Session 9
Modeling Languages

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Languages for Modeling as a CSP

Using CP: different integration approaches:

- Library in a general-purpose language (e.g. Choco)
- DSL in a general-purpose language (e.g. CLP(FD))
- Just the DSL (e.g. Essence, MiniZinc, OPL, …)

Focus on the DSLs, i.e. languages specifically designed to **model** constraint satisfaction or optimisation problems.

We choose to use MiniZinc

A modeling language

The idea is to be able to express CSPs and COPs conveniently, while being able to use different solvers.

A common language for different approaches to solving CSPs and COPs.

Must somehow represent:

- Variables and their domains
- Constraints

Also able to express:

- Variable and value search strategies

A modeling language: MiniZinc

General language features

Official support and distribution on https://www.minizinc.org/

There are a few other modeling languages, among which:

- Essence
- CLP(*) languages, which include GNU Prolog
- …

Minizinc has several tutorials online. We just provide the basics here.

MiniZinc: user-friendly IDE