

# Visual Basic Invisible Tools v1.40

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# What is a Table?

A VBIT table is a dynamic array or matrix of variable length text strings.

It is possible to define arrays of strings in native Visual Basic too, but lacks flexibility, and the practical limits makes it completely useless compared to tables in VBIT:

```
Static SmallMatrix(500, 10) As String ' Standard Visual Basic
For i% = 1 To 500
    For j% = 1 To 10
        SmallMatrix(i%, j%) = "TESTING"
    Next j%
Next i%
```

**"OUT OF STRING SPACE"** is the message from Visual Basic !  
I've got 16 MB of RAM, but VB does not want to use it.

***String Arrays in VB are not going to be mentioned any more, from this point. In the following, the term Array will only be used for describing a table with only one column.***

' The good news are: the following works fine

```
BigTable& = ITabNew(5000, 10) ' VBIT 10 times bigger - no problem !
For i% = 1 To 5000
    For j% = 1 To 10
        ITabPut BigTable&, i%, j%, "TESTING"
    Next j%
Next i%
```

'You may put several megabytes of data into the VBIT tables.

The powerful routines for table searching, sorting, file I/O and all the other routines found in VBIT will open a new world for all Visual Basic programmers - giving the programming the power you have dreamed of !

## Where to find VBIT?

The latest release of VBIT will always be available at Trader's Mascot BBS

**This is a BBS running Excalibur : Phone : +47 7012 9014**

**You may also find VBIT on InterNet**

<http://www.prodat.no/infotech/>

## Important information for IdbTools users

From version 1.15, this tool is called VBIT.

Users of previous versions (IdbTools) should be aware of the following changes:

Old routine name	New routine name	Comments
LicenseIdbTools	<b>LicenseVBIT</b>	Old license codes will still be valid
IdbTrace	<b>Trace</b>	
IdbTraceStr	<b>TraceStr</b>	
VersionIdbTools	<b>FileGetVersion("VBIT.DLL")</b>	The new routine will work for other files too

The following calls will be slightly different from previous versions:

**SysInfo(DIR\_WINDOWS)**  
**SysInfo(DIR\_WINDOWS\_SYSTEM)**  
**SysInfo(DISK\_PATH)**

The returned path will always be terminated by "\" (e.g. "C:\WINDOWS\"). **VBIT.BAS** should be included in your projects instead of IDBTOOLS.BAS and IDBTABLE.BAS

If you use the VTSS calls, **VBITVTSS.BAS** should be included too

**Strip** function is changed, the second parameter should now be a string.

Result\$ = **Strip**(StringIn\$, **Char\$**, Type%).

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ITabGetSize  
ITabInsertLine  
ITabInsertLines  
ITabNew  
ITabNewArray  
ITabPut  
ITabPutInt  
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L

LicenseGetCode  
LicenseProgram  
LicenseVBIT

M

Modulus10  
Modulus10Calc  
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Modulus11  
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N

Num0

P

Pick  
PickWord  
PickWords  
Place

S

Strip  
Subst  
SubstAll  
Sound

SwapChrs  
SwapDate  
SwapStr  
SysInfo  
SysInfoNum

T

Trace  
TraceStr

V

VTSSget  
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## VBIT File Routines

- FileExist Function to check if a file exist
- FileFindPath Sarches for a given filename, returns path
- FileGetAttr Returns the attributes for a file as string
- FileGetDate Returns date for a file
- FileGetExt Returns extension of a complete filename.
- FileGetFileName Returns filename without extention
- FileGetPath Returns PATH-part of a complete filename
- FileGetSize Returns filesize as Long
- FileGetTime Returns the time for a file as string
- FileGetVersion Get the current version number of VBIT
- IniFileGetString Read data from a given address in an INI-file
- IniFilePutString Write data to a given address in an INI-file



## Function FileExist

**Example**

**Back**

Function to check if a file exist. FileExist returns (True/False)

**Usage:**

```
Function FileExist%(fileName$)
```

## Example FileExist

```
AutoTab& = ITabRead("C:\AUTOEXEC.BAT",IT_TEXTFILE+IT_ASCII) ' edit file.....
' Write back, but keep original file as ".BAK": ITabWrite(autoTab&,"C:\
AUTOEXEC. $$$",IT_TEXTFILE+IT_ASCII) If FileExist("C:\AUTOEXEC.BAK") Then
Kill "C:\AUTOEXEC.BAK"
End If
Name "C:\AUTOEXEC.BAT" As "C:\AUTOEXEC.BAK"
Name "C:\AUTOEXEC. $$$" As "C:\AUTOEXEC.BAT"
ITabDelete autoTab&
```

## Function FileFindPath

**Example**

**Back**

This function searches for a given filename, and returns the filename complete with path.

The search is first performed in the current path, if the file is not found the search continues in the \WINDOWS\SYSTEM directory, and finally in the PATH settings from environment.

**Usage :**

```
f_file$ = FileFindPath$(file$)
```

## Example FileFindPath

```
file$ = FileFindPath$("VBIT.DLL")
```

```
'Result : file$: "C:\WINDOWS\SYSTEM\VBIT.DLL"
```

## Function FileGetAttr

[Back](#)

Returns the attributes for a file as string. Format : "ADHRS"

A: Archive (set when file is changed - used by back-up systems) D: Directory name  
H: Hidden file  
R: Read-Only file  
S: System file

### Usage:

```
file$ = "C:\WINDOWS\SYSTEM\VBIT.DLL"  
Attr$ = FileGetAttr(file$)
```

## Function FileGetExt

**Example**

**Back**

Returns extension of a complete filename.

**Usage:**

```
file$ = FileGetExt(file$)
```

## Example FileGetExt

```
fil$ = "C:\WINDOWS\SYSTEM\VBIT.DLL"  
f_ext$ = FileGetExt(fil$)           ' f_ext:  "DLL"  
f_fil$ = FileGetFilename(fil$)     ' f_fil:  "VBIT"  
f_name$ = FileGetName(fil$)        ' f_name: "VBIT.DLL"  
f_path$ = FileGetPath(fil$)        ' f_path: "C:\WINDOWS\SYSTEM\"
```

## Function FileGetDate

[Back](#)

Returns date for a file. Format : "YYYYMMDD"

**Usage:**

```
file$ = "C:\WINDOWS\SYSTEM\VBIT.DLL"  
date$ = FileGetDate(file$)
```



## Function FileGetFileName

Example

Back

Returns filename without extension of a complete filename.(D:\path\file.ext)

### Usage:

```
f_fil$ = FileGetFilename(fil$)
```

## Example FileGetFileName

```
fil$ = "C:\WINDOWS\SYSTEM\VBIT.DLL"  
f_fil$ = FileGetFilename(fil$)      ' f_fil:  "VBIT"
```

## Function FileGetPath

Example

Back

Returns PATH-part of a complete filename (D:\PATH\FILE.EXT)

### Usage:

```
path$ = FileGetPath$(file$)
```

## Example FileGetPath

```
wordpath$ = FileGetPath$(FileFindPath$("WINWORD.EXE")) 'wordpath$: "D:\  
WINWORD\"
```

## Function FileGetSize

[Back](#)

Returns filesize as Long. If the file does not exist, the return value is 0. (Visual Basic's FileLen causes a run-time error if the file is unavailable)

### Usage:

```
size& = FileGetSize(file$)
```

## Function FileGetTime

**Example**

**Back**

Returns the time for a file as string. Format : "HHMMSS"

**Usage:**

```
Time$ = FileGetTime(file$)
```

## Example FileGetTime

```
file$ = "WINWORD.EXE"  
time$ = FileGetTime(FileFindPath(file$))
```

## Function FileGetVersion

Example

Back

Get version number of given file.

