5.180 in_intervals

DESCRIPTION LINKS

Origin Domain definition.

Constraint in_intervals(VAR, INTERVALS)

Synonym in.

Arguments

VAR	:	dvar
INTERVALS	:	collection(low−int, up−int)

Restrictions

required(INTERVALS, [low, up])
INTERVALS.low ≤ INTERVALS.up
|INTERVALS| > 0

Purpose Enforce the domain variable VAR to take a value within one of the intervals specified by the collection of intervals INTERVALS.

Example $(5, \langle \texttt{low}-1\ \texttt{up}-1, \texttt{low}-3\ \texttt{up}-5, \texttt{low}-8\ \texttt{up}-8 \rangle)$

The in_intervals constraint holds since its first argument VAR = 5 belongs to the second intervals of the collection of intervals INTERVALS.

Typical |INTERVALS| > 1

Symmetries

- Items of INTERVALS are permutable.
- INTERVALS.low can be decreased.
- INTERVALS.up can be increased.
- One and the same constant can be added to VAR as well as to the low and up attributes of all items of INTERVALS.

Arg. properties Extensible wrt. INTERVALS.

Remark Entailment occurs immediately after posting this constraint.

Systems dom in **Gecode**, in in **JaCoP**, in in **SICStus**.

See also **specialisation:** in_interval *(set of intervals replaced by single interval).*

Keywords **constraint arguments:** unary constraint.
constraint type: value constraint, predefined constraint.
filtering: arc-consistency.
modelling: interval, domain definition.