ل LibreO	ffice RefCard	
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	TICE Basic	
ě Ow	ruiony	
	erview	
		Beginner
v. 1.10	- 02/11/2018	
Written wing Lik	ma fan 1 522 Platform All	
written using Lib	reOffice v. 5.5.5 – Platform: All	
Overview		
Dovolopmont time: Coding 20% Mt	aintaining 90%	
Entities Naming	annanning 8070	
Variables constants subs and functions	must be identified	
Allowed chars: unaccented chars, numb	ers underscore ()	
An identifier can't start with a number	r nor contain a space.	
Do not use any Basic keyword to nar	me an entity!	
Easy to read names CamelCase	e, Name_with_separators	
Explicit names IsCell(),	SaveSpreadsheet()	
Comments		
' (apostrophe) or REM. What follows is a	Comment.	
Comments are as important as code:	I hey apply to the current line only.	
		_
Indented code is easier to read. Indent e	each code level with Space / Tabulati	on.
Continuing An Instruction On The	Next Line	
Last two chars or the first line: _ (space	e + underscore).	
Variables		
By default, variable declares are not	mandatory but this is dangerous (typos	s lead to
double declares).	a module forces variable declaration	
Declaring Variables		
Variable : a memory place A variable of	ontents may be modified at run-time	
Simple Variables	ontents may be mounied at run-time.	
Dim MvVar As AType	Ex:Dim MyText As String	
Arrays		
Array indices are zero-based!		
Dim MyArray(NumDim) As AType	Number of dimensions : any.	
	Dim MyArray(2,4): 2 dimensions. 3	items for
Dim MvArrav(9) As AType	the 1^{∞} , 5 for the 2^{∞} (base 0).	haso ()
$\operatorname{Dim} \operatorname{My}(\operatorname{Sray}()) \land \operatorname{AType})$	Declares an array of unknown dimension	ion Calling
Dim MyArray () As Arype	ReDim will be required.	on. Canny
Accessing Arrays Items		
MyArray(1, 3) = Value	Sets Value to item 1, 3.	
<pre>Inf = LBound(MyArray()[, n])</pre>	Lower bound [for dimension n].	
<pre>Sup = UBound(MyArray()[, n])</pre>	Upper bound [for dimension n].	
Redimensioning ReDim MyArray(NewDim)	With data loss	
ReDim Preserve MyArray(NewDim)	Without data loss.	
Emptying Erase(MyArray) Or US	e ReDim with data loss.	
Test If Empty IsEmpty = (LBound(M	MyArray) = 0) And (UBound(MyArra	ay) = −1)
Test If Exists Exists = Not IsNull	l(MyArray) And Not IsEmpty(MyArr	ay)
Setting Non-Object variables		
Basic often automatically typecasts	when SomeValue is not of the same tyr	ne as
MyVar. Prefer typecasting explicitly u	ising dedicated functions (CXxx(), RefC	Card #5).
Creating/Setting Object Variables		
Dim MyObject As New AClass		
MyObject = New AClass	Initialization differed to the 1st setting.	
Set MyObjet = AClass	Initialization is immediate	
Variables Visibility		
Declaring	gives visibility	
Dim MyVar As AType	In the current subprogram or module.	
Static Hyvar AS Alype	m uie current subprogram.	
Private MyVar As AType	In the current module.	
Public MyVar As AType	In the current library.	
Global MyVar As AType	In all libraries.	
	Persistent value between programs	5!
Туре		
Specifies the value set a variable can ca	arry or a function return.	
Predefined Types		
Type name	Description In	itialized to

