

5.7 alldifferent_consecutive_values

	DESCRIPTION	LINKS	GRAPH
Origin	Derived from alldifferent .		
Constraint	<code>alldifferent_consecutive_values(VARIABLES)</code>		
Argument	<code>VARIABLES</code> : <code>collection(var-dvar)</code>		
Restrictions	<code>required(VARIABLES, var)</code> <code>alldifferent(VARIABLES)</code>		
Purpose	<p>Enforce (1) all variables of the collection <code>VARIABLES</code> to take distinct values and (2) constraint the difference between the largest and the smallest values of the <code>VARIABLES</code> collection to be equal to the number of variables minus one (i.e., there is no holes at all within the used values).</p>		
Example	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> <code>((5, 4, 3, 6))</code> </div> <p>The <code>alldifferent_consecutive_values</code> constraint holds since (1) all the values 5, 4, 3 and 6 are distinct and since (2) all values between value 3 and value 6 are effectively used.</p>		
Typical	<code> VARIABLES > 2</code>		
Symmetries	<ul style="list-style-type: none"> • Items of <code>VARIABLES</code> are permutable. • Two distinct values of <code>VARIABLES.var</code> can be swapped. • One and the same constant can be added to the <code>var</code> attribute of all items of <code>VARIABLES</code>. 		
See also	implies : alldifferent , consecutive_values .		
Keywords	<p>characteristic of a constraint: all different, disequality.</p> <p>combinatorial object: permutation.</p> <p>constraint type: value constraint.</p>		

Arc input(s)	VARIABLES
Arc generator	$SELF \mapsto \text{collection}(\text{variables})$
Arc arity	1
Arc constraint(s)	TRUE
Graph property(ies)	$RANGE(\text{VARIABLES}, \text{var}) = \text{VARIABLES} - 1$