If the given file is not found in the given path (or current directory), the routine will search for it in \WINDOWS\SYSTEM\ and eventually the path given by the current environment.

### Usage:

Result\$ = FileGetVersion(FileName\$)

The version number is returned as String, but it can be converted to a Double.

The version information is obtained from the standard Windows version information found in most files made for Windows, e.g. DLL-, EXE-, DRV- files. If this information is not present in the given file, this routine will make up a version number based on the file's date and time.

The Windows file version information is internally given by two 32-bit numbers, but is usually presented as four 16-bit numbers separated by periods, e.g. **"3.10.002.5"**. There are also similar information for product version, but this is ignored here.

This routine will return a string which is possible to convert to a number (Double), and will use the following rules:

The version is given by: **"aa.bb.cc.dd"**, where **"aa.bb"** normally is the official version number and **"cc.dd"** is the revision number, if given at all. If the second part is zero, it is ignored by this routine. If it is not zero, the second number will be divided by 1000 and appended to the first number after stripping off the decimal point of the second number. A version number like this, **"3.10.002.5"**, will look like this when returned from this routine: **"3.100025"** (**"3.10"** & **".0025"**).

If the file does not contain any version information, the version number returned from this routine will be made up using the file's date and time information: **"0.0000YYYYMMDDhhmmss"**.



## Example FileGetVersion

```
Result$ = FileGetVersion("VBIT.DLL")      ' Result will be "1.20" for this
version
Result$ = FileGetVersion("C:\VB\VB.EXE")  ' Result: "3.000537"
Result$ = FileGetVersion("C:\CONFIG.SYS") ' Result: "0.000019950310120748"
(date/time info)
```

## Function IniFileGetString

[Example](#)

[See also](#)

[Back](#)

Read data from an INI-file. Filename, section and a profile name is given and the function returns a string containing the profile string. If the profile name do not exist, the return value is an empty string. If the filename is given without any path, the system will start looking for the file in the Windows directory.

### Usage:

```
Result$ = IniFileGetString(Filename$, Section$, Name$)
```

The section name must be given without brackets,

Wrong => "[SectionName]"

Correct => "SectionName"

## Example IniFileGetString

```
StartProg$ = IniFileGetString("SYSTEM.INI", "boot", "shell")  
' Returns perhaps "progman.exe"
```

```
String$ = IniFileGetString("WIN.INI", "MS user info", "DefName") ' Return  
information about the user from "WIN.INI"
```

**See Also**  
[INIFilePutString](#)

## Function IniFilePutString

[Example](#)

[See also](#)

[Back](#)

Write data to an INI-file. Given the filename, section, name and the data to be written.

If the filename is given without any path, the system will start looking for the file in the Windows directory . The section name must be given without brackets. The function returns True(-1) if the call was successful, else False(0).

### **Usage:**

```
Result% = IniFilePutString(FileName$, Section$, Name$, Data$)
```

## Example IniFilePutString

```
Result%=IniFilePutString("MYPROG.INI", "Licence", "Name", "John Doe")
```

```
' Will write within the file "\WINDOWS\MYPROG.INI":
```

```
[Licence]
```

```
Name = John Doe
```

```
OK%=IniFilePutString("WIN.INI", "Desktop", "Wallpaper", "c:\pic\my.bmp")
```

```
' This statement will change the wallpaper, taking effect from the next  
startup of Windows.
```

See Also  
[INIFileGetString](#)

## VBIT Misc Routines

- [AnsiToAscii](#) Translate from Windows to DOS character set
- [AsciiToAnsi](#) Translate from DOS to Windows character set
- [CRLF](#) Manipulate CR/LF in strings, remove/insert
- [Decrypt](#) Recover string encrypted by Encrypt
- [Decrypt7](#) Recover string encrypted by Encrypt7
- [DecryptZ](#) Recover string encrypted by EncryptZ
- [Encrypt](#) Encrypt a string, make unreadable, linked to a key
- [Encrypt7](#) As Encrypt, but, returns only 7-bit characters
- [EncryptZ](#) As Encrypt, but returns only alphanumeric (A-Z,0-9)
- [Find](#) Find a substring within a string from a given position
- [FormNum](#) Format number
- [FullPath](#) Return full path for given file pattern
- [GetDateLong](#) Convert a "dayNumber&" to a long
- [GetDateStr](#) Convert a "dayNumber&"to a string
- [GetDayNumber](#) Return day number relative to 1/1 1800.
- [GetNumDays](#) Returns number of days between two dates
- [Interest](#) Returns calculated interest in given time period
- [LicenseGetCode](#) For the developers internal use, make license code for applications
- [LicenseVBIT](#) Check for legal license code for VBIT users
- [LicenseProgram](#) Check for legal license code for applications
- [Modulus10](#) Append a CDV (Control Digit Verifier) to number, 10 method
- [Modulus10Calc](#) Return the CDV for a number, 10 method
- [Modulus10Valid](#) Check CDV in number and return false / true, 10 method
- [Modulus11](#) Append a CDV (Control Digit Verifier) to number, 11 method
- [Modulus11Calc](#) Return the CDV for a number, 11 method
- [Modulus11Valid](#) Check CDV in number and return false / true, 11 method
- [Num0](#) Translate from number to string with leading zeros
- [Pick](#) Pick a substring from string
- [PickWord](#) Pick a word from a string
- [PickWords](#) Pick more then one word from a string
- [Place](#) Insert a substring into an other string
- [Sound](#) Play sounds
- [Strip](#) Remove a given character from a string
- [Subst](#) Substitute one substring with an other within a string
- [SubstAll](#) Substitute all matching substrings within a string
- [SwapChrs](#) Exchange two characters within a string.
- [SwapDate](#) Exchange positions in a datestring.
- [SwapStr](#) Exchange positions in a string according to a formatted mask
- [SysInfo](#) Return system information as string.
- [SysInfoNum](#) Return system information as integer
- [Trace](#) Write text (string + newline) to debug output window
- [TraceStr](#) Write string to debug output window



## Function AnsiTiAscii

[Example](#)

[See also](#)

[Back](#)

Translate string from Windows to DOS character set.

### **Usage:**

```
Result$ = AnsiToAscii(StringIn$)
```

[Sample collection](#)

## Example AnsiToAscii

We want to write some text containing special characters to a DOS file:

```
Open "scan-dos.txt" For Output As #1
Write #1, "In Norway and Denmark, we use some special characters:"
Write #1, AnsiToAscii("      [Æ]=[AE], [Ø]=[OE] and [Å]=[AA]")
Write #1, AnsiToAscii("      [æ]=[ae], [ø]=[oe] and [å]=[aa]")
Write #1, AnsiToAscii("In Sweden, they use [Ä] instead of [Æ],")
Write #1, AnsiToAscii("      [ä]=[æ], [Ö]=[Ø] and [ö]=[ø].")
Close #1
```

From DOS, we can look at the file we just made:

```
C:\VBIT\TEST> type scan-dos.txt
In Norway and Denmark, we use some special characters:
      [Æ]=[AE], [Ø]=[OE] and [Å]=[AA]
      [æ]=[ae], [ø]=[oe] and [å]=[aa]
In Sweden, they use [Ä] instead of [Æ],
      [ä]=[æ], [Ö]=[Ø] and [ö]=[ø].
```

If we had not called AnsiToAscii, the result would have looked like this:

```
In Norway and Denmark, we use some special characters:
      [Æ]=[AE], [Ø]=[OE] and [Å]=[AA]
      [µ]=[ae], [°]=[oe] and [å]=[aa]
In Sweden, they use [-] instead of [Æ],
      [ä]=[µ], [Ö]=[Ø] and [÷]=[°].
```

The message would have lost its meaning because of incompatible character sets.

