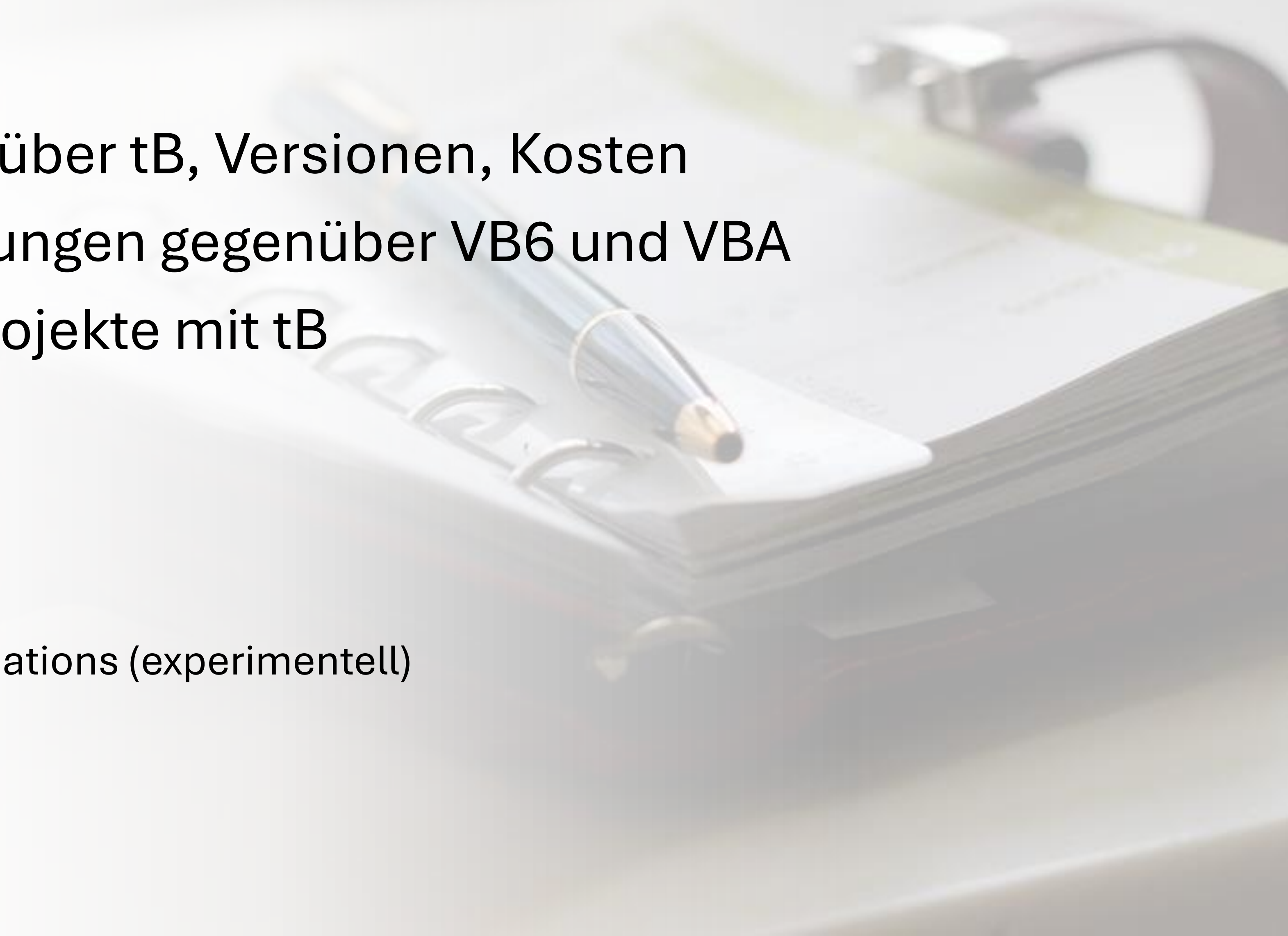
twinBASIC
tBA
und Access

luna-soft

twin BASIC

AEK Access-Entwickler-Konferenz

Agenda



- Einführung und Überblick über tB, Versionen, Kosten
- Neuerungen und Erweiterungen gegenüber VB6 und VBA
- Kurze Demo echter VB6 Projekte mit tB
- twinBASIC + Access
  - Teil 1: Add-Ins Access
  - Teil 2: Berichts-Feature
  - Teil 3: Add-Ins IDE-VBA
  - Teil 4: **tBA** - **t**win**B**ASIC for **A**pplications (experimentell)

Überblick über twinBASIC

- twinBASIC Projekt
  - Entwickelt von Wayne Phillips
  - Bekannt für vbWatchdog und andere Produkte
- Details zur Präsentation
  - Präsentiert von **Juanjo Luna**
    - Homepage: **luna-soft.es**
    - **Youtube: www.youtube.com/accessototal**
    - MVP Microsoft Apps & Services
      - Access
      - Excel
    - LinkedIn Learning Instructor
    - EventoDeDatos.com

Evento de Datos

Evento de Datos

Evento de Datos

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twin BASIC

Evento de Datos

TEMIX
2do Encuentro Internacional de Profesionales en Datos
MEDELLÍN - COLOMBIA 2023
EXPERT SOLUCION
ACCESS SOFTWARE

AEK
Access-Entwickler-Konferenz

luna-soft

twin BASIC

Evento de Datos

AEK Access-Entwickler-Konferenz

Was ist twinBASIC?

- ✓ Einfach zu bedienen, in wenigen Minuten loslegen!
- ✓ Nahtlose VB6-Kompatibilität
- ✓ Native 32-Bit- und 64-Bit-Kompilierung
- ✓ Volle Unicode-Unterstützung
- ✓ Moderne, leichtgewichtige IDE
  - ● Code-Faltung
  - ● Inline-Code-Hinweise
  - ● Syntax-Hervorhebung
  - ● Projektfehler und Diagnose in Echtzeit
  - ● IDE-Themes (dunkel und hell)

- ✓ Monaco-basierter Code-Editor
- ✓ Integrierter Debugger
- ✓ Neue integrierte Steuerelemente
  - ● WebView2
  - ● QRCode
- ✓ Eingebauter Paketserver

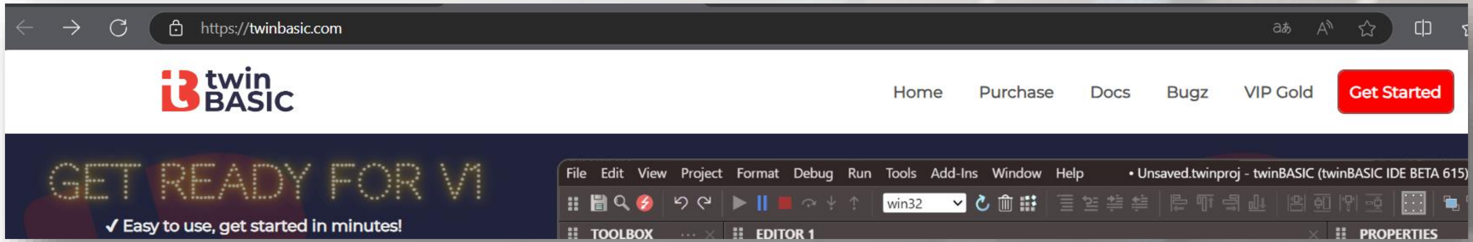
Fortschritt-Update

- Bessere Stabilität
- Verbesserungen in der IDE
- Verbesserungen in ActiveX-Steuerelementen
- Bessere Dokumentation
- Umfassendere Leitfäden
- Verbesserte Benutzerhandbücher
- Verbesserungen des twinPACK-Pakets
- Erweiterte Funktionen
- Fehlerbehebungen
- Community-Projekte
- WinDevLib von fafalone
- Vorläufiges Veröffentlichungsdatum von V1 (31.Dez 2024)

luna-soft

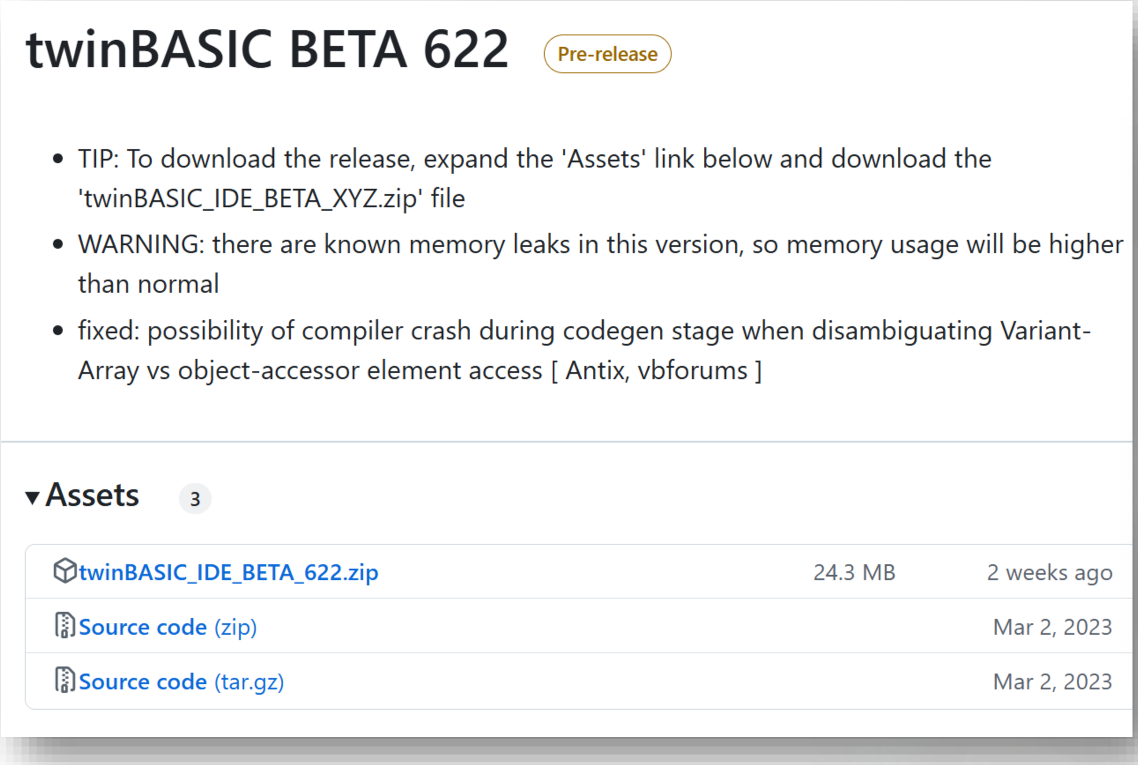
Installieren

twin BASIC


https://twinbasic.com
twin BASIC
Home
Purchase
Docs
Bugz
VIP Gold
Get Started
File Edit View Project Format Debug Run Tools Add-Ins Window Help
• Unsaved.twinproj - twinBASIC (twinBASIC IDE BETA 615)
win32
TOOLBOX
EDITOR 1
PROPERTIES

GET READY FOR V1

✓ Easy to use, get started in minutes!

