REVaMP²

Jittac

Just-in-Time Tool for Architecture Consistency

Karlstad University

- Software Quality and Digital Modernization (SQuaD) Research Group in Departement of Mathematics & Computer Science at **Karlstad University**

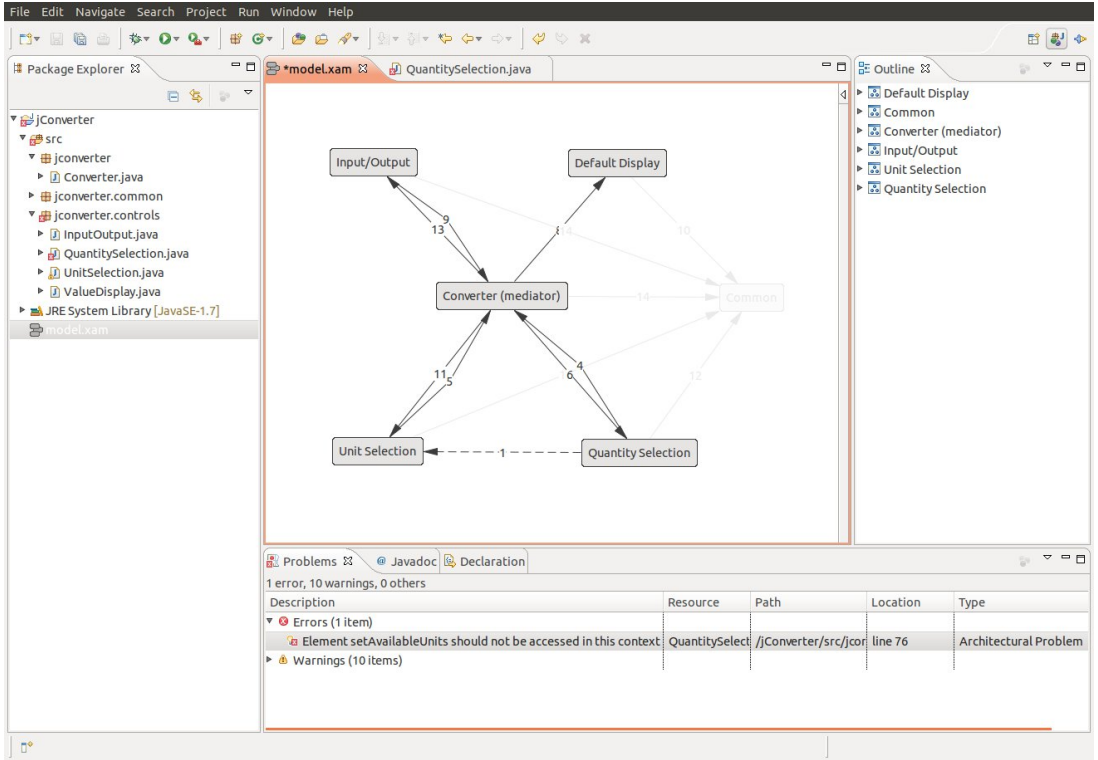
- Research Focus
  - design and evolution of security- and privacy-critical systems
  - quality assurance techniques, such as testing, for long-living systems
  - **detection of and mitigation against software architecture degradation and other forms of technical debt**

Jittac
The Tool

- JITTAC is an Eclipse based plug-in that helps check the **consistency between a software's architectural design and its implementation**.
- Original Jittac is developed as open source tool by Lero - The Irish Software Research Centre at the University of Limerick
- It **detects architectural violations** using a method based on Reflexion Modelling and prompts the developer/architect accordingly
- Gives programmers **real time feedback on architectural violations** they might introduce to the codebase, AS they introduce them into the codebase.

Jittac
The Tool

- This **increases programmers' architectural awareness** in a timely fashion and lessens the likelihood that architectural violations will become entrenched in the codebase over time.
  - **Java** codebase



Jittac
The Tool

- Used by SQuaD
  - for software architecture degradation research
  - for module dependency analysis for single systems & software product lines
  - for feature dependency analysis for single systems & software product lines
  - to generate software dependency metrics
  - as a software codebase-to-architecture mapping tool

- For related research interests or industrial case study analysis contact
  - https://www.kau.se/en/cs/research/research-areas/squad

Jittac
Demo

Conclusion & Contact Details

- The tool can be used for
  - software architecture degradation & consistency checking
  - module / feature dependency analysis
  - codebase-to-architecture mapping
  - software dependency metrics generation

- **Partners involved**
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