LibreOffice Reference Card
LibreOffice Basic Calc
v. 1.11 – January 13, 2018
Written with LibreOffice v. 5.3.3 – Platform: All

LibreOffice Documents

Current document

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Open another existing document

Visible mode

---

Invisible mode

---

Turn visible a posteriori

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Create a new Calc document

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Save a document

---

Create and save a document

---

Close a document

---

Work with cells

---

Work with sheets

---

Cells

---

Access to cells

---

Select a cell

---

Access cell contents

---

Calc – General functionalities

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Automatic calculation

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Protect document

---

Unprotect document

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LibOBasic_3_Calc_Flat_A4_EN_v211.cdt
Ranges (ranges)

Range = set of cells, (including a single one) Dim MyRange As Object

Access to ranges

MySheet = new sheet object. Get a range object Ran:

By cell default notation Ran = MySheet.getCellRangeByName("C2:G14")

By name Ran = MySheet.getCellByName("RangeName")

By coordinates Ran = MySheet.getCellRangeByPosition(2, 1, 6, 13)

(XX, Y1, X2, Y2)

Random Ran = ThisComponent.Sheets.getCellRangeByPosition(2, (ex third sheet)

Active range

Like active cell, but check "com.sun.star.sheet.SheetCellRange" or "[...]-SheetCellRanges"

Range selection

ThisComponent.CurrentController.select(MyRange) Where MyRange is an object.

Range coordinates

Coordinates (Object) Coord = MyRange.RangeAddress

Sheet Index (integer) Ran = MyRange.RangeAddressSheet.

Column Rank (Long) NumCHG = MyRange.RangeAddress.StartColumn
topleft corner

Row rank (Long) NumLHG = MyRange.RangeAddress.StartRow

topleft corner

Column Rank (Long) NumCBD = MyRange.RangeAddress.EndColumn
topleft corner

bottom/right corner

Row rank (Long) NumLBD = MyRow.RangeAddress.EndRow

topleft corner

Sheet container object MySheet = MyRange.Spreadsheet

Absolute coordinates (String) Coord = MyRange.AbsoluteName

Named ranges

The doc object points to the document. With Dim TheRanges As Object

Named ranges TheRanges = Doc.NamedRanges

Number (Long) Nb = TheRanges.Count

Get a range (by index) MyRange = TheRanges(index)

Check existence (name) Exit = TheRanges.hasByName("RangeName")

Get range (by name) MyRange = TheRanges.getByName("RangeName")

Add TheRanges.addNewByName("Rangename", Co-

ord, )

Delete (by name) TheRanges.removeByName("RangeName")

Erase a range

Erase Mode contents MyRange.clearContents(EraseMode)

EraseMode is a value that define the type of cleaning. Use com.sun.star.sheet-

-CellFlags.XXX and combine them with :-)

ANNEAU Comments

PARAMS Date/time formatted numbers STRONG Text

FORMULA Formule

Get cell contents in a range

MyRange.DataArray is a table of cell values for MyRange.

Copy range contents into another range

Have 2 ranges Source and Target, with same dimensions.

Copy contents (values) from Source into Target.DataArray = Source.DataArray

Target.

Write values in a range

MyRange is a range object and MyTable a table, with same dimensions, where values must be transfered to the range.

Dim MyTable As Variant

MyTable = MyRange.DataArray MyTable takes the range dimensions 'Give values to the table elements)

MyRange.DataArray = MyTable

-DataArray is an embedded table: use .DataArray(i,j)

Traverse cells in a range

From a collection (MyRanges.Cells) create an enumeration. Traverse the range calling its properties hasMoreElements and NextElement:

Dim Plages As Object

MyRanges = ThisComponent.createInstance("com.sun.star.sheet.SheetCellRanges")

MyRanges.insertByNamed(");">"

Linum = MyRanges.Cells.CreateEnumeration

Do While Linum.hasMoreElements

MyCell = Linum.NextElement

emaker = Linum.NextElement

ypplicats to Select cell Loop

Empty cells are not traversed !