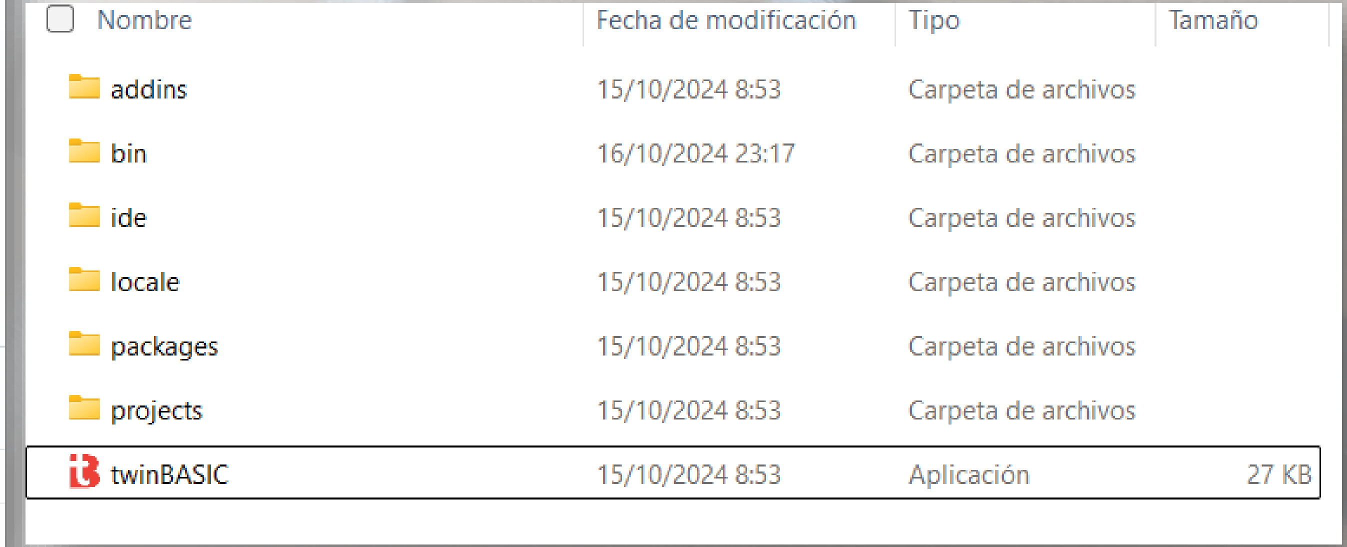


twinBASIC BETA 622 Pre-release

- TIP: To download the release, expand the 'Assets' link below and download the 'twinBASIC_IDE_BETA_XYZ.zip' file
- WARNING: there are known memory leaks in this version, so memory usage will be higher than normal
- fixed: possibility of compiler crash during codegen stage when disambiguating Variant-Array vs object-accessor element access [Antix, vbforums]

▾ Assets 3

twinBASIC_IDE_BETA_622.zip	24.3 MB	2 weeks ago
Source code (zip)		Mar 2, 2023
Source code (tar.gz)		Mar 2, 2023



☐ Nombre	Fecha de modificación	Tipo	Tamaño
addins	15/10/2024 8:53	Carpeta de archivos	
bin	16/10/2024 23:17	Carpeta de archivos	
ide	15/10/2024 8:53	Carpeta de archivos	
locale	15/10/2024 8:53	Carpeta de archivos	
packages	15/10/2024 8:53	Carpeta de archivos	
projects	15/10/2024 8:53	Carpeta de archivos	
twinBASIC	15/10/2024 8:53	Aplicación	27 KB

Erweiterte VB6-Syntax

- Bit-Shift-Operatoren
- Definition von Interface-Definitionen im Code
- Klasseninstanz AddressOf
- Unterstützung bei der Vererbung
- Inline Variablen-Initialisierung
- Überladen von Prozeduren
- Multithreading-Syntax (in Kürze verfügbar)
- Unterstützung für neue Projekttypen, wie z.B. Standard-DLL

- Control Anchoring und Docking - Automat. Größen und Positionierung

Community	Professional	Ultimate
FREE	EUR €29 /Monat* ~~(46 €)~~	EUR €45 /Monat* ~~(70 €)~~
Create 32/64-bit EXE/DLLs	Alle Comunity-Funktionen plus:	Alle Professional-Funktionen plus:
Begrüßungsbildschirm für 64-Bit	Kein Begrüßungsbildschirm bei 64-Bit-EXE/DLL	Privater Produktsupport per E-Mail
Nur Windows (nicht optimierte Kompilierung)	Optimierte Kompilierung (immer noch nur Windows)	Plattformübergreifende Unterstützung (Linux/Mac/Android)

*** 35 % Rabatt**

Demo

VB6
ACCESS

Demo VB6

✓ fafalone

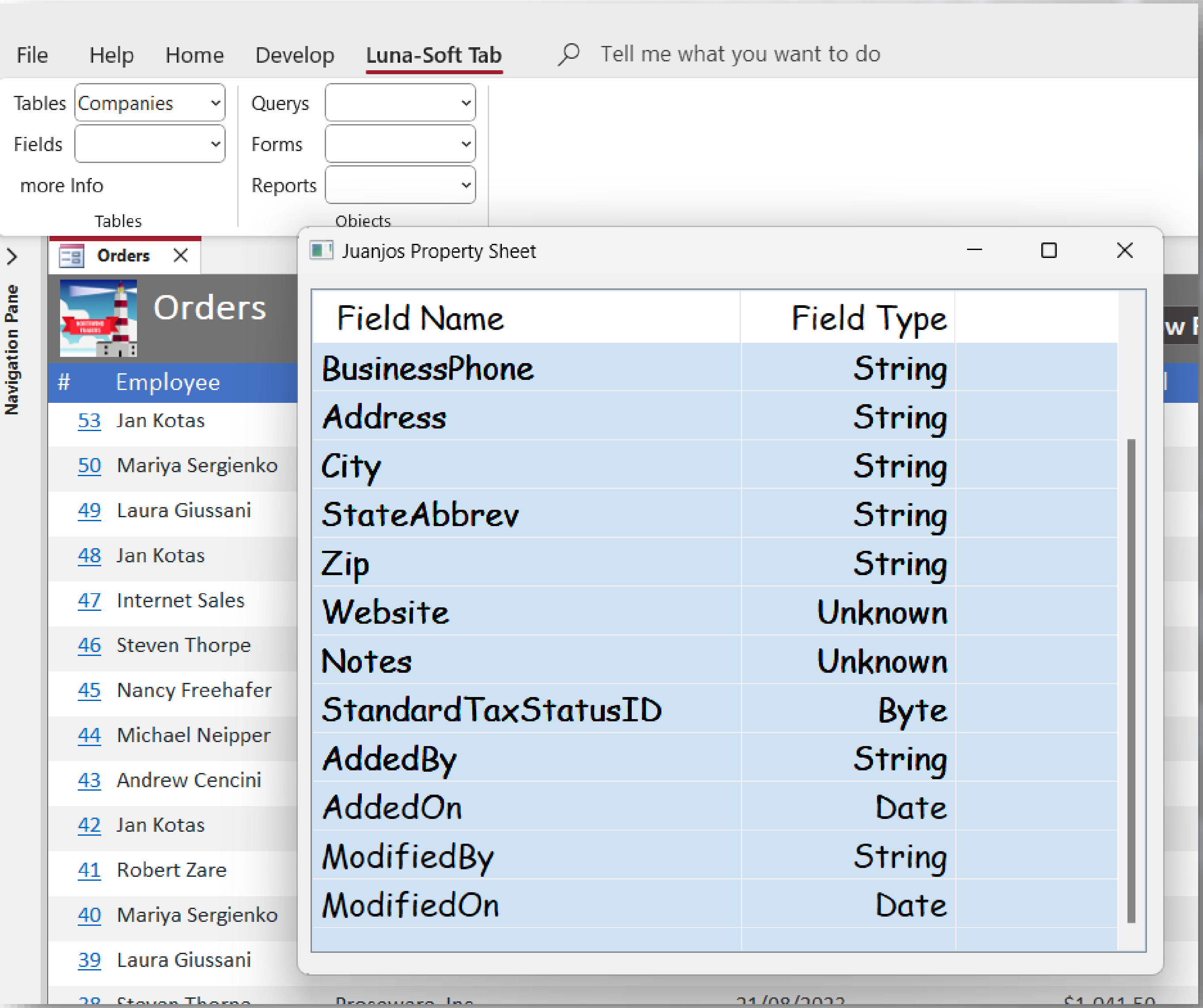
- Lemmings
- photoDemon

✓ winDev: package

(https://github.com/fafalone/WinDevLib/issues/9#issuecomment-1416767019)

✓ Teil 1: Add-Ins Access

● Control Objects Addin


File
Help
Home
Develop
Luna-Soft Tab
Tell me what you want to do
Querys
Forms
Reports
more Info
Tables
Objects
Navigation Pane
Orders
Juanjos Property Sheet

