

5.291 size_max_starting_seq_alldifferent

	DESCRIPTION	LINKS	GRAPH
Origin	Inspired by size_max_seq_alldifferent .		
Constraint	<code>size_max_starting_seq_alldifferent(SIZE, VARIABLES)</code>		
Synonyms	<code>size_maximal_starting_sequence_alldiff</code> , <code>size_maximal_starting_sequence_alldistinct</code> , <code>size_maximal_starting_sequence_alldifferent</code> .		
Arguments	SIZE : <code>dvar</code> VARIABLES : <code>collection(var-dvar)</code>		
Restrictions	SIZE ≥ 0 SIZE ≤ VARIABLES required (VARIABLES, var)		
Purpose	<div style="border: 1px solid pink; padding: 5px;"> SIZE is the size of the maximal sequence (among all sequences of consecutive variables of the collection VARIABLES starting at position one) for which the alldifferent constraint holds. </div>		
Example	<div style="border: 1px solid blue; padding: 10px; display: inline-block;"> $\left(\begin{array}{c} \text{var} - 9, \\ \text{var} - 2, \\ \text{var} - 4, \\ 4, \left\langle \begin{array}{c} \text{var} - 5, \\ \text{var} - 2, \end{array} \right\rangle \\ \text{var} - 7, \\ \text{var} - 4 \end{array} \right)$ </div>		
	The <code>size_max_starting_seq_alldifferent</code> constraint holds since the constraint alldifferent (⟨var - 9, var - 2, var - 4, var - 5⟩) holds and since alldifferent (⟨var - 9, var - 2, var - 4, var - 5, var - 2⟩) does not hold.		
Symmetry	One and the same constant can be added to the <code>var</code> attribute of all items of VARIABLES.		
Remark	A conditional constraint [256] with the specific structure that one can relax the constraints on the last variables of the collection VARIABLES.		
See also	common keyword: alldifferent , open_alldifferent , size_max_seq_alldifferent (<i>all different, disequality</i>).		
Keywords	characteristic of a constraint: all different, disequality, hypergraph. combinatorial object: sequence. constraint type: sliding sequence constraint, open constraint, conditional constraint.		

Arc input(s)	VARIABLES
Arc generator	<code>PATH_1</code> \mapsto <code>collection</code>
Arc arity	*
Arc constraint(s)	<code>alldifferent(collection)</code>
Graph property(ies)	<code>NARC</code> = SIZE

Graph model

Note that this is an example where the arc constraints do not have the same arity. However they correspond to the same constraint.

Parts (A) and (B) of Figure 5.525 respectively show the initial and final graph associated with the **Example** slot.

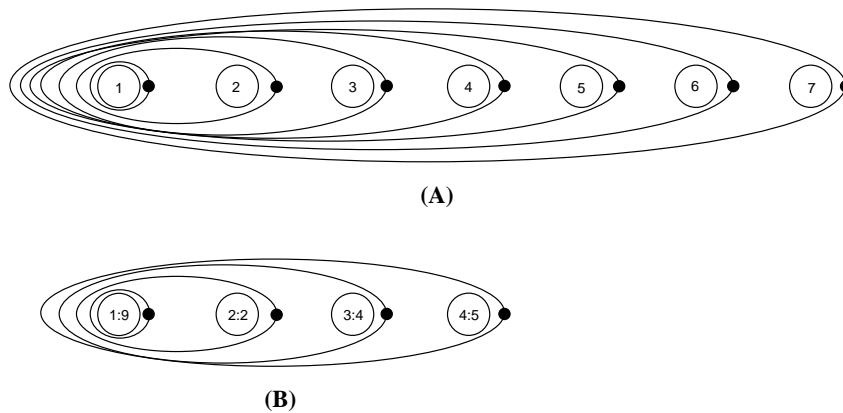


Figure 5.525: Initial and final graph of the `size_max_starting_seq_alldifferent` constraint