Type name	Description	Initialized to	
Boolean	Logical values True / False.	False	
	Can be seen as False = 0; True = other integers (-1).		
Byte	Integer numbers (8 bits), from 0 to 255.	Θ	
Currency	Currency numbers (4 decimals).	0.0000	
Date	Dates and hours. In fact, doubles.	0.0	
	Reference date (0.0) is 12/30/1899 at 00:00.		
Double	Floating numbers (64 bits).	0.0	
Integer	Integer numbers (16 bits), from -32 768 to +32 767.	0	
Long	32bits int numbers, -2 147 483 648 to +2 147 483 647.	Θ	
Object	Objects. Allow to manipulate LibreOffice API objects.	Null	
Single	Floating numbers (32 bits).	0.0	
String	Text (0 to 65 545 characters).	"" (null	
	In code, strings are delimited with " (double quotes).	length)	
Variant	Any type, incl. object.	Empty	
Fvery time	a type is unspecified. Variant is implicit		

Custom Types Type MyType member1 As AType member2 As AType where AType can be any simple or custom type. 'etc. End Type A custom type may only be referenced in the module where it is declared. This code is To create a var of this type in any other module, create a function that realizes the cre-ation, within the same module as the type declaration. You then call that creation function in order to create an instance of that type: Function CreateMyType() As MyType
Dim Result As New MyType CreateMyType = Result End Function Usage elsewhere (other modules): Dim MyVar As Object MyVar = CreateMyType() Objects LibreOffice offers many classes (aka services) to manipulate documents and their components. Service = Properties + Methods. An object is an instance of a service. Property State (≈ variable) Method Action (≈ subprogram) Syntax: object.SomeProperty Or object.SomeMethod Empty, Null And Nothing Empty Uninitialized variable yet. Empty assignation possible. Null Invalid contents. Null assignation possible. Nothing (objects only) No (more) reference to the object. Assignation possible. Functions Variable is empty. IsEmpty(SomeVar) IsNull(SomeObject) Unusable data Operators Booleans Not Not And And 0r Or (inclusive) Exclusive or Xor Comparisons (return True or False) Strictly equal < Strictly lower <= Lower or equal <> Different > Strictly upper >= Upper or equal Mind to floating numbers comparisons! Numerical Addition Multiplication Integer division Modulo (remainder of Subtraction Division Mod integer division) ٨ Raising to the power Text & Strings concatenation (fusion) (" + " is possible ; better not use because of its ambiguity). Constants Constant: a memory place; fixed value (immutable during execution). **Declaring Constants** Const SOME CONSTANT = SomeValue SomeValue must be a simple type: no array, no object. **Naming Constants** It is frequent to name constants in all UPPERCASE. **Constants Visibility** Declaring... gives visibility... MYCONST = SomeValue In the current subprogram or module. Const Public MYCONST = SomeValue In the current library. Global MYCONST = SomeValue In all libraries **File Paths** To ensure multi-platform compliance, file paths are often expressed using the URL format: file:///support/path/to/afile.txt instead of the native OS format. Two functions allow to switch from one to the other representation: From OS native to URL URLname = ConvertToURL(NativeName) From URL to OS native NativeName = ConvertFromURL(URLname) Subprograms Ensure arguments

parameters correspondence, in number and type. Premature subprogram exit: Exit Sub, Exit Function Sub Executes an action. Naming hint: verb at the infinitive: DoXxx(), etc. Declaration Sub SubName(parameters) Sub SubName(parameters) Structure End Sub Use SubName(arguments). If no argument: SubName() Function Executes an action and returns a value. Naming hint: verb at the indicative: IsXxx(), etc. Declaration Function FuncName(parameters) As SomeType Function FuncName(parameters) As SomeType Structure Somewhere, define the return value: FuncName = SomeValue End Function

SomeVar = FuncName(arguments)

If no argument: SomeVar = FuncName() A Function may be called like a Sub (without caring of the return value).

Use

Always set initial values rather than rely upon implicit settings.