Tables: Companies

Fields:

#	Employee
53	Jan Kotas
50	Mariya Sergienko
49	Laura Giussani
48	Jan Kotas
47	Internet Sales
46	Steven Thorpe
45	Nancy Freehafer
44	Michael Neipper
43	Andrew Cencini
42	Jan Kotas
41	Robert Zare
40	Mariya Sergienko
39	Laura Giussani

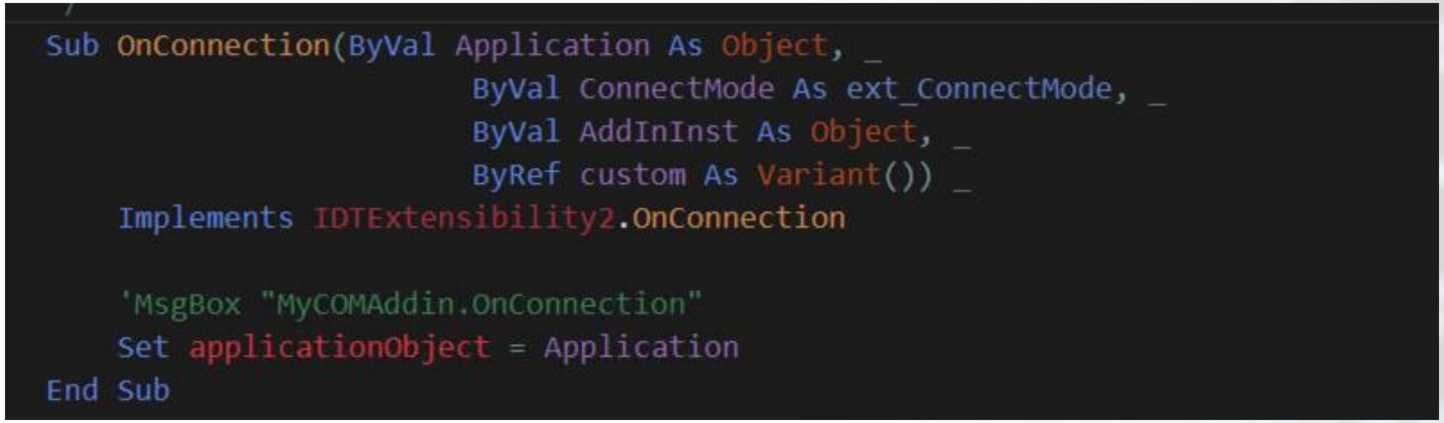
Field Name	Field Type
BusinessPhone	String
Address	String
City	String
StateAbbrev	String
Zip	String
Website	Unknown
Notes	Unknown
StandardTaxStatusID	Byte
AddedBy	String
AddedOn	Date
ModifiedBy	String
ModifiedOn	Date

luna-soft

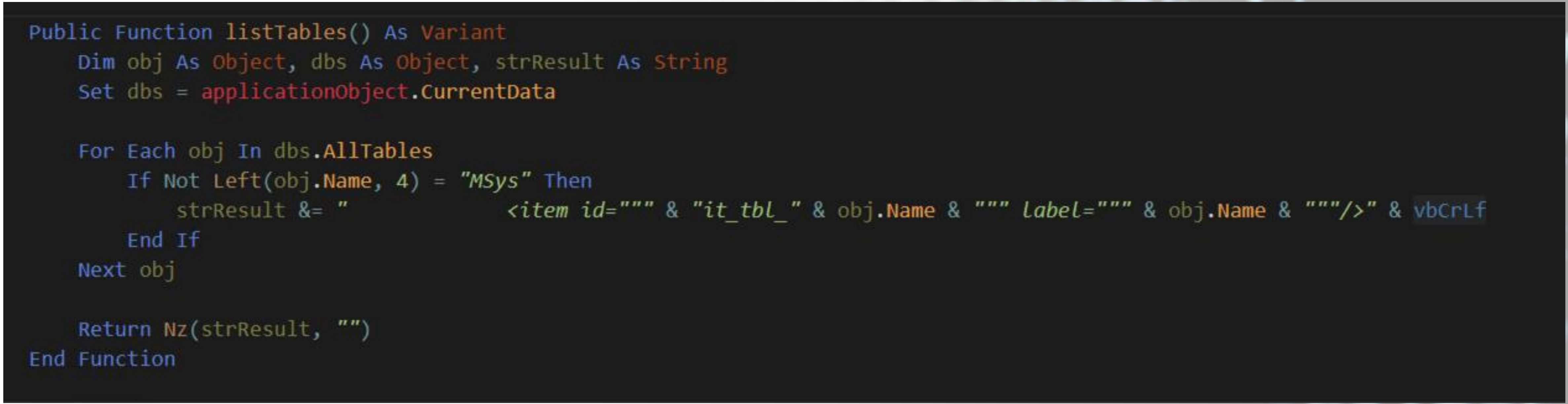
✓ Teil 1: Add-Ins Access

● Control Objects Addin

twin BASIC



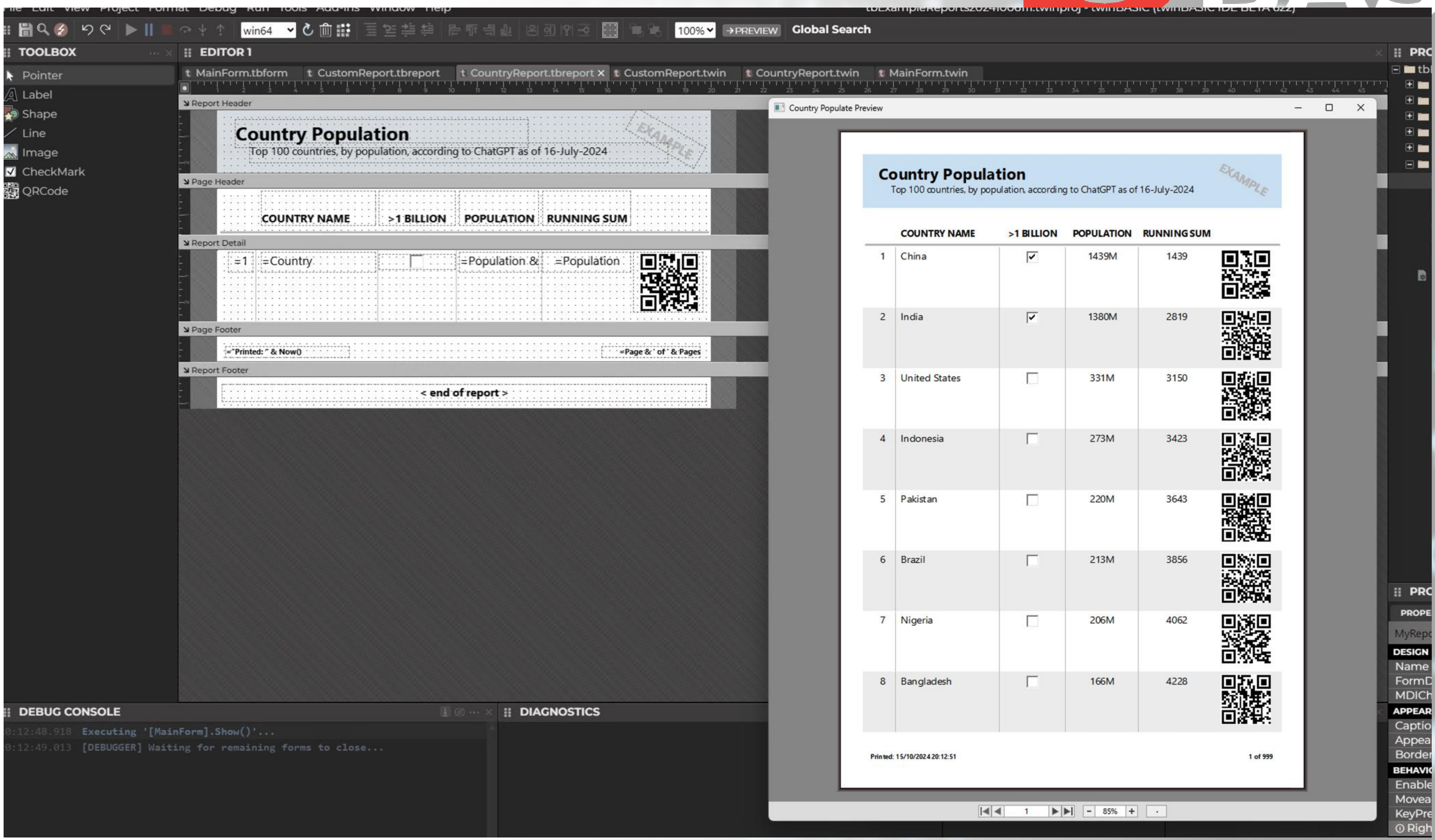
```
Sub OnConnection(ByVal Application As Object, _
                          ByVal ConnectMode As ext_ConnectMode, _
                          ByVal AddInInst As Object, _
                          ByRef custom As Variant()) _
    Implements IDTExtensibility2.OnConnection

    'MsgBox "MyCOMAddin.OnConnection"
    Set applicationObject = Application
End Sub
```



```
Public Function listTables() As Variant
    Dim obj As Object, dbs As Object, strResult As String
    Set dbs = applicationObject.CurrentData

    For Each obj In dbs.AllTables
        If Not Left(obj.Name, 4) = "MSys" Then
            strResult &= "            <item id=""" & "it_tbl_" & obj.Name & """ label=""" & obj.Name & """/>" & vbCrLf
        End If
    Next obj

    Return Nz(strResult, "")
End Function
```

✓ Teil 2: Berichts-Feature

● Kurzes Beispiel ohne Access


win64
100%
→PREVIEW
Global Search
TOOLBOX
Pointer
Label
Shape
Line
Image
CheckMark
QRCode
EDITOR 1
MainForm.tbform
CustomReport.tbreport
CountryReport.tbreport
CustomReport.twin
CountryReport.twin
MainForm.twin
Report Header
Page Header
Report Detail
Page Footer
Report Footer
DEBUG CONSOLE
DIAGNOSTICS
Country Populate Preview
85%

