# Next Gen RE Teaching for Next Gen Devs

21 maj 2024

# Hypotheses on Next Gen Devs

- Cross-functional DevOps Teams & Decentralization => More of the actual RE work is done by the coders
- Agile & Open Source => Requirements in flat-structured NL markdown issues
- LLM Coding Support & Low Code / No Code => Prompts == NL Requirements Increased importance of RE by Coders

# Implications for RE Teaching

#### Focus more on...

- Practical RE for coders learning by doing: connecting the "hard" engineering work with the "soft" parts of RE: elicitation, communication, decision-making, ...
- Providing a consistent and relevant vocabulary for NL requirements modelling with structure and regularity.
- ► RE tooling that integrate with git and markdown issues

## Future ideas on reqT for teaching RE:

- Focus on vocabulary and structured NL
- Markdown <=> embedded DSL
- New metamodel utilizing new features of Scala 3
- Decision-making (prioritization, release planning) based on constraint solving

# Current stable and milestone versions of reqT

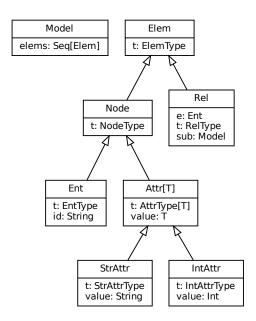
- Stable version used for MSc course ETSN15 labs 2024:
  - https: //github.com/reqT/reqT/releases/tag/v3.1.7
- Latest milestone version of regT v4:
  - https://github.com/reqT/reqT/releases

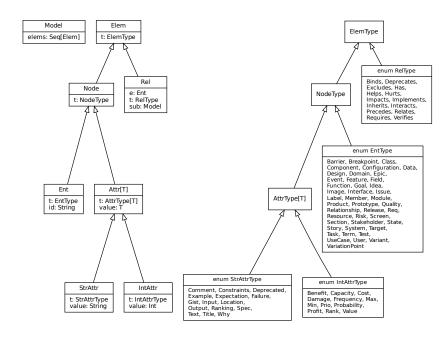
## New reqT metamodel:

Model

elems: Seq[Elem]

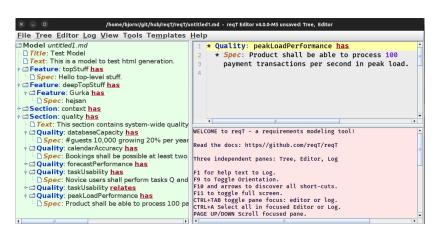
# New reqT metamodel:





#### reqT Tree Editor GUI

- Green area: Tree Navigator
- Gray area: Text Editor (Markdown indentation lists)
- Pink area: Log with output, analysis, metrics etc



#### How to install:

- Download reqT jar-file from here: https://github.com/reqT/reqT/releases run with java -jar reqT.jar
- To run the jar you only need java:
  - java on mac/ubuntu: https://sdkman.io/
  - java on windows: https://adoptium.net/
- To generate graphs of reqT models you need graphviz:
  - https://graphviz.org/download/
- On windows this is the recommended new terminal:
  - https://learn.microsoft.com/en-us/windows/ terminal/install
- To run the latest reqT v4 in a shell you need scala-cli:
  - https://scala-cli.virtuslab.org/install
  - ▶ run with scala-cli repl --jar reqT.jar -S 3.3

#### Further reading on reqT

- Regnell, Björn. "Towards a semi-formal, open and scalable requirements modeling tool". Requirements Engineering: Foundation for Software Quality: 19th International Working Conference, REFSQ 2013, Essen, Germany, April 8-11, 2013. Proceedings 19. Springer Berlin Heidelberg, 2013.
- Regnell, Björn. "What is essential? A pilot survey on views about the requirements metamodel of reqT". Requirements Engineering: Foundation for Software Quality: 22nd International Working Conference, REFSQ 2016, Gothenburg, Sweden, March 14-17, 2016, Proceedings 22. Springer International Publishing, 2016.
- Regnell, Björn, and Krzysztof Kuchcinski. "A scala embedded DSL for combinatorial optimization in software requirements engineering". First Workshop on Domain Specific Languages in Combinatorial Optimization. 2013.
- Regnell, Björn, and Krzysztof Kuchcinski. "Exploring software product management decision problems with constraint solving-opportunities for prioritization and release planning". 2011 Fifth International Workshop on Software Product Management (IWSPM). IEEE, 2011.
- On-going work on the 4.x branch: https://github.com/reqT/reqT/tree/4.x
- Download concept definitions: https://github.com/reqT/reqT-lang/releases/download/v4.2.0/concepts-GENERATED.csv