Paramete	ers		Program Ske	leton			
Parameter	r : a value the subprogra	m declaration specifies.	Dim Frame As	Variant			
Ex : MySu	t: the actual value the ca ub(ByRef AParam as Lu	uner passes to the subprogram. ong. ByVal OtherParam As String.	Dim Dispatcr Dim Args() A	as Object As Variant 'co	ontents depends	from context	
	Optional ByRef Some	eParam As String)	Dim UnoCmd A Frame = Thi	s String sComponent.Cur	rentController.	Frame	
ByRef	By reference (default). The parameter points to the argument passed by the caller.			UnoCmd = 'UNO command to run (above) Dispatch = createUnoService("com.sun.star.frame.DispatchHelper") Dispatch eventPDirectch(Ereme UnoCmd "" & Arce())			
ByVal	 Any modification of By value. The parameter 	a ByRef item is propagated to the caller at return time. ter is a copy of the argument passed by the caller.	where UnoCmd i	s the command fo	ound in the files abor	", 0, Args()) Ve.	
Ontional	value modifications are local to the called and not propagated to the caller. cional Optional parameter		Examples				
operonae	 Giving a default value 	ue to an optional parameter:	(only modified p	arts are shown)			
	If IsMissing(Son	neParam) Then SomeParam = SomeValue	Ext. Calling I	Print Preview			
	The identifier is always	ays available in the subprogram.	Dispatch.exe	ecuteDispatch(F	rame, ".uno:Pri	ntPreview", "",	0, Args())
Control	I Structures		Ex2. Showing	g/Hiding The Si	debar		
Loops			Dim Args(0) Args(0).Name	As New com.sur = "Sidebar"	n.star.beans.Pro	pertyValue	
Repeat a s	sequence of instructions.		Args(0).Valu	e = True	'or False dep	ending on aim	rgs())
Premat	ture exit possible using E	xit For Or Exit Do according to situation.					ii g5())
For each c	counter value	You must know the counter bounds.	Error Mana	igement			
For i = S	Start To End [Step	By default, increment Step is 1.	In Basic, error r	nanagement is av	ailable using:		
'instru	uctions	 Counters are often named as i, j, k, etc. Never set the counter in the loop instructional 	 Err, Erl and 	Error : functions	to get information a	about the last error	met.
Next For Each	n Next		Error Informa	tion Functions	; ;		
For each it	tem	The number of items is unknown.	Err The	error code.			
For Each	item In SomeObject	item must be of a compatible type.	DF A	n error code of 0 Ise If Err Then	(zero) means "no er to check error pro	rror". esence.	
Next			Error The	message that des	cribes the error.		
Do While	Condition	Condition is evaluated first	Erl The	line number where	e the error occurred	l.	
'instru	uctions	Infinite loops (Condition never met)!	Err = 1234	generates error 1	L234.	IUETT.	
гоор	or		On Error – In	tercepting Erro	ors		
While Cor	ndition	Older syntax, for compatibility only. Doesn't sup- net 5 with	Error interce	ption is active as	long as it has not	been canceled.	
Wend		Do not use!	Un Error Goto	o MyLabel A	Activates error interc	ception. If an error	occurs, the
Do Loop	Until				In the program be	ody, you must defir	e the label
Do 'instru	uctions	Condition is evaluated last .	On Error Pos	me Next	MyLabel: (bewa	re to the semicolon	i character).
Loop Unt	il Condition	* Infinite loops (Condition never met)!	ON LITON RES	e de la compansión de la compan	execution continues	to the next instruct	ion.
Condition	nal Tests	and a state of the	On Error Goto	o 0 0	Cancels error interce	eption.	
A branch tr	hat allows to take action	according to a given situation.	In a Sub or I requires call	Function, you migi ing On Error Go	ht prefer the On Loc to 0 to cancel error	cal Error Xxx Sy r interception: cano	ntax. This doesn't celing is automati-
If Condit	, tion Then SomeInstru	iction	cally perform	ned when leaving	the Sub or Function	1.	
If Then E	lse		<pre>On Local E Xxx</pre>	rror Goto XxxI	has precedence or	n any preexisting 0	n Error Goto
If Condit Instru	tion Then uctionsThen			lave Of Bunn	ing A Macro		
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