Country Population

Top 100 countries, by population, according to ChatGPT as of 16-July-2024

EXAMPLE

COUNTRY NAME | >1 BILLION | POPULATION | RUNNING SUM

=1 | =Country | ☐ | =Population & | =Population

="Printed: " & Now()

=Page & " of " & Pages

< end of report >

```
0:12:48.918  Executing '[MainForm].Show()'...
0:12:49.013  [DEBUGGER] Waiting for remaining forms to close...
```

Country Population

Top 100 countries, by population, according to ChatGPT as of 16-July-2024

EXAMPLE

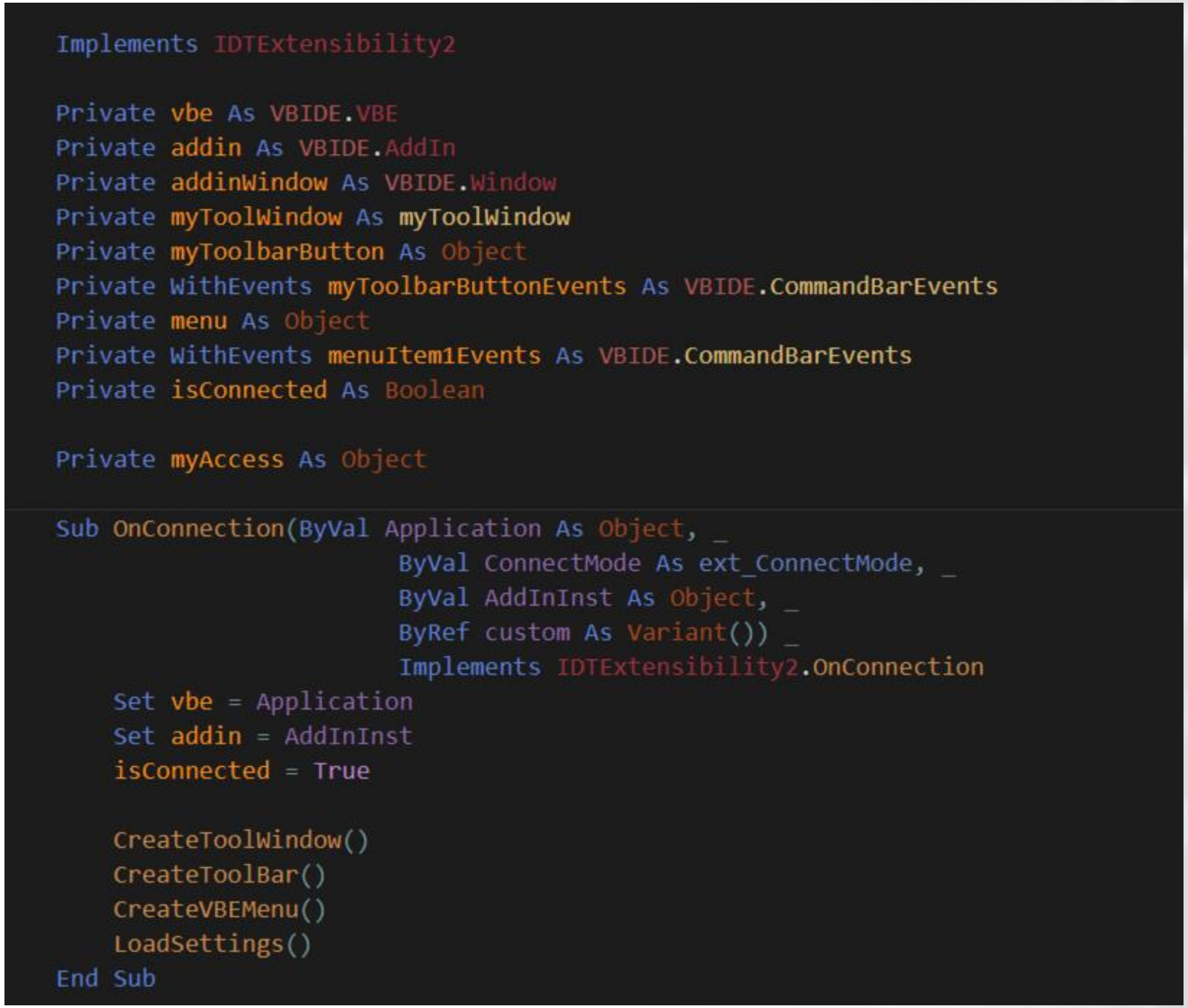
	COUNTRY NAME	>1 BILLION	POPULATION	RUNNING SUM
1	China	☑	1439M	1439
2	India	☑	1380M	2819
3	United States	☐	331M	3150
4	Indonesia	☐	273M	3423
5	Pakistan	☐	220M	3643
6	Brazil	☐	213M	3856
7	Nigeria	☐	206M	4062
8	Bangladesh	☐	166M	4228

Printed: 15/10/2024 20:12:51

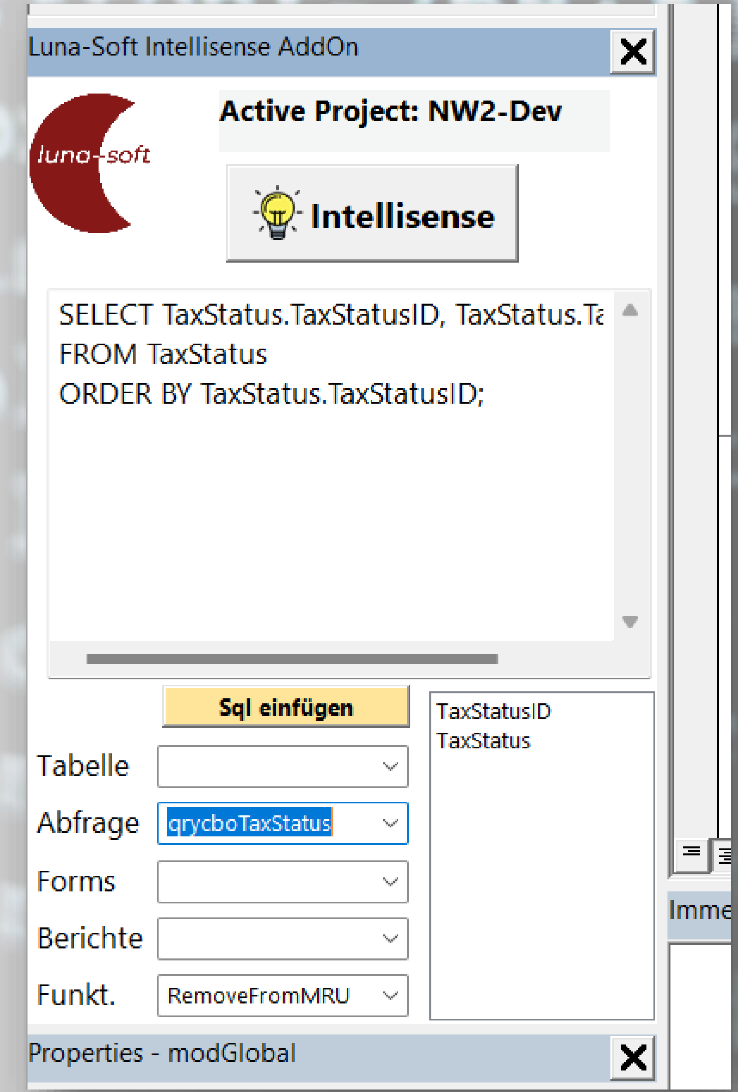
1 of 999

✓ Teil 3: Add-Ins IDE-VBA

● Auto Intellisense



```
Implements IDTExtensibility2

Private vbe As VBIDE.VBE
Private addin As VBIDE.AddIn
Private addinWindow As VBIDE.Window
Private myToolWindow As myToolWindow
Private myToolbarButton As Object
Private WithEvents myToolbarButtonEvents As VBIDE.CommandBarEvents
Private menu As Object
Private WithEvents menuItem1Events As VBIDE.CommandBarEvents
Private isConnected As Boolean

Private myAccess As Object

Sub OnConnection(ByVal Application As Object, _
                        ByVal ConnectMode As ext_ConnectMode, _
                        ByVal AddInInst As Object, _
                        ByRef custom As Variant()) _
                        Implements IDTExtensibility2.OnConnection
    Set vbe = Application
    Set addin = AddInInst
    isConnected = True

    CreateToolWindow()
    CreateToolBar()
    CreateVBEMenu()
    LoadSettings()
End Sub
```



