


Summary table of OPL keywords

Provides a short description of each OPL keyword and a link to the corresponding full description.

This table lists the words reserved for OPL; some of them are used as keywords, others are reserved for future use. Keywords that are specific to the CP Optimizer engine are identified by *CP keyword* in the description. This table provides a short description and a link to the full keyword description.

 **Important:**
You cannot use OPL reserved words as variable names.

The keywords `initial` and `template` are reserved for future use.

The keyword `struct` is deprecated. Use `tuple` instead.

Table 1. OPL reserved keywords

Keyword	Description
all	Allows you to use only part of an array with functions that take array parameters.
and	CP. Uses a logical AND to aggregate several constraints into a single one.
assert	Checks assumptions.
boolean	Domain shortcut for decision variables.
constraints	An alias for <code>subject to</code> .
CP	Denotes a constraint-programming model.
CPLEX	Denotes a math-programming model.
cumulFunction	Used to express a cumulative function (CP keyword, scheduling).

Keyword	Description
dexpr	Expresses decision variables in a more compact way.
diff	The difference between two data sets.
div	The integer division operator.
dvar	Decision variables in OPL models.
else	To state conditional constraints.
execute	Introduces a preprocessing or postprocessing scripting block.
false	A shortcut for a constraint that is always false.
float	Declares a floating-point value.
float+	Domain shortcut for decision variables.
forall	Introduces a constraint.
from	Associated with the DBRead and SheetRead keywords to read data from a database or spreadsheet.
in	Checks membership in a set.
if	To state conditional constraints
include	Includes a model in another model.
infinity	A predefined float constant to represent the IEEE infinity symbol.
int	Declares an integer.
int+	Domain shortcut for decision variables.
intensity	Used for defining intensity of an interval (CP keyword, scheduling).
inter	Retains the common elements between data sets (intersection).
interval	Used to create interval variables (CP keyword, scheduling).

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Keyword	Description
invoke	Calls an IBM ILOG Script function after a data initialization.
key	In declarations of tuples, enables you to access data organized in tuples using a set of unique identifiers.
main	Introduces a flow control scripting block.
max	Computes the maximum of a collection of related expressions.
maximize	A constraint to express an objective function.
maxint	The largest positive integer available in OPL.
min	Computes the minimum of a collection of related expressions.
minimize	A constraint to express an objective function.
mod	The integer division remainder.
not in	Non-membership in a set.
optional	Used to declare an interval as optional (CP keyword, scheduling).
or	CP. Uses a logical OR to aggregate several constraints into a single one.
ordered	Combines several parameters to produce a more compact statement.
piecewise	Introduces continuous and discontinuous piecewise linear functions.
prepare	Introduces IBM ILOG Script function definitions to be used in some other part of the .dat file.
prod	Computes the product of a collection of related expressions.
pwlFunction	Used to model a known continuous function of time (scheduling).
range	Defines a range of integers by a lower bound and an upper bound.



Keyword	Description
reversed	Specifies the descending lexicographic order in a set.
sequence	Used to define a sequence of interval variables (CP keyword, scheduling).
setof	Defines sets (lists of unique elements).
SheetConnection	Connects a model to a spreadsheet.
SheetRead	Reads data from a spreadsheet.
SheetWrite	Writes data to a spreadsheet.
size	Used for defining interval size (CP keyword, scheduling).
sorted	Orders a set in ascending natural, lexicographic order.
stateFunction	Used to express a state function (CP keyword, scheduling).
stepFunction	A special case of pwlFunction , where the function changes in step intervals (scheduling).
stepwise	Used to express stepwise linear functions (scheduling).
string	Declares a data string.
subject to	Introduces an optimization instruction, followed by a block of constraints.
sum	Computes the sum of a collection of related expressions.
syndiff	Runs the difference between the union and the intersection of two sets.
to	Associated with the DBUpdate and SheetWrite keywords to write data to a database or spreadsheet.
true	A shortcut for a constraint that is always true.
tuple	A data structure to cluster together closely related data.

Keyword	Description
types	Used to associate a non-negative integer (the type of the interval variable) with each interval variable in a sequence.
union	Adds the nonidentical elements of a set to another sets.
using	Associated with the keyword CP or CPLEX to specify the solving engine for a model.
with	Indicates that an element of a tuple must be contained in a given set.

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