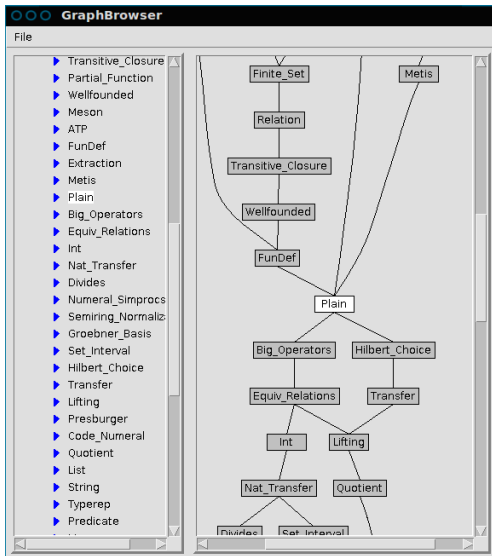# Graphview

Graph visualization tool for Isabelle

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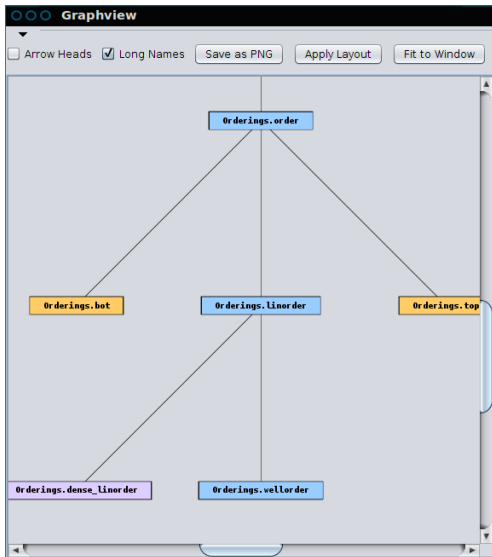
- Bachelor student at TUM
- Computer Science
- Started in 2010

- Hiwi since Dec. 2010
- No prior FP experience

Graphbrowser

- By Stefan Berghofer

- Written in Java
- Shows theory dependencies
- Can filter subtrees
- Static layout

- Rewrite in Scala
- Integration into Isabelle/jEdit
- Universal graph tool
- Extension to locale dependencies
- Handling of larger graphs
- Better filtering
- Interactive interface

Graphview

- jEdit dockable or stand-alone
- Displays DAGs
- Flexible tooltips

- Filters
- Colorations

Demo

- Scala, FP concepts
- Isabelle

- JUNG
- Reimplementation with Java2D

Java Universal Network/Graph Framework

- Selected after Lars Hupel's evaluation
- Handles graph representation and visualization
- Looked promising from the outside

But

- Dying project
- No good DAG layout-algorithm
- Imperative
- Much boilerplate work

Uses

- Isabelle's internal graph representation
- Java2D-visualization

- More functional and simpler code
- No external dependencies
- Halved LOC
- Easier interaction with ML

Possible Improvements

- Faster rendering
- Prettier layout algorithm
- Content-based filters
- Better integration into Isabelle/jEdit

Discussion