Luna-Soft Intellisense AddOn

Active Project: NW2-Dev

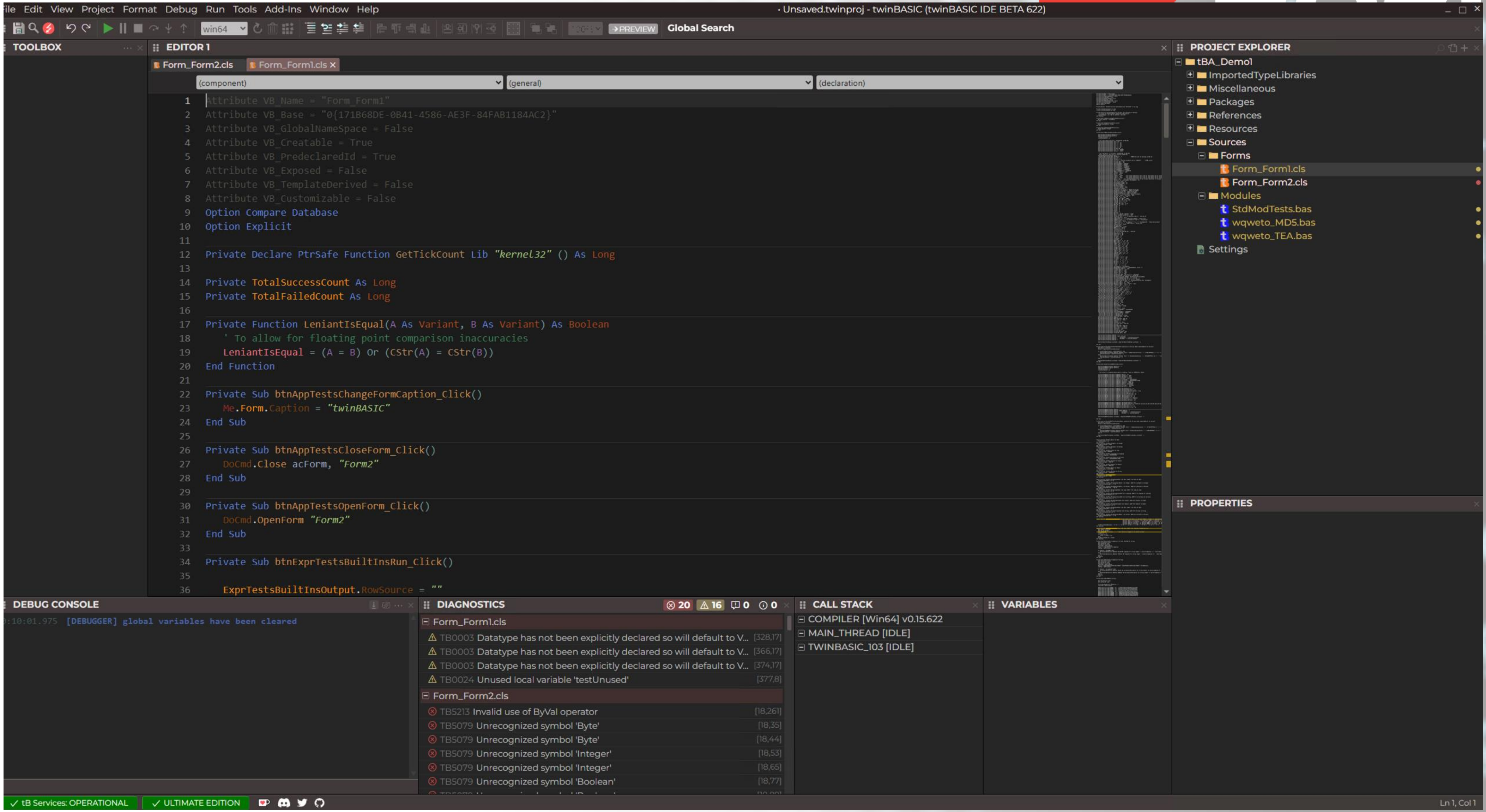
```
SELECT TaxStatus.TaxStatusID, TaxStatus.Ta
FROM TaxStatus
ORDER BY TaxStatus.TaxStatusID;
```

Tabelle:
Abfrage: qrycboTaxStatus
Forms:
Berichte:
Funkt.: RemoveFromMRU

TaxStatusID
TaxStatus

Properties - modGlobal

✓ Teil 4: tBA - twinBASIC for Applications (experimentell)


ile Edit View Project Format Debug Run Tools Add-Ins Window Help
· Unsaved.twinproj - twinBASIC (twinBASIC IDE BETA 622)
win64
PREVIEW
Global Search
TOOLBOX
EDITOR 1
Form_Form2.cls
Form_Form1.cls
(component)
(general)
(declaration)
PROJECT EXPLORER
tBA_Demo1
ImportedTypeLibraries
Miscellaneous
Packages
References
Resources
Sources
Forms
Form_Form1.cls
Form_Form2.cls
Modules
StdModTests.bas
wqweto_MD5.bas
wqweto_TEA.bas
Settings
PROPERTIES
DEBUG CONSOLE
DIAGNOSTICS
20
16
0
0
CALL STACK
VARIABLES
✓ tB Services: OPERATIONAL
✓ ULTIMATE EDITION
Ln 1, Col 1

```
Attribute VB_Name = "Form_Form1"
Attribute VB_Base = "0{171B68DE-0B41-4586-AE3F-84FAB1184AC2}"
Attribute VB_GlobalNameSpace = False
Attribute VB_Creatable = True
Attribute VB_PredeclaredId = True
Attribute VB_Exposed = False
Attribute VB_TemplateDerived = False
Attribute VB_Customizable = False
Option Compare Database
Option Explicit

Private Declare PtrSafe Function GetTickCount Lib "kernel32" () As Long

Private TotalSuccessCount As Long
Private TotalFailedCount As Long

Private Function LeniantIsEqual(A As Variant, B As Variant) As Boolean
   ' To allow for floating point comparison inaccuracies
   LeniantIsEqual = (A = B) Or (CStr(A) = CStr(B))
End Function

Private Sub btnAppTestsChangeFormCaption_Click()
   Me.Form.Caption = "twinBASIC"
End Sub

Private Sub btnAppTestsCloseForm_Click()
   DoCmd.Close acForm, "Form2"
End Sub

Private Sub btnAppTestsOpenForm_Click()
   DoCmd.OpenForm "Form2"
End Sub

Private Sub btnExprTestsBuiltInsRun_Click()

   ExprTestsBuiltInsOutput.RowSource = ""
```

```
:10:01.975  [DEBUGGER] global variables have been cleared
```

```
Form_Form1.cls
  ⚠ TB0003 Datatype has not been explicitly declared so will default to V...  [328,17]
  ⚠ TB0003 Datatype has not been explicitly declared so will default to V...  [366,17]
  ⚠ TB0003 Datatype has not been explicitly declared so will default to V...  [374,17]
  ⚠ TB0024 Unused local variable 'testUnused'                                 [377,8]
Form_Form2.cls
  ⊗ TB5213 Invalid use of ByVal operator                                     [18,261]
  ⊗ TB5079 Unrecognized symbol 'Byte'                                         [18,35]
  ⊗ TB5079 Unrecognized symbol 'Byte'                                         [18,44]
  ⊗ TB5079 Unrecognized symbol 'Integer'                                      [18,53]
  ⊗ TB5079 Unrecognized symbol 'Integer'                                      [18,65]
  ⊗ TB5079 Unrecognized symbol 'Boolean'                                      [18,77]
```

```
COMPILER [Win64] v0.15.622
MAIN_THREAD [IDLE]
TWINBASIC_103 [IDLE]
```

Fazit

Ist twinBASIC etwas für mich?

- Personalisieren ACCESS
- Custom Controls
- DLL (Dein Code ist nicht einsehbar)
- Android – Mac -Linux

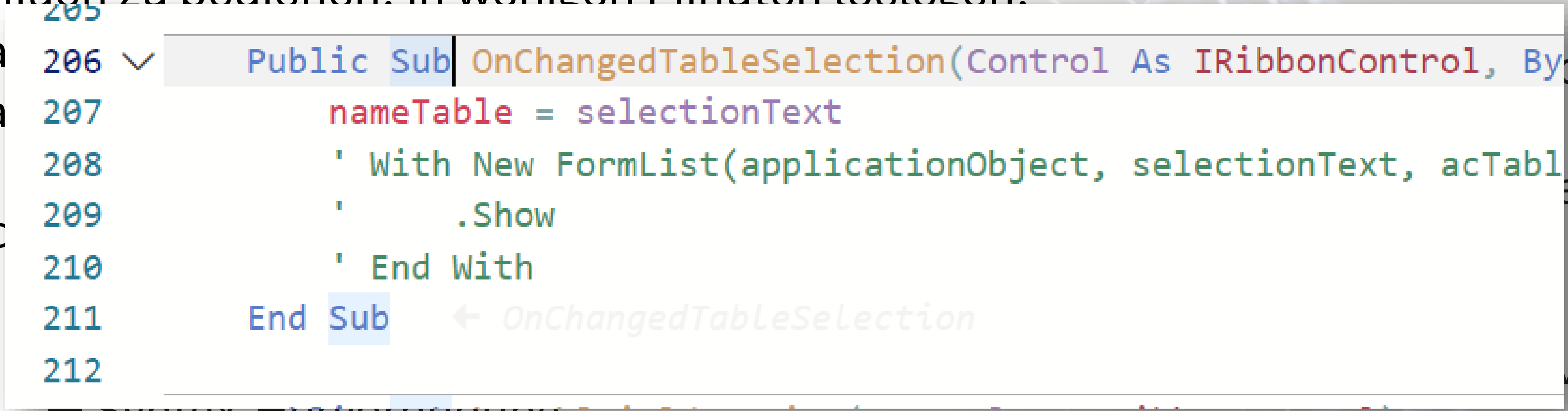
Dok.

- Fragen?
- Links und Ressourcen.

Access-Entwickler-Konferenz

Was ist twinBASIC?