See Also  
[AsciiToAnsi](#)

## Function AsciiToAnsi

[Example](#)

[See also](#)

[Back](#)

Translate string from DOS to Windows character set.

### **Usage:**

```
Result$ = AsciiToAnsi(StringIn$)
```

[Sample collection](#)

## Example AsciiToAnsi

Read a Dos file to a Windows listbox after proper translation:

```
Open "DosFil.Txt" For Input As #1
Do While (Not EOF(1))
    Line Input #1, dostext$
    ListBox.AddItem AsciiToAnsi(dostext$)
Loop
Close #1
```

See Also  
[AnsiAscii](#)

## Function CRLF

Example

Back

Replace the control character pairs CR (Carriage Return, ascii=13) and LF (Line Feed, ascii=10) with a given character (represented by its ascii value), or the other way around (when value is negative).

This function can be used for translating text files between DOS and UNIX.

The function can be very useful when reading and writing MultiLine TextBoxes in Windows.

### Usage:

```
Result$ = CRLF(StringIn$, asciiValue%)
```

If `asciiValue%` is positive, then all CR/LF character pairs in `StringIn$` will be replaced with the character represented by `asciiValue%` and returned in `Result$`.

When `asciiValue%` is negative, all the occurrences of `Chr$(-asciiValue%)` in `StringIn$` will be replaced with CR/LF and returned in `Result$`.

Simple methode for adding several lines to a MultiLine TextBox:

```
MText1 = CRLF("Line1@Line2@Line3", -Asc("@")) ' Replace "@" with CR/LF
```

Read MultiLine TextBox and convert linefeeds to space:

```
Text1 = CRLF(MText1, Asc(" ")) ' -> "Line1 Line2 Line3"
```

[Sample collection](#)

## Example CRLF

```
Convert file from UNIX format to DOS format (VERY FAST):
Sub UnixToDos (ByVal FromFile$, ByVal ToFile$)
    BytesToRead& = FileLen(FromFile$)
    If FileLength(ToFile$) > 0 Then Kill (ToFile$)           'see ITabDir sample
    Open FromFile$ For Input As #1
    Open ToFile$ For Binary Access Write As #2
    Const maxBuff& = 30000                                   'Read up to 30000
    bytes each time
    Do While BytesToRead& > 0
        BuffSize& = BytesToRead&
        If BuffSize& > maxBuff& Then BuffSize& = maxBuff&
        buffer$ = CRLF(Input$(BuffSize&, #1), -10)           'convert LF to CR/LF
        Put #2, , buffer$
        BytesToRead& = BytesToRead& - BuffSize&
    Loop
    Close #1
    Close #2
End Sub
```



## Function Decrypt

[Example](#)

[See also](#)

[Back](#)

Decrypt a string encrypted by Encrypt.

**Usage:**

```
Result$ = Decrypt(EncryptedText$, EncryptionKey$)
```

## Example Decrypt

```
'Crypt$ => "<'srogjaågkw4åfkae5g0+wk4r935283592+r qawæsqq" Secretkey$="MyCode"  
DecryptedString$ = Decrypt(Crypt$, secretkey$)  
'=> DecryptedString$ = "This is the secret text which shall be encrypted"
```

## See Also

[Decrypt7](#)

[DecryptZ](#)

[Encrypt](#)

[Encrypt7](#)

[EncryptZ](#)

## Function Decrypt7

[See also](#)

[Back](#)

Decrypt a string encrypted by Encrypt7.

**Usage:**

```
Result$ = Decrypt7(EncryptedText$, EncryptionKey$)
```

## See Also

[Decrypt](#)

[DecryptZ](#)

[Encrypt](#)

[Encrypt7](#)

[EncryptZ](#)

## Function DecryptZ

[See also](#)

[Back](#)

Decrypt a string encrypted by EncryptZ.

**Usage:**

```
Result$ = DecryptZ(EncryptedText$, EncryptionKey$)
```

## See Also

[Decrypt](#)

[Decrypt7](#)

[Encrypt](#)

[Encrypt7](#)

[EncryptZ](#)

## Function Encrypt

[Example](#)

[See also](#)

[Back](#)

Encrypt a string. Will return 8-bit characters without control characters.

**Usage:**

```
Result$ = Encrypt(TextIn$, EncryptionKey$)
```



## Example Encrypt

```
TextIn$= "This is the secret text which shall be encrypted"  
Secretkey$="MyCode"  
Crypt$ = Encrypt(TextIn$, SecretKey$)
```

## See Also

[Decrypt](#)

[Decrypt7](#)

[DecryptZ](#)

[Encrypt7](#)

[EncryptZ](#)

## Function Encrypt7

[See also](#)

[Back](#)

Encrypt a string. Will return eturn only characters from 7 bit ascii values (no control characters).

**Usage:**

```
Result$ = Encrypt7(TextIn$, EncryptionKey$)
```

## See Also

[Decrypt](#)

[Decrypt7](#)

[DecryptZ](#)

[Encrypt](#)

[EncryptZ](#)

## Function EncryptZ

[See also](#)

[Back](#)

Encrypt a string. Will return only folded letters (A .. Z) and/or digits (0 .. 9).

**Usage:**

```
Result$ = EncryptZ(TextIn$, EncryptionKey$)
```

## See Also

[Decrypt](#)

[Decrypt7](#)

[DecryptZ](#)

[Encrypt](#)

[Encrypt7](#)

## Function Find

**Example**

**Back**

Search for a substring within an other string from the given position. The position of the found substring is returned, else 0. (In nature equal to the function InStr in Basic).

### **Usage:**

```
Result% = Find(subString$, inString$, Pos%)
```

[Sample collection](#)

## Example Find

```
Instring$ = "12345@@67890"  
Pos% = Find("5@", Instring$, 1) ' Pos => 5  
Pos% = Find("@", Instring$, 1)  ' Pos => 6  
Pos% = Find("@", Instring$, 6)  ' Pos => 7
```



## Function FormNum

[Back](#)

Format number with/round up/down, right justify, 1000-delimiter, adding string in front of number

### Usage:

string\$ = FormNum\$(number#, decimal%, length%, delimiter\$)

number# : Number to format (type Double)  
decimal% : number of decimal places  
length% : length on string\$  
(ignored if you don't want 1000-delimiter)  
delimiter\$ : string containing 3 delimiters in row:  
1) String to fill in front of number (typical blank/space).  
2) String for 1000-delimiter  
3) String for decimal-delimiter

### Example:

```
String$ = FormNum(tall1#, 2 ,16, " ,.")
String$ => "          12,345.00"

String$ = FormNum(tall1#, 2 ,16, " .,")
String$ => "          12.345,00"

String$ = FormNum(tall1#, 0 ,16, " ,.")
String$ => "          12,345"

String$ = FormNum(tall1#, 0 , -16, " ,.")
String$ => "          12345"

String$ = FormNum(tall1#, 0 , -16, "* ,.")
String$ => "*****12345"

String$ = FormNum(tall1#, 2 , 16, "* .")
String$ => "*****12 345.00"

String$ = FormNum(tall1#, 0 , -16, "0 ,.")
String$ => "0000000000012345"
```

## Function Fullpath

**Example**

**Back**

Return full path for a file pattern. The full path will include drive and all directory names for the given pattern.