Ranges: Miscellaneous

Merged cells of MyRange MyRange.Merge

Range types

Depending of the access mode, ranges implement one of these services:

1. com.sun.star.sheet.SheetCell ①

2. com.sun.star.sheet.SheetCellRange ②

3. com.sun.star.sheet.TableCell ③

4. com.sun.star.sheet.NameRange ③

Depending on the service implemented, ranges must be employed differently.

Test through method supportsService() (ex. below)

Cell or range?

To know the object type, test supportsService() with service_name below (boolean) on the object (range or cell):

If MyObj.supportsService(service_name) Then ...

Replace service_name by:

Cell ? "com.sun.star.sheet.SheetCell" ①

Single range ? "com.sun.star.sheet.SheetCellRange" ③

Multiple range ? "com.sun.star.sheet.SheetCellRange" ③

Always test a cell before a single range because a cell is also a single range !

Rows/Columns (rows/columns)

Rows and columns are Sheet and Range objects properties.

General

Rows (TheRows) TheRows = MyRange.Rows

Columns (TheCols) TheCols = MyRange.Columns

Counting NBL = MyRange.Rows.Count

A row (TheRow object) base 0) TheRow = MyRange.Rows(index)

A column (TheCol object) base 0) TheCol = MyRange.Columns(index)

Row/Columns properties

Applies to Row or Rows (resp. Column or Columns).

Visible / Hidden (Boolean) isVisible = True

Optimal width (Boolean) OptimalWidth = True

Insert/delete rows/columns

Define object Roc, and FirstPos and LastPos the positions of the beginning and end of the row set (resp. columns) to add/delete (Long).

Insert Roc.insertByIndex(index,FirstPos,LastPos)

Delete Roc.removeByIndex(index,FirstPos,LastPos)

Freeze rows/columns

Use the Controller object: MyController = ThisComponent.CurrentController

Is there one? Freeze = MyController.hasFrozenPanes

Freeze MyController.freezeAtPosition(1, 2)

Delete MyController.freezeAtPosition(8, 5)

Call a Calc function

Use service "com.sun.star.sheet.FunctionAccess"

Usage

Dim FCalc As Object

Dim Result As (context dependent)

Dim Params As (context dependent)

Dim FunctionName As String

FCalc = CreateUnoService("com.sun.star.sheet.FunctionAccess")

Results = FCalc.callFunction(FunctionName, Params)

Example 1 (function sum())

Dim FCalc As Object

Dim Results As Long

FCalc = CreateUnoService("com.sun.star.sheet.FunctionAccess")

Results = FCalc.callFunction("SUM", Array(1, 55, 321, 8))

Example 2 (function round())

Dim FCalc As Object

Dim Results As Long

FCalc = CreateUnoService("com.sun.star.sheet.FunctionAccess")

Results = FCalc.callFunction("ROUND", Params)

Create a Calc function

Create Example: calculate the area of a trapeze (S = (b + b) / 2) x h)

Function AreaTrapeze(GB As Double, PB As Double, H As Double) As Double

AreaTrapeze = ((GB + PB) / 2) * H

End Function

Usage in Calc

If A2 is the large base, A3 the small base and A4 the height, the area of the trapezoid is ob-

tained inserting the following formula in a cell: =AREATRAPEZE(A2;A3;A4)

The macro receives the values of the arguments and not the cell object.

The macro returns a value. It does not applies to a cell.

The function must be located in a library accessible at runtime (e.g. standard library of the
document or user) otherwise, it produces the VALUE! error.

Credits

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We are like dwarves perched on the shoulders of giants. If we are able to see more and farther than the

latter, this is not at all because of the stature of our sight or the stature of our body, but because we are

carried aloft and elevated by the magnitude of the giants (Bernard de Chartres acta).

History

Version Date Comments

1.01 01/10/2017 First version.

1.11 13/01/2018 Add range types.

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