- ✓ Einfach zu bedienen, in wenigen Minuten loslegen!
- ✓ Na
- de-Editor
- ✓ Na
- ✓ Vo
- erelemente
- ✓ Mo
- ver

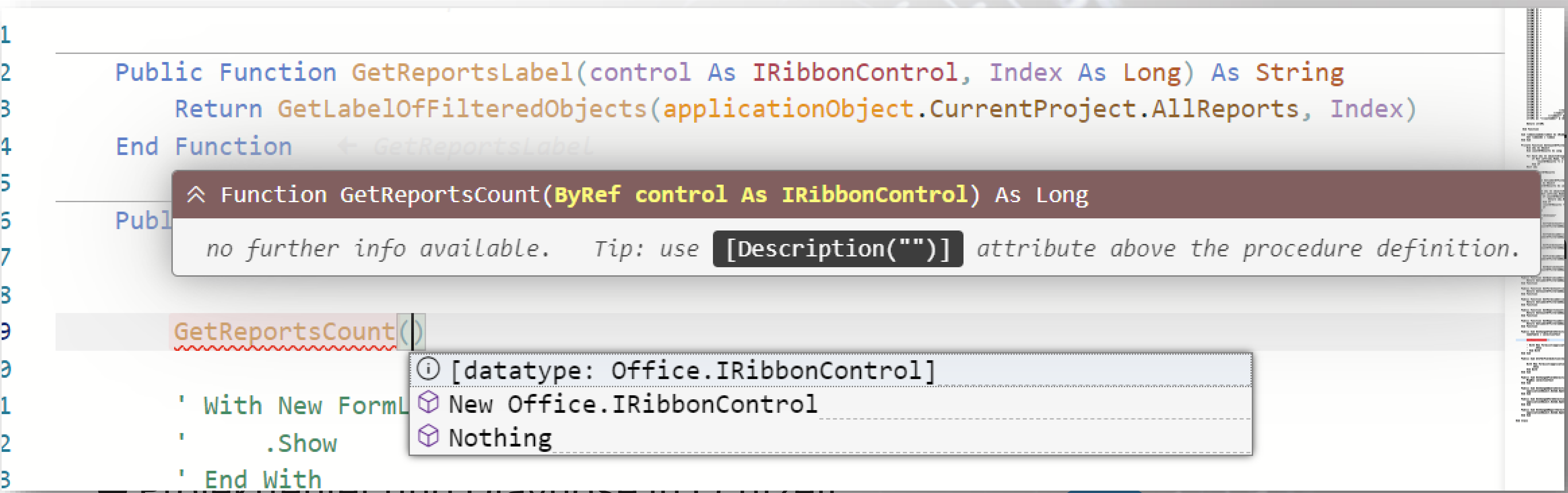


```
    Public Sub OnChangedTableSelection(Control As IRibbonControl, By
        nameTable = selectionText
        ' With New FormList(applicationObject, selectionText, acTabl
        '       .Show
        ' End With
    End Sub   ← OnChangedTableSelection
```

- ● Syntax-Hervorhebung
- ● Projektfehler und Diagnose in Echtzeit
- ● IDE-Themes (dunkel und hell)

Was ist twinBASIC?

✓
✓
✓
✓
✓
✓



```
    Public Function GetReportsLabel(control As IRibbonControl, Index As Long) As String
        Return GetLabelOfFilteredObjects(applicationObject.CurrentProject.AllReports, Index)
    End Function   ← GetReportsLabel

    Publ

        GetReportsCount()

        ' With New FormL
        '     .Show
        ' End With
```

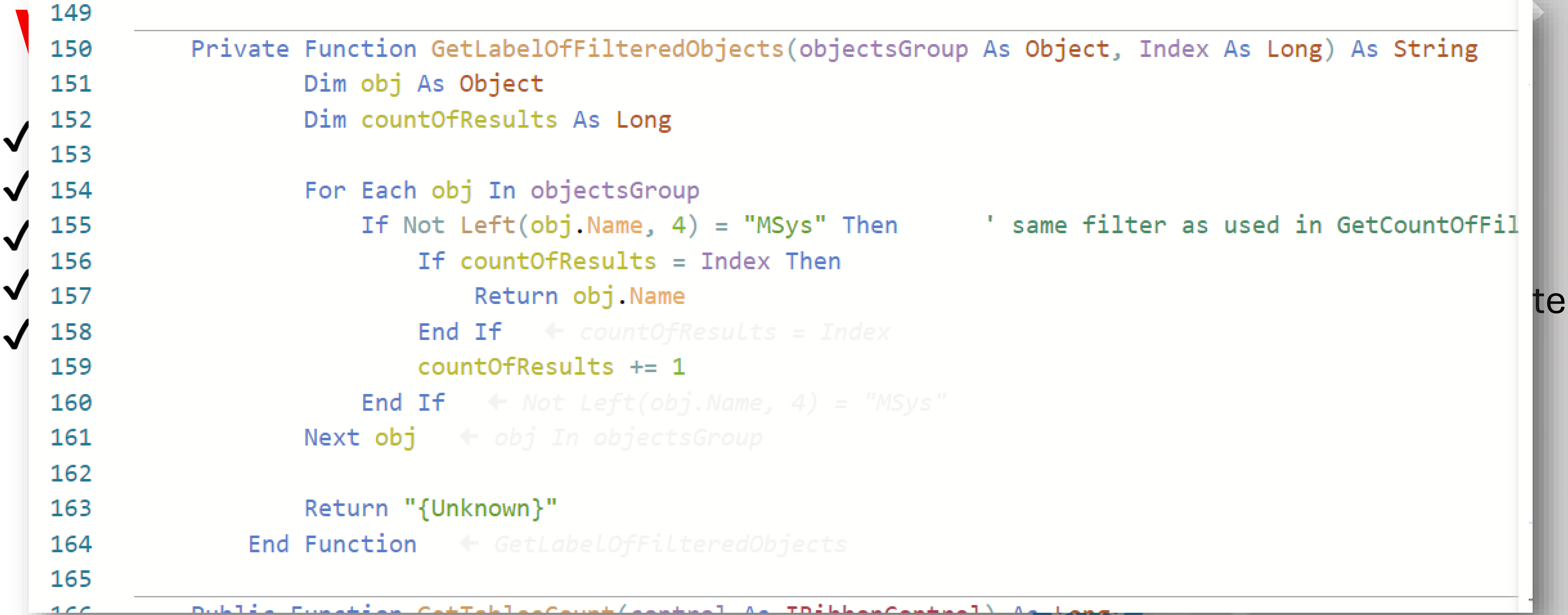
Function GetReportsCount(**ByRef control As IRibbonControl**) As Long

no further info available.   Tip: use `[Description("")]` *attribute above the procedure definition.*

[datatype: Office.IRibbonControl]
New Office.IRibbonControl
Nothing

te

- Projektfehler und Diagnose in Echtzeit
- IDE-Themes (dunkel und hell)

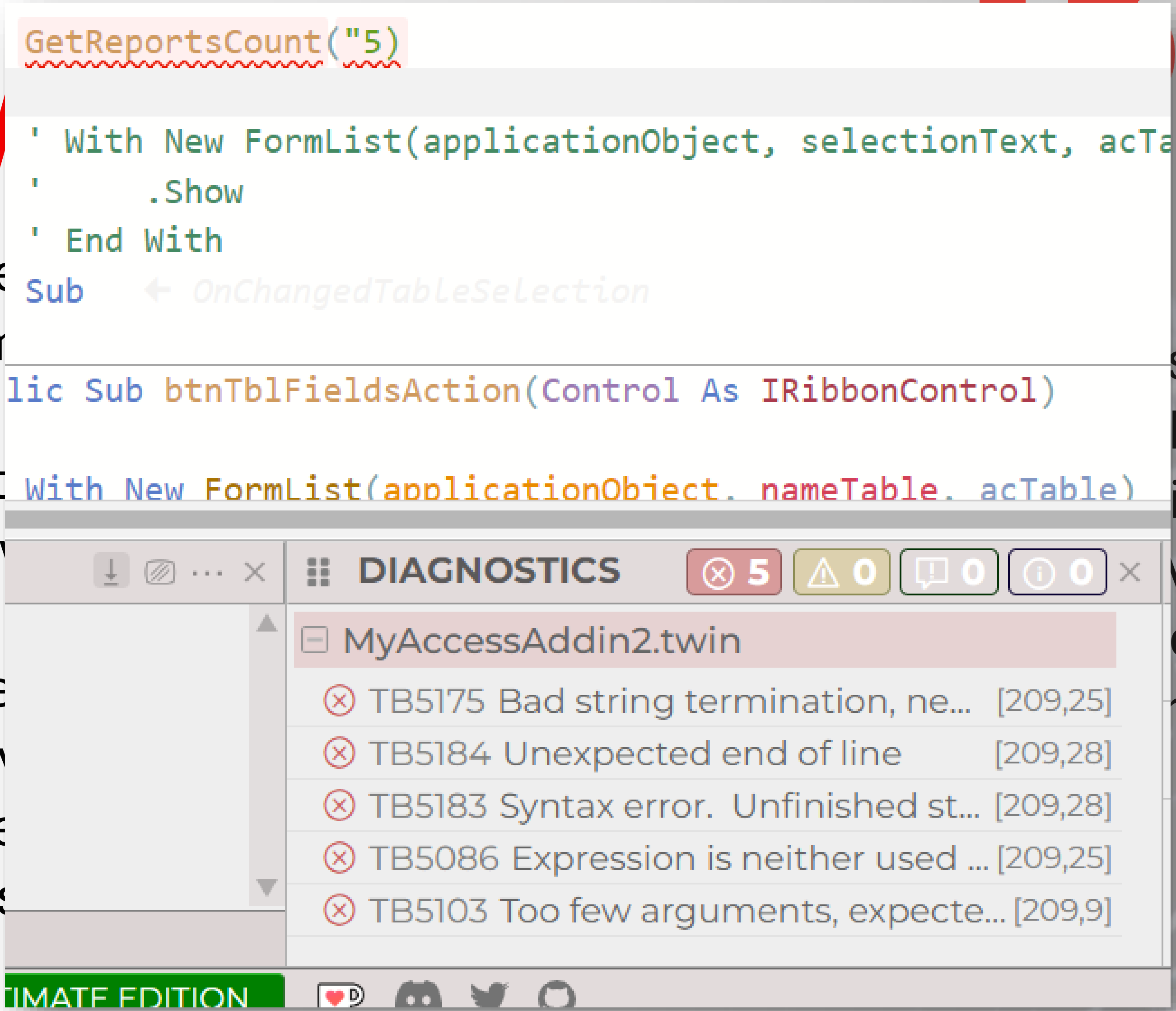


```
    Private Function GetLabelOfFilteredObjects(objectsGroup As Object, Index As Long) As String
            Dim obj As Object
            Dim countOfResults As Long

            For Each obj In objectsGroup
                If Not Left(obj.Name, 4) = "MSys" Then      ' same filter as used in GetCountOfFil
                    If countOfResults = Index Then
                        Return obj.Name
                    End If  ← countOfResults = Index
                    countOfResults += 1
                End If  ← Not Left(obj.Name, 4) = "MSys"
            Next obj  ← obj In objectsGroup

            Return "{Unknown}"
        End Function  ← GetLabelOfFilteredObjects

    Public Function GetTablesCount(control As IRibbonControl) As Long
```

te

Was ist tw

- ✓ Einfach zu bediene
- ✓ Nahtlose VB6-Kom
- ✓ Native 32-Bit- und
- ✓ Volle Unicode-Unt
- ✓ Moderne, leichtge
  - ● Code-Faltu
  - ● Inline-Code
  - ● Syntax-Herv
  - ● Projektfehle
  - ● IDE-Themes