**Usage:**

```
Result$ = FullPath(filePattern$)
```

## Example FullPath

```
' Assume current directory is "C:\VBIT\SAMPLE\TEST":
path$ = FullPath("*.BAS")           '-> "C:\VBIT\SAMPLE\TEST\*.BAS"
path$ = FullPath("../lib/*.DLL")    '-> "C:\VBIT\SAMPLE\LIB\*.DLL" path$ =
FullPath("../IDBT*.WRI")           '-> "C:\VBIT\SAMPLE\IDBT*.WRI" path$ =
FullPath("../..\*.*)"              '-> "C:\VBIT\*.*)"
```

## Function GetDateLong

**Example**

**Back**

Convert a "dayNumber&" (returned from GetDayNumber) to a long on the format "yyyymmdd".

**Usage:**

```
dateAsLong& = GetDateLong(dayNumber&)
```

## Example FullPath

```
ldate& = GetDateLong (date1&)           ' ldate&=19951224  
ldate& = GetDateLong (date1&+7)       ' ldate&=19951231
```

## Function GetDateStr

**Example**

**Back**

Convert a "dayNumber&" (returned from GetDayNumber) to a string on the format given by dateFmt\$.

**Usage:**

```
dateString$ = GetDateStr(dateNum&, dateFmt$)
```

## Example FullPath

```
sdate$ = GetDateStr(date1&,"DDMMYYYY") ' sdate$="24121995"
```

## Function GetDayNumber

[Example](#)

[Back](#)

Return day number relative to 1/1 1800. The number returned from this routine can be used for representing dates in a form suitable for calculating number of days between two dates.

### Usage:

```
dayNumber& = GetDayNumber(dateStr$, dateFmt$)
```



## Example FullPath

```
date1& = GetDayNumber("24/12-1995","DD MM YYYY")
date2& = GetDayNumber("1996 01 01","YYYY MM DD")
diff& = date2& - date1& ' should give 8
```

## Function GetNumDays

Example

Back

Returns number of days between two dates. Valid results for dates from September 14th 1752 to December 31 9999.

### Usage:

```
GetNumDays& (fromDate$, toDate$, dateFormat$, type%)
```

#### fromDate\$:

String containing date "MM","DD","YYYY".  
Position in string is determined by dateFormat\$  
(similar to the function SwapStr\$).

#### toDate\$:

String containing date "DD", "MM" and "YYYY", as  
described above.

#### dateFormat\$:

String containing the characters "DD", "MM" and "YYYY",  
where "DD" indicates the position of the day, "MM" the  
month and "YYYY" the year.

#### type%:

IT_MONTH	' Actual number of days pr month
IT_MONTH_30	' 30 days per month (31st ignored and ' february is also counted as 30 days)

## Example GetNumDays

```
days1&=GetNumDays("01011995","01031995","DDMMYYYY",IT_MONTH)
days2&=GetNumDays("01011995","01031995","DDMMYYYY",IT_MONTH_30)
' days1& will be 59 and days2& will be 60

      n1&=GetNumDays("01-01-1995","03-01-1995","MM-DD-YYYY",IT_MONTH)
' n1& will be the same as days1&
```

## Function Interest

Example

Back

Returns calculated interest in given time period based on amount and interest rate  
Valid results for dates from September 14th 1752 to December 31 9999.

### Usage:

Interest# (fromDate\$, toDate\$, dateFormat\$, amount#, rate#, type%)

#### fromDate\$:

String containing date "MM","DD","YYYY".  
Position in string is determined by dateFormat\$  
(similar to the function SwapStr\$).

#### toDate\$:

String containing date "DD", "MM" and "YYYY", as  
described above.

#### dateFormat\$:

String containing the characters "DD", "MM" and "YYYY",  
where "DD" indicates the position of the day, "MM" the  
month and "YYYY" the year.

#### amount#:

The amount subject to interest calculation.

#### rate#:

The interest rate given in percent.

#### type%:

IT_MONTH	' Use actual number of days pr month
IT_MONTH_30	' 30 days per month (31st ignored and ' february is also counted as 30 days)
+	
IT_YEAR_360	' 360 days per year
IT_YEAR_365	' 365 days per year (also for leap year)
IT_YEAR	' Use actual number of days pr year ' (if start date is in a leap year: 366)

Add types for month and year:

IT_MONTH_30+IT_YEAR_360	' 30 days per month, ' 360 days per year
IT_MONTH+IT_YEAR_365	' Actual number of days, ' 365 days per year
IT_MONTH+IT_YEAR	' Actual number of days, ' 365/366 days per year ' (if start date is in a ' leap year, use 366)



## Example Interest

```
loan# = 100000.0
irate# = 10.0 ' interest rate in %
fmt$ = "DD MM YYYY"
typ% = IT_MONTH + IT_YEAR_365
i1#=Interest("01 01 1995","01 01 1996",fmt$,loan#,irate#,typ%)
i2#=Interest("01 01 1995","01 07 1995",fmt$,loan#,irate#,typ%)
i3#=Interest("01 07 1995","01 01 1996",fmt$,loan#,irate#,typ%)
i4#=Interest("01 01 1996","01 07 1996",fmt$,loan#,irate#,typ%)
' i1# = 10000.0 ' one year (365 days)
' i2# = 4958.9 ' 1st half (181 days)
' i3# = 5041.1 ' 2nd half (184 days)
' i4# = 4986.3 ' 1st half next year (182 days: leap year)

typ% = IT_MONTH_30 + IT_YEAR_360
i1#=Interest("01 01 1995","01 01 1996",fmt$,loan#,irate#,typ%)
i2#=Interest("01 01 1995","01 07 1995",fmt$,loan#,irate#,typ%)
i3#=Interest("01 07 1995","01 01 1996",fmt$,loan#,irate#,typ%)
i4#=Interest("01 01 1996","01 07 1996",fmt$,loan#,irate#,typ%)
' i1# = 10000.0 ' one year (360 days)
' i2# = 5000.0 ' 1st half (180 days)
' i3# = 5000.0 ' 2nd half (180 days)
' i4# = 5000.0 ' 1st half next year (180 days)
```

## Function LicenseGetCode

[Example](#)

[See also](#)

[Back](#)

This function is meant to be used in a stand-alone program and the purpose is to generate licence code for applications. See function LicenceProgram.

**Usage:**

```
Result$ = LicenseGetCode (Name$ , Key$)
```

## Example LicenseGetCode

```
Code$ = LicenseGetCode("Bjorn Nornes", "Key_key_key_1")
```



## See Also

[LicenseProgram](#)

[LicenseVBIT](#)

## Function LicenseProgram

[Example](#)

[See also](#)

[Back](#)

This function must be placed in the start-form of your application. If the code and the key is matching, the function returns True(-1) else False(0). See also function LicenseGetCode.

