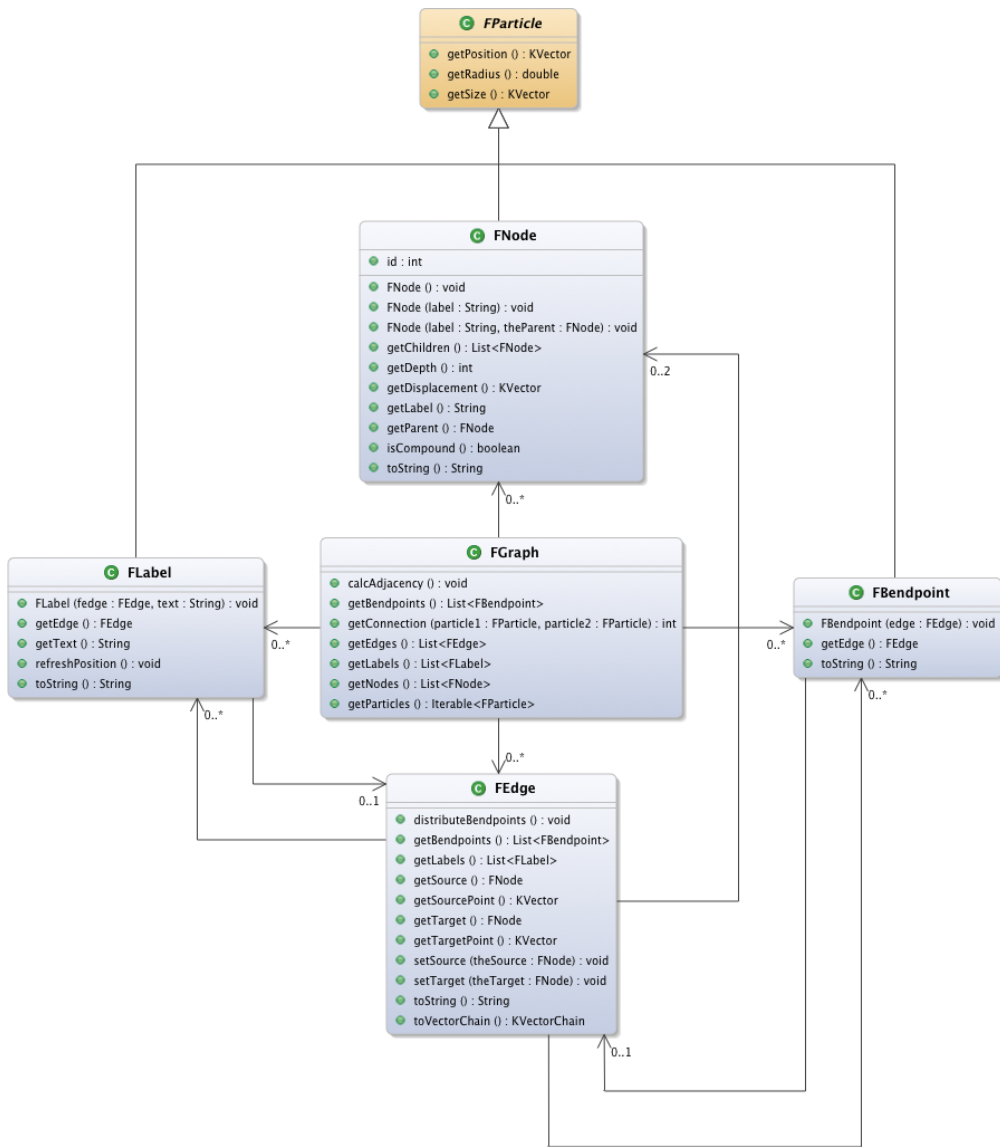
List available layout options.

## Architecture

The architecture basically consists of two chunks: the graph model and the actual implementation of the algorithm.

### Graph Model

KLay Force uses a custom, lightweight graph model whose root is the `FGraph` class. `FNode` instances are connected through `FEdge` instances that, to be routed properly, can have `FBendpoint` instances. Edges and nodes can have a number of `FLabel` instances. Nodes, labels, and bend points are considered `FParticles` since they exert forces on each other. The following is a class diagram of the basic graph model:



## Algorithm



### ToDo

Describe architecture.