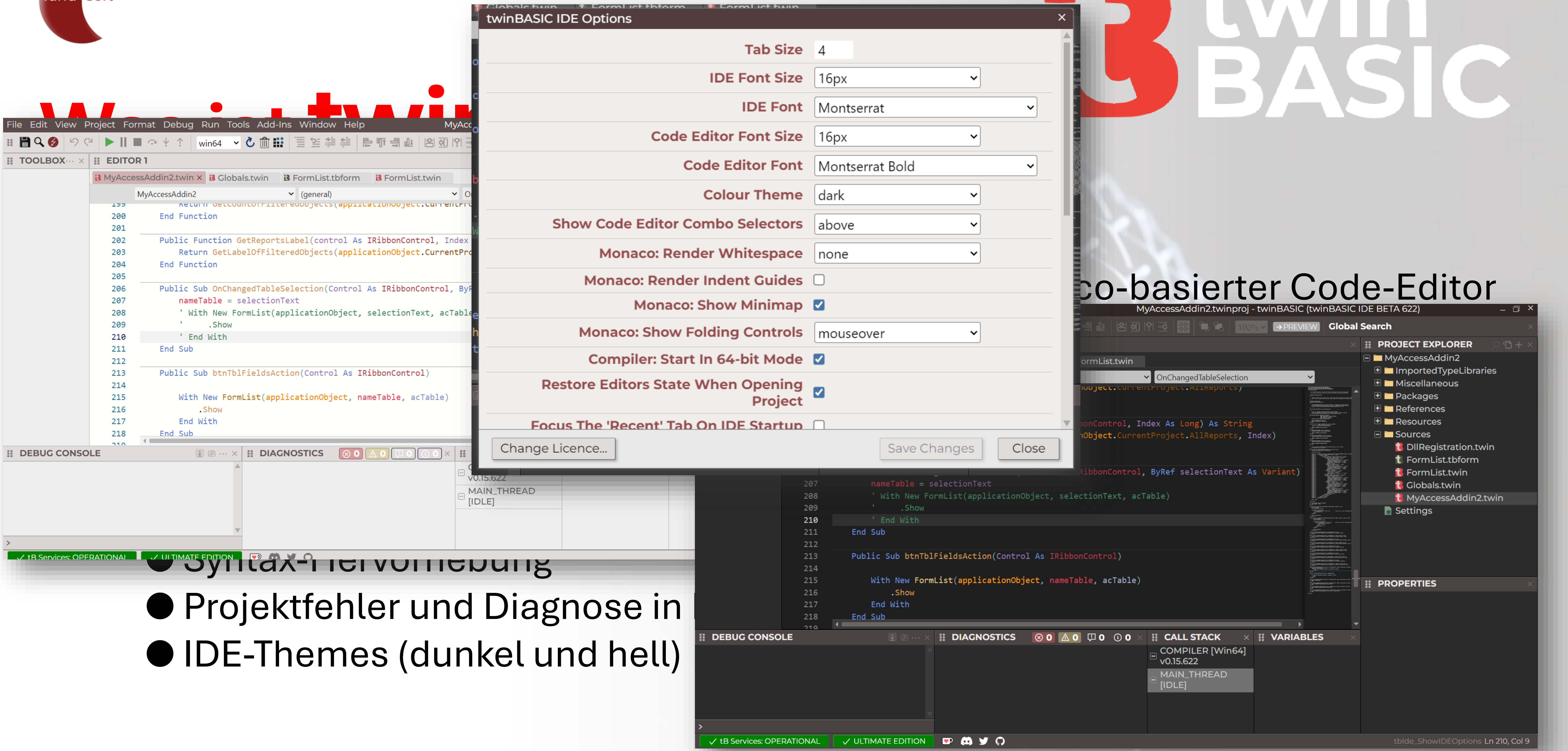
```
GetReportsCount("5)

' With New FormList(applicationObject, selectionText, acTa
'      .Show
' End With
Sub   ← OnChangedTableSelection

lic Sub btnTblFieldsAction(Control As IRibbonControl)

With New FormList(applicationObject, nameTable, acTable)
```

MyAccessAddin2.twin

- ⊗ TB5175 Bad string termination, ne... [209,25]
- ⊗ TB5184 Unexpected end of line [209,28]
- ⊗ TB5183 Syntax error. Unfinished st... [209,28]
- ⊗ TB5086 Expression is neither used ... [209,25]
- ⊗ TB5103 Too few arguments, expecte... [209,9]

sierter Code-Editor
Debugger
ierte Steuerelemente
View2
ode
Paketserver

co-basierter Code-Editor



twinBASIC IDE Options

Tab Size	4
IDE Font Size	16px
IDE Font	Montserrat
Code Editor Font Size	16px
Code Editor Font	Montserrat Bold
Colour Theme	dark
Show Code Editor Combo Selectors	above
Monaco: Render Whitespace	none
Monaco: Render Indent Guides	☐
Monaco: Show Minimap	☑
Monaco: Show Folding Controls	mouseover
Compiler: Start In 64-bit Mode	☑
Restore Editors State When Opening Project	☑
Focus The 'Recent' Tab On IDE Startup	☐

```
End Function

Public Function GetReportsLabel(control As IRibbonControl, Index
    Return GetLabelOfFilteredObjects(applicationObject.CurrentPr

End Function

Public Sub OnChangedTableSelection(Control As IRibbonControl, ByRef selectionText As Variant)
    nameTable = selectionText
    ' With New FormList(applicationObject, selectionText, acTable)
    '     .Show
    ' End With
End Sub

Public Sub btnTblFieldsAction(Control As IRibbonControl)

    With New FormList(applicationObject, nameTable, acTable)
        .Show
    End With
End Sub
```

File Edit View Project Format Debug Run Tools Add-Ins Window Help
TOOLBOX
EDITOR 1
MyAccessAddin2.twin
Globals.twin
FormList.tbform
FormList.twin
DEBUG CONSOLE
DIAGNOSTICS
Change Licence...
Save Changes
Close
MyAccessAddin2.twinproj - twinBASIC (twinBASIC IDE BETA 622)
PREVIEW
Global Search
PROJECT EXPLORER
MyAccessAddin2
ImportedTypeLibraries
Miscellaneous
Packages
References
Resources
Sources
DllRegistration.twin
FormList.tbform
FormList.twin
Globals.twin
MyAccessAddin2.twin
Settings
PROPERTIES
CALL STACK
COMPILER [Win64] v0.15.622
MAIN_THREAD [IDLE]
VARIABLES
tB Services: OPERATIONAL
ULTIMATE EDITION
tbIde_ShowIDEOptions Ln 210, Col 9

- Projektfehler und Diagnose in
- IDE-Themes (dunkel und hell)

Was ist twinBA

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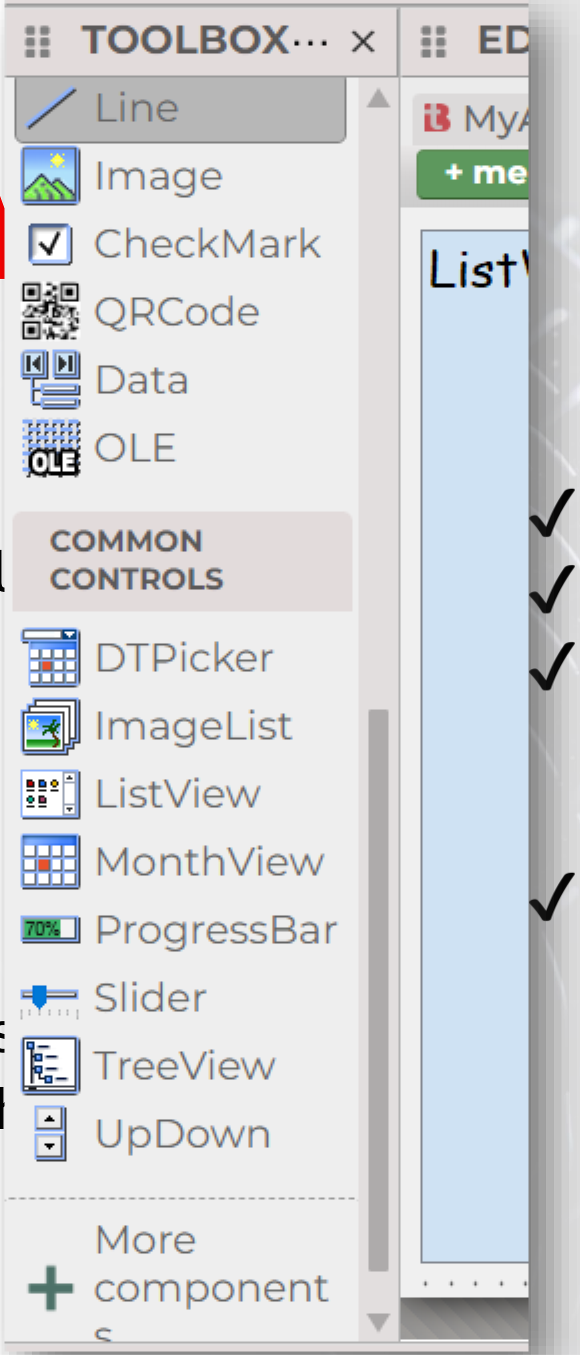
  - ● Code-Faltung
  - ● Inline-Code-Hinweise
  - ● Syntax-Hervorhebung
  - ● Projektfehler und Diagnos
  - ● IDE-Themes (dunkel und