### **Usage:**

```
Result% = LicenseProgram(CustomerName$, Code$, Key$)
```

## Example LicenseProgram

```
Status% = LicenseProgram("Trader's Mascot AS", "ABXY12", "Key_Key_Key_1")
```

## See Also

[LicenseGetCode](#)

[LicenseVBIT](#)

## Function LicenseVBIT

Example

See also

Back

The buyer of this product will receive a code from InfoTech AS. This will make him/her a registered user of the product and he/she can use the product freely in his/her system.

The table functions are protected by a code for those who have not bought the product. In Visual Basic runmode the protection is in a mild form. When an exe file is made the protection becomes more aggressive and will more often remind the user of the lack of payment. Despite this, the user can fully test the product or use the 'free to use functions in the package.

### Usage:

```
Result% = LicenseVBIT(Name$ , Code$)
```

Result% will contain a True(-1) if a legal code is given, else False(0).

## Example LicenseVBIT

```
Status% = LicenseVBIT("Douglas Moore", "TT4LBT")
```

## See Also

[LicenseGetCode](#)

[LicenseProgram](#)

## Function Modulus10

[Example](#)

[See also](#)

[Back](#)

Append a Control Digit Verifier to the input string based on the modulus 10 formula . All characters except digits in the StrIn\$ are ignored during calculation.

**Usage:**

Result\$ = Modulus10(StrIn\$)



## Example Modulus10

CustNum\$ = **Modulus10**("95101201230") ' CustNum\$ = "951012012302"

## See Also

[Modulus10Calc](#)

[Modulus10Valid](#)

[Modulus11](#)

[Modulus11Calc](#)

[Modulus11Valid](#)

## Function Modulus10Calc

[Example](#)

[See also](#)

[Back](#)

The function returns a control digit based on CDV modulus 10 calculation over the StrIn\$.

**Usage:**

```
Result$ = Modulus10Calc(StrIn$)
```

## Example Modulus10Calc

```
CD$ = Modulus10Calc("95101201230") ' CD$ = "2"
```

## See Also

[Modulus10](#)

[Modulus10Valid](#)

[Modulus11](#)

[Modulus11Calc](#)

[Modulus11Valid](#)

## Function Modulus10Valid

[Example](#)

[See also](#)

[Back](#)

The function returns True(-1) if the last character of StrIn\$ is a valid CDV based on the modulus 10 formula, else it returns False(0).

**Usage:**

```
Result% = Modulus10Valid(StrIn$)
```

## Example Modulus10Valid

```
If Modulus10Valid("9521.05.69325") Then Status="OK"
```

## See Also

[Modulus10](#)

[Modulus10Calc](#)

[Modulus11](#)

[Modulus11Calc](#)

[Modulus11Valid](#)



## Function Modulus11

[Example](#)

[See also](#)

[Back](#)

Append a Control Digit Verifier to the input string based on the modulus 11 formula. All characters except digits in the StrIn\$ are ignored during calculation.

**Usage:**

```
Result$ = Modulus11(StrIn$)
```

## Example Modulus11

Account\$ = **Modulus11**("9521.05.6932") ' Account\$ = "9521.05.69325"

## See Also

[Modulus10](#)

[Modulus10Calc](#)

[Modulus10Valid](#)

[Modulus11Calc](#)

[Modulus11Valid](#)

## Function Modulus11Calc

[Example](#)

[See also](#)

[Back](#)

The function returns a control digit based on CDV modulus 11 calculation over the StrIn\$.

**Usage:**

```
Result$ = Modulus11Calc(StrIn$)
```

## Example Modulus11Calc

CD\$ = **Modulus11Calc**("9521.05.6932") ' CD\$ = "5"

## See Also

[Modulus10](#)

[Modulus10Calc](#)

[Modulus10Valid](#)

[Modulus11](#)

[Modulus11Valid](#)

## Function Modulus11Valid

[Example](#)

[See also](#)

[Back](#)

The function returns True(-1) if the last character of StrIn\$ is a valid CDV based on the modulus 11 formula, else it returns False(0).

**Usage:**

```
Result% = Modulus11Valid(StrIn$)
```

## Example Modulus10Valid

```
If Not Modulus11Valid("9521.05.69328") Then Status="ERROR"
```



## See Also

[Modulus10](#)

[Modulus10Calc](#)

[Modulus10Valid](#)

[Modulus11](#)

[Modulus11Calc](#)

## Function Num0

**Example**

**Back**

Convert a positive number to a string with leading zeros.  
The number of digits must be given in the call, max 9.

**Usage:**

```
Result$ = Num0(Number&, Digits%)
```

## Example Num0

```
String$ = Num0(1,3)      => "001"  
String$ = Num0(1234,9) => "000001234", max number of digits. String$ =  
Num0(1234,10)          => "1234"
```

## Function Pick

Example

See also

Back

Pick one or more characters from a text string. The position of the first character, and the wanted number of characters from that position must be given in the call. The function returns a string.

### Usage:

```
Result$ = Pick(StringIn$, FromPos%, Length%)
```

Requiring more characters than the input sting contains, causes the function to fill the surplus characters with blanks.

If the wanted number of characters is set to 0, the function will return rest of the string from the given position.

If the position is given as a negative number, the start position will be relative to the end of the string. -1 is the last position in the string, -2 is the last but one, and so on. 0 as position will be interpreted as the position after the last character.

If the number wanted is given as a negative number, the routine will pick characters from the left of the given position, inclusive.

Sample Collection

## Example Pick

```
String$ ="Example of the Pick function in use"
Result$ = Pick(String$,1,7)   'Result$ => "Example"
Result$ = Pick(String$,32,11) 'Result$ => " use      "
Result$ = Pick(String$,32,0)  'Result$ => " use"
Result$ = Pick(String$,-10,8) 'Result$ => "ion in u"
Result$ = Pick(String$,8,-6)  'Result$ => "ample "
Result$ = Pick(String$,-5,-2) 'Result$ => "in"
Result$ = Pick(String$,0,-3)  'Result$ => "se " (0 is the pos after last char)
```

See Also

PickWord

PickWords

## Function PickWord

[Example](#)

[See also](#)

[Back](#)

Pick a word from a string. Declaring the position number of the wanted word and the delimiter, the function returns the wanted word as a string.

### Usage:

```
Result$ = PickWord(StringIn$, WordNumber%, Delimiter%)
```

The delimiter must be given as an ascii value. For the purpose of increasing the readability the VB function "Asc( )" can be used. Given semicolon as delimiter: Asc(";"). Having a do-while-loop where PickWord will be called many times, it would enhance speed to initialize a variable outside the loop: Semicolon% = Asc(";")

Ignoring leading delimiters and /or deal with them as one connected delimiter, the negative ascii value for the delimiter should be given: Semicolon% = -Asc(";")

[Sample collection](#)

## Example PickWord

```
text$ = "Here;is;an;;example;using PickWord"      'Result

Result$ = PickWord(text$, 3, Asc(";"))           '"an"
Result$ = PickWord(text$, 5, Asc(";"))           '"example"
Result$ = PickWord(text$, 6, 59)                 '"using PickWord" Result$ =
PickWord(text$, 5, -59)                          '"using PickWord" Result$ =
PickWord(text$, 2, 32)                          '"PickWord"
Result$ = PickWord(text$, 2, Asc("e"))           '"r"
```



See Also

Pick

PickWords

## Function PickWords

Example

See also

Back

Pick more than one word from a string. If you only need one word, you ought to use PickWord.

### Usage:

```
Result$ = PickWords(StringIn$, WordNumber%, NumWanted%, Delimiter%)
```

Given the word number for the first word in the string and the number of wanted words, the function returns a string.

In order to get all words from a given wordnumber, 0 as number must be used.

The delimiter must be given as an ascii value. For the purpose of increasing the readability the VB function "Asc( )" can be used. Given semicolon as delimiter: Asc(";"). Having a do-while-loop where PickWord will be called many times, it would enhance speed to initialize a variable outside the loop: Semicolon% = Asc(";")

Ignoring leading delimiters and /or deal with them as one connected delimiter, the negative ascii value for the delimiter should be given: Semicolon% = -Asc(";")

## Example PickWords

```
text$ = ";Here;is;an;;example;using PickWords" 'Result
Result$ = PickWords(text$, 3, 2, Asc(";"))      '"is;an"
Result$ = PickWords(text$, 3, 3, Asc(";"))      '"is;an"
Result$ = PickWords(text$, 4, 3, Asc(";"))      '"an;;example"
Result$ = PickWords(text$, 3, 2, -Asc(";"))     '"an;example"
Result$ = PickWords(text$, 2, 0, Asc(" "))     '"PickWords"
' note the leading ";" in text$
```

See Also

Pick

PickWord

## Function Place

Example

Back

Superimpose a string on a copy of "tostring" in the given position and return the result as a string.

If one want the whole "fromstring" one can use 0 as the number of wanted characters, else use the actual number of wanted characters picked from "fromstring". If the given number is greater then the length of the "fromstring", the function will fill the surplus number by space.

### Usage:

```
Result$ = Place(FromString$, ToString$, Pos%, Length%)
```

## Example Place

```
tostring$ = "*****"
Result$ = Place("TEST", tostring$, 4, 0)
Result$ = Place(" TEST", tostring$, 3, 6)
Result$ = Place("TEST", tostring$, 1, 2)
Result$ = Place(Num0(123,6), tostring$, 7, 0)
```

'Result  
'\*\*\*\*\*TEST\*\*\*"  
'\*\* TEST \*\*"  
'TE\*\*\*\*\*"  
'\*\*\*\*\*000123"

## Function Sound

**Back**

Play sound through PC-speaker og through sound-card !

Sound "+"	' OK signal (same as Beep)
Sound "?"	' System sound for Question
Sound "!"	' System sound for Exclamation (error)
Sound "*"	' System sound for Asterisk ("finished")
Sound "."	' System sound for Critical Stop
Sound "-"	' PC speaker beep
Sound "FILENAME.WAV"	' Play WAV-file. If the file is not found in ' the current/given directory, the routine will ' look for the file in the WINDOWS directory.

## Function Strip

Example

Back

Remove a given character from a string.

### Usage:

```
Result$ = Strip(StringIn$, Char$, Type%)
```

### Type:

STRIP_L	Remove leading delimiters, (as LTRIM i Basic)
STRIP_T	Remove trailing delimiters, (as RTRIM i Basic)
STRIP_LT	Remove leading and trailing delimiters,(as TRIM i Basic)
STRIP_ALL	Remove all delimiters

What sets **Strip** and VB's \*TRIM funksjon apart, is that **Strip** may remove any character where \*TRIM only removes "space".

If you want to remove repeating embedded delimiters, the function **PickWords** can be suitable.



## Example Strip

```
String$ = "****T*E*S*T****"  
Result$ = Strip(String$, "*", STRIP_L)      '"T*E*S*T*"'  
Result$ = Strip(String$, "*", STRIP_T)      '"****T*E*S*T"'  
Result$ = Strip(String$, "*", STRIP_LT)     '"T*E*S*T"'  
Result$ = Strip(String$, "*", STRIP_ALL)    '"TEST"'
```

If you want to remove repeating embedded delimiters, the function *PickWords* can be suitable.

```
String$ = ";;This;;is;an;;;example;using;;PickWords;;"  
Result$ = PickWord(String$, 1, 0, -Asc(";"))
```

```
'Result$ : "This;is;an;example;using;PickWords"
```

Remove a given character, given as an ascii value, from a string.

## Function Subst

[Example](#)

[See also](#)

[Back](#)

Exchange a substring with another string from a given position in the third string and return the resultstring.

The position must be given as a variable. The variable will be changed by the function. Into this variable the next position is given if there are more than one occurrence of the substring in the instring after the position, else a zero will be returned. The returned position will be related to the resultstring. Search for inString\$ is case sensitive.

### Usage:

```
Result$ = Subst(OldStr$, NewStr$, inString$, Pos%)
```

This call will change the variable Pos%.



See Also  
SubstAll

## Function SubstAll

[Example](#)

[See also](#)

[Back](#)

Exchange all the occurrences of `oldstring$` with `newstring$` in a copy of the `instring$` which is returned as a result. Search for `instring$` is case sensitive.

**Usage:**

```
Result$ = SubstAll(OldStr$, NewStr$, inString$)
```

## Example SubstAll

```
res$ = SubstAll("1 ", "@@", "1111 222221 33333 444441 555555")
res$ = "111@@222222@@333333 444444@@555555"
res$ = SubstAll("is", "was", "This is an example")
res$ = "Thwas was an example"
```

See Also  
Subst

## Function SwapChars

[Example](#)

[See also](#)

[Back](#)

Swap two characters within a string. The argument "Character" contains the two characters which are to be swapped. The function returns a string where all the occurrences of the specified characters are swapped. A typical example would be to swap the characters period(.) and comma(,).

**Usage:**

```
Result$ = SwapChars(String$, Characters$)
```



## Example SwapChrs

```
Result$ = SwapChrs("1.234.567,00", ".", ",") '=> "1,234,567.00"
```

See Also

SwapDate

SwapStr

## Function SwapDate

**Example**

**See also**

**Back**

Swap the position of the year and day within a datestring with format "YMMDD" or "DDMMYY".

The function SwapStr may be used as replacement for SwapDate. Please refer to [SwapStr](#)

**Usage:**

```
Result$ = SwapDate(Date$)
```

## Example SwapDate

```
NewDate$ = SwapDate("241294") ' => "941224"  
NewDate$ = SwapDate("941224") ' => "241294"
```

See Also

SwapChrs

SwapStr

## Function SwapStr

Example

See also

Back

This function can replace SwapDate, but can also be used in other occasions. The "fromFmt\$" and the "toFmt\$" consist of letters which describe the wanted formate. E.g. "DD-MM-YY", YYMMDD", (Year, Month, Day).

### Usage:

```
Result$ = SwapStr(StrIn$, FromFmt$, ToFmt$)
```

Letters which are found in both FromFmt\$ and the ToFmt\$ give the position and length, repeating equal letters, of the string which to be picked from "StrIn\$" and placed in the Result\$. The ToFmt\$ is the template for the Result\$. All positions which are not overwritten will be left in the Result\$ untouched. If the length of the substring FromFmt\$ is less then the lenght of the ToFmt\$ , leading zeros will be put into the Result\$. If the length of the substring ToFmt\$ is less then the length of FromFmt\$ then the function picks the number of characters from the left which can be placed according the template. E.g. 1994 (yy) => 94.

## Example SwapStr

```
ResultString$ = SwapStr("241294", "ddmmyy", "yymmdd")      "'941224"  
ResultString$ = SwapStr("941224", "yymmdd", "dd/mm-yy")   "'24/12-94"  
ResultString$ = SwapStr("12-24-1994", "mm dd yyyy", "ddmmyy") "'241294"
```

**See Also**  
[SwapChrs](#)  
[SwapDate](#)



## Function SysInfo

See also

Back

This returns system information about the PCs environment as string.