TOOLBOX… ×
ED
Line
Image
CheckMark
QRCode
Data
OLE
COMMON CONTROLS
DTPicker
ImageList
ListView
MonthView
ProgressBar
Slider
TreeView
UpDown
More components
MyA
+ me
List

- ✓ Monaco-basierter Code-Editor
- ✓ Integrierter Debugger
- ✓ Neue integrierte Steuerelemente
  - ● WebView2
  - ● QRCode
- ✓ Eingebauter Paketserver

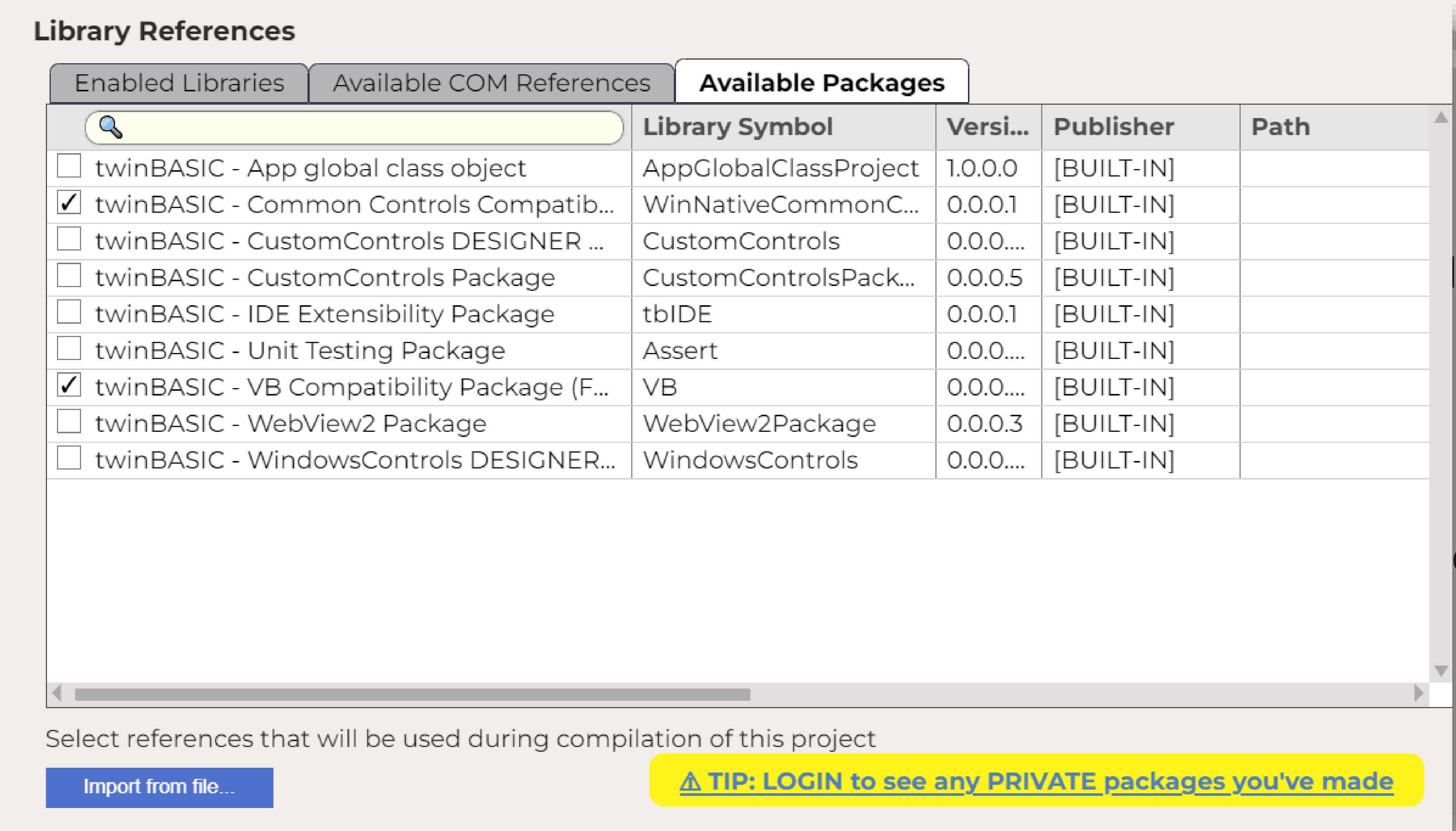
Wa

✓ Einfa
✓ Naht
✓ Nativ
✓ Volle
✓ Mod

le-Editor

relemente

er



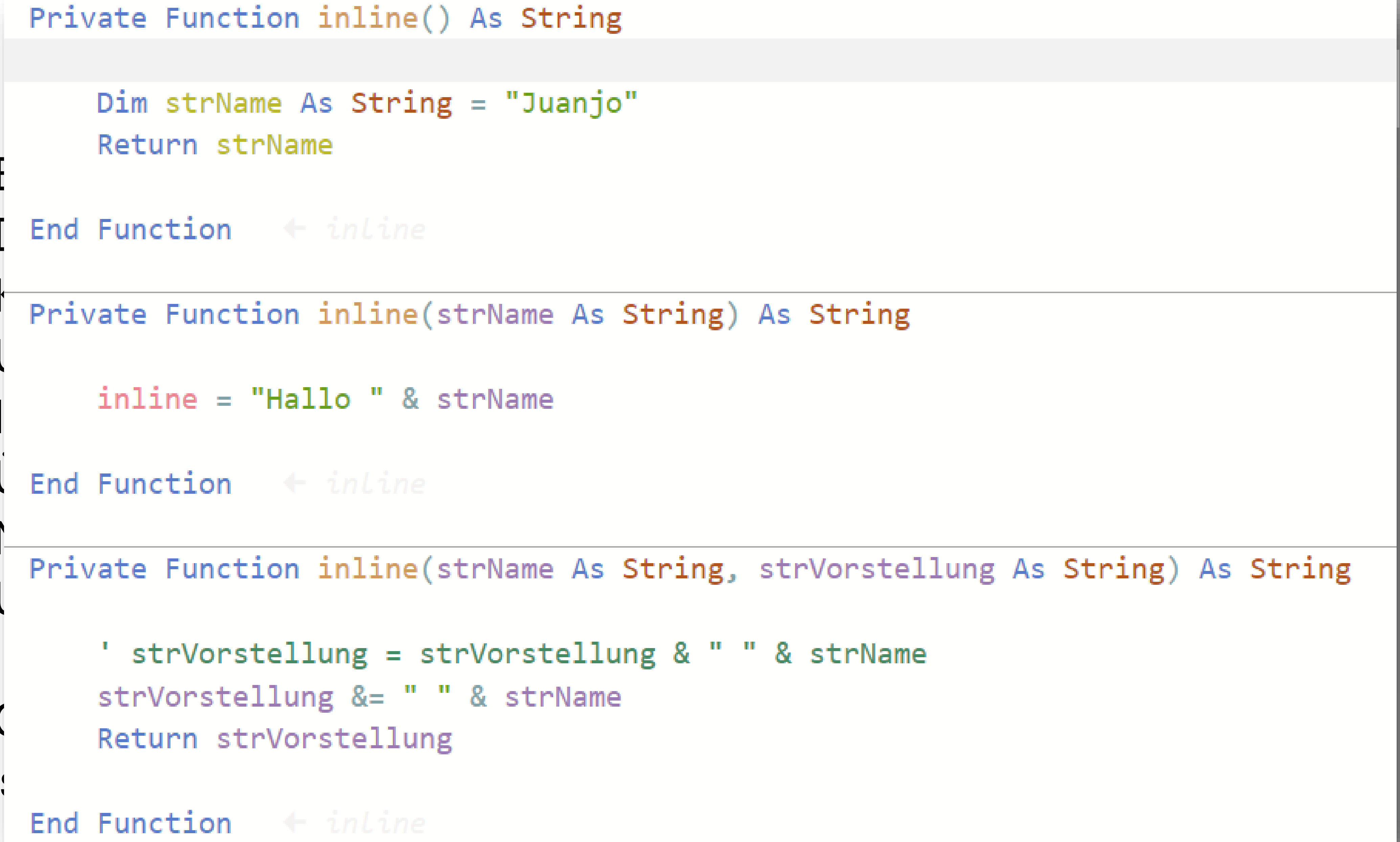
Library References

Enabled Libraries
Available COM References
Available Packages

	Library Symbol	Versi...	Publisher	Path
☐ twinBASIC - App global class object	AppGlobalClassProject	1.0.0.0	[BUILT-IN]	
☑ twinBASIC - Common Controls Compatib...	WinNativeCommonC...	0.0.0.1	[BUILT-IN]	
☐ twinBASIC - CustomControls DESIGNER ...	CustomControls	0.0.0....	[BUILT-IN]	
☐ twinBASIC - CustomControls Package	CustomControlsPack...	0.0.0.5	[BUILT-IN]	
☐ twinBASIC - IDE Extensibility Package	tbIDE	0.0.0.1	[BUILT-IN]	
☐ twinBASIC - Unit Testing Package	Assert	0.0.0....	[BUILT-IN]	
☑ twinBASIC - VB Compatibility Package (F...	VB	0.0.0....	[BUILT-IN]	
☐ twinBASIC - WebView2 Package	WebView2Package	0.0.0.3	[BUILT-IN]	
☐ twinBASIC - WindowsControls DESIGNER...	WindowsControls	0.0.0....	[BUILT-IN]	

Select references that will be used during compilation of this project

Import from file...
⚠ TIP: LOGIN to see any PRIVATE packages you've made



```
Private Function inline() As String

    Dim strName As String = "Juanjo"
    Return strName

End Function  ← inline
```

```
Private Function inline(strName As String) As String

    inline = "Hallo " & strName

End Function  ← inline
```

```
Private Function inline(strName As String, strVorstellung As String) As String

    ' strVorstellung = strVorstellung & " " & strName
    strVorstellung &= " " & strName
    Return strVorstellung

End Function  ← inline
```

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