### Usage:

```
Result$ = SysInfo(What%)
```

#### What%

SCREEN\_SIZE\_X  
SCREEN\_SIZE\_Y  
SCREEN\_SIZE\_PALETTE  
MEMORY\_FREE\_KB  
MEMORY\_BIGGEST\_FREE\_BLOCK\_KB  
DISK\_DRIVE  
DISK\_FREE\_KB  
DISK\_SIZE\_KB  
DISK\_TYPE  
DISK\_CLUSTER\_SIZE [+ drive]  
DISK\_SECTOR\_SIZE [+ drive]  
DISK\_SECTORS\_PR\_CLUSTER [+ drive]  
DISK\_AVAILABLE\_CLUSTERS [+ drive]  
DISK\_TOTAL\_CLUSTERS [+ drive]

#### Result\$

The width of the screen  
The height of the screen  
The number of colors available  
Free memory measured in KiloBytes  
Biggest free memory block measured in KiloBytes  
Current drive, (1="A", 2="B", 3="C" .... )  
Free disk space measured in KiloBytes  
Total disk space measured in KiloBytes  
Drive type (see below)

The following is only defined for SysInfo (string only):

DIR_WINDOWS	Current path for the \WINDOWS\SYSTEM\ directory
DIR_WINDOWS_SYSTEM	Current path for the \WINDOWS\SYSTEM\ directory
DISK_PATH	Current D:\DIRECTORYNAME
DISK_VOLUME_LABEL	Disk label, (name, 11 char.)
DISK_VOLUME_DATE	Volume label date "YYYYMMDD"
DISK_VOLUME_TIME	Volume label time "TT:MM:SS"

DISK\_TYPE returns

"REMOVABLE"  
"FIXED"  
"REMOTE"  
"CDROM"  
"?"

For all "DISK\_...." parameters, the current disk drive will be used unless a disk drive is specified. Specifying an other drive goes as follows: Add the drive number or the ascii value of the drive letter to the argument (What%).

Note: Number of clusters is limited to &Hffff (16 bit), so this information will be incorrect for very big drives, such as CD-ROMs (most programs, including Windows File Manager, have the same problem). If the number of clusters is &Hffff and

the drive type is CDROM, SysInfo/SysInfoNum will now return 650000 for type ( DISK\_SIZE\_KB [+ drive] ).

### Examples

```
si$ = SysInfo(DISK_SIZE_KB + 1)           '=> Regarding drive A
si$ = SysInfo(DISK_PATH_KB + 2)          '=> Regarding drive B
si$ = SysInfo(DISK_SIZE_KB + Asc("A"))   '=> Regarding drive A
si$ = SysInfo(DISK_FREE_KB + Asc("C"))   '=> Regarding drive C
```

See Also  
[SysInfoNum](#)

## Function SysInfoNum

Example

See also

Back

This returns system information about the PC's environment. SysInfoNum as long integer when possible.

### Usage:

```
Result& = SysInfoNum(What%)
```

### What%

SCREEN\_SIZE\_X  
SCREEN\_SIZE\_Y  
SCREEN\_SIZE\_PALETTE  
MEMORY\_FREE\_KB  
MEMORY\_BIGGEST\_FREE\_BLOCK\_KB  
DISK\_DRIVE  
DISK\_FREE\_KB  
DISK\_SIZE\_KB  
DISK\_TYPE  
DISK\_CLUSTER\_SIZE [+ drive]  
DISK\_SECTOR\_SIZE [+ drive]  
DISK\_SECTORS\_PR\_CLUSTER [+ drive]  
DISK\_AVAILABLE\_CLUSTERS [+ drive]  
DISK\_TOTAL\_CLUSTERS [+ drive]

DISK\_TYPE returns

### Result&

The width of the screen  
The height of the screen  
The number of colors available  
Free memory measured in KiloBytes  
Biggest free memory block measured in KiloBytes  
Current drive, (1="A", 2="B", 3="C" .... )  
Free disk space measured in KiloBytes  
Total disk space measured in KiloBytes  
Drive type (see below)

DRIVE\_REMOVABLE  
DRIVE\_FIXED  
DRIVE\_REMOTE  
DRIVE\_CDROM  
0

For all "DISK\_...." parameters, the current disk drive will be used unless a disk drive is specified. Specifying an other drive goes as follows:  
Add the drive number or the ascii value of the drive letter to the argument (What%).

Note: Number of clusters is limited to &Hffff (16 bit), so this information will be incorrect for very big drives, such as CD-ROMs (most programs, including Windows File Manager, have the same problem). If the number of clusters is &Hffff and the drive type is CDROM, SysInfo/SysInfoNum will now return 650000 for type ( DISK\_SIZE\_KB [+ drive] ).

## Example SysInfoNum

```
si& = SysInfoNum(DISK_SIZE_KB + Asc("D"))  '=> Regarding drive D
```

See Also  
[SysInfo](#)

## Sub Trace

Example

Example

Example

Output a line of text followed by a linefeed to the debug output device. The debug output device can be a secondary monochrome screen, a screen connected to a Com-port or a window on the screen. You have to run a special program for activating the debug device. A suitable program for this purpose is DBWIN.EXE.

**Usage:**

```
Trace debugText$
```

This routine together with TraceStr is a good alternative to the standard debug in Visual Basic. It can be used for dumping contents of variables, tracing events etc.

## Example Trace

```
Trace "Click event: Mouse button=" & Button & ", X=" & X & ", Y=" & Y  
' output: Click event: Mouse button=1, X=12, Y=43
```



See Also  
TraceStr

## Sub TraceStr

Example

Example

Example

Output a text string to the debug output device.

### **Usage:**

```
TraceStr debugText$
```

## Example TraceStr

```
TraceStr "Click event: Mouse button="
TraceStr Button
TraceStr ", X=" & X
Trace ", Y=" & Y      ' terminate line.
' output: Click event: Mouse button=2, X=122, Y=143
```

See Also  
Trace

# VBIT Spreadsheet Routines

- ITabCopyDataToVTSS Dump/write the contents of a table to a Visual Tools spreadsheet.
- ITabCopyFromVTSS Read the contents of a Visual-Tools spreadsheet to a new table.
- ITabCopyToVTSS Dump/write the contents of a table to a Visual Tools spreadsheet.
- ITabSetMaxDecimalFromVTSS Will force the next call to ITabCopyFromVTSS to round decimal numbers to the given number of decimals.
- ITabToVTSS Export table to a Visual Tools Spreadsheet.
- VTSSget Returns the contents of a given cell in a Formula One Spreadsheet as string
- VTSSput Write a string to a given cell in a Formula One Spreadsheet.

## Function ITabCopyDataToVTSS

### Example

Dump/write the contents of a table to a Visual Tools spreadsheet.  
The layout of the spreadsheet (column headers and column width) will not be altered by this call.

### Usage:

```
ITabCopyDataToVTSS Handle&, SShandle&
```

This function makes it possible to write Excel 4.0 spreadsheet and \*.vts files, internal format of Visual Tools, indirectly via the spreadsheet.

## Function ITabCopyDataFromVTSS

Example

Example

Example

Read the contents of a Visual-Tools spreadsheet to a new table. This function makes it possible to read Excel 4.0 spreadsheet and \*.vts files, internal format of Visual Tools, indirectly via the worksheet.

The number of lines in the table will be as many as it are datafilled lines in the worksheet. Blank trailing lines in the worksheet are disregarded.

### Usage:

```
Handle& = ITabCopyFromVTSS (SHandle&)
```

Remember to delete the table, using ITabDelete, when it is no longer needed (free system resources):

MyTab& = ITabCopyFromVTSS (Sheet1.SS)



See Also

[ITabCopyToVTSS](#)

## Sub ITabCopyToVTSS

Example

Example

Example

Dump/write the contents of a table to a Visual Tools spreadsheet.

The contents of line 0 in the table will be used as column headers, and the width of all columns in the spreadsheet will be adjusted to fit the longest string in each column.

### Usage:

`ITabCopyToVTSS Handle&, SShandle&`

This function makes it possible to write Excel 4.0 spreadsheet and \*.vts files, internal format of Visual Tools, indirectly via the spreadsheet.

Display list of all files in the WINDOWS-directory:

```
Windir = SysInfo(DIR_WINDOWS) & "\*.*"
TestTab& = ITabDir(Windir, 6)
ITabCopyToVTSS TestTab&, Sheet1.SS
```

See Also  
[ITabCopyFromVTSS](#)

## Function ITabSetMaxDeciamlFromVTSS

### Example

Will force the next call to ITabCopyFromVTSS to round decimal numbers to the given number of decimals.

### Usage:

```
ITabSetMaxDecimalsFromVTSS maxdec%
```

**NOTE:** This is a potentially dangerous call since it will set a global variable in the DLL. The danger is minimized since this variable will be reset by the next call to ITabCopyFromVTSS. Still there is a very small possibility of another application calling ITabCopyFromVTSS before your application, and both applications may get unexpected results.

The chances for this to happen are microscopic, but you should minimize the risk by calling ITabCopyFromVTSS immediately after this call.

## Function ITabToVTSS

### Example

Export table to a Visual Tools Spreadsheet.

### Usage:

```
ITabToVTSS table&, ssHandle&, types&
```

### Types:

```
IT_NUM_CONV    ' Number as numeric (not as string)
IT_AUTO_SIZE   ' Automatic justify columnwidth
IT_COL_HEAD    ' Set column heading from line 0
```

### Example:

```
' No formatting, no column heading from line 0:
```

```
  ITabToVTSS table&, ssHandle&, 0
```

```
' As ITabCopyDataToVTSS:
```

```
  ITabToVTSS table&, ssHandle&, IT_AUTO_SIZE + IT_NUM_CONV
```

```
' As ITabCopyToVTSS, but without rightjustify of numbers
```

```
  ITabToVTSS table&, ssHandle&, IT_AUTO_SIZE + IT_COL_HEAD
```

## Function VTSSget

Example

Example

Example

Much simplified replacement for the Formula One call SSGetTextRC.

The function returns the contents of a given cell in a Formula One SpreadSheet as string (max 255 char). This call can also be used for reading column headers (row%=0), row headers (col%=0) and the top left cell (0,0).

### Usage:

```
result$ = VTSSget(ss&, row%, col%)
```

Read the contents of line 4, column 1 in spreadsheet Sheet1:  
contents\$ = VTSSget(Sheet1.SS,4,1)

In Formula One :

contents\$ = String\$(255,0)  
err% = SSGetTextRC(Sheet1.SS,4,1,contents\$,255)



See Also  
VTSSput

## Function VTSSput

Example

Example

Example

Simplified replacement for the Formula One function SSSetTextRC. VTSSput does not return status, and can also be used for writing column headers (row=0), row headers (col=0) and the top left cell (0,0).

### Usage:

VTSSput ss&, row%, col%, dataStr\$

Write data to line 4 - column 1 in spreadsheet Sheet1  
VTSSput Sheet1.SS, 4, 1, "Test"

In Formula One:

err% = SSSetTextRC(Sheet1.SS,4,1,"Test")

See Also  
[VTSSget](#)

## VBIT Table Routines

- ITabBlankLine Remove contents of a given line in a table
- ITabBlankLines Remove contents of the given lines in a table
- ITabCopy Copy lines from one table to another
- ITabCopyToGrid Copy contents of a table to a GRID.VBX spreadsheet.
- ITabDelete Delete table and release memory
- ITabDir Create a table containing file and/or directory information.
- ITabEnvList Read environment settings into a new table
- ITabEnvString Read environment settings into a new table
- ITabFastSort Extremely fast sorting of a table
- ITabFind Search data , given mask, by column
- ITabFindGE Search for data, given mask, by column in pre-sorted table.
- ITabFromString Create a one-dimensional tabel from string of words
- ITabGet Get data as string type from table
- ITabGetColWidth Get the width of a given column in a table
- ITabGetInt Get data as integer type from table
- ITabGetLine Get data as string type from an array
- ITabGetLong Get data as long type from table
- ITabGetNumColumns Get the defined number of columns a table consists of
- ITabGetNumLines Get the defined number of lines/rows a table consists of
- ITabGetReal Get data as real type from table
- ITabGetSize Get the total amount of consumed memory for a given table
- ITabInsertLine Insert a line at a given line number in a table
- ITabInsertLines Insert lines from a given line number in a table
- ITabNew Create a new table.
- ITabNewArray Create a new table with only one column.
- ITabPut Write data (string) to a cell in a table
- ITabPutInt Write data (integer ) to a cell in a table
- ITabPutLine Write data (string) to a line in a table/array
- ITabPutLong Write data (long) to a cell in a table
- ITabPutReal Write data (real) to a cell in a table
- ITabRead Read a table to memory from a file in a specific format
- ITabReadFixedRecLenFile Read a file with fixed record length to a table
- ITabReadFmt Read a file with fixed record length to a new table
- ITabRemoveLine Remove a line at a given line number in a table
- ITabRemoveLines Remove lines from a given line number in a table
- ITabSmartSort Sort a table by column using the SmartSort algorithm
- ITabWrite Write a table to a named disk file of a specific format

## Sub ITabBlankLine

Example

Example

Erase the content of the given line.

**Usage:**

```
ITabBlankLine Handle&, atLine%
```

The line will still be there, but all columns will be empty.

See Also  
[ITabBlankLines](#)

## Sub ITabBlankLines

Example

Example

Erase the content of the specified lines.

**Usage:**

```
ITabBlankLines Handle&, atLine%, numLines%
```

The lines will still be there, but all columns will be empty.



See Also  
[I](#)[TabBlankLine](#)

## Function ITabCopy

### Example

Copy lines from one table to another. The destination table will be expanded if needed.  
If the source table contains more columns than the destination table, the surplus columns will be ignored.

### Usage:

```
ITabCopy fromTab&, fromLine%, toTab&, toLine%, numLines%
```

## Function ItabCopyToGrid

Example

Example

Copy contents of a table to a GRID.VBX spreadsheet.

The contents of line 0 in the table will be used as column headers, and the width of all columns in the spreadsheet will be adjusted to fit the longest string in each column.

### Usage:

ITabCopyToGRID Handle&, Grid.hWnd

## Example ITabCopyToGrid

Display list of all files in the WINDOWS-directory:

```
Windir = SysInfo(DIR_WINDOWS) & "*.*"
TestTab& = ITabDir(Windir, 6)
ITabCopyToGRID TestTab&, Grid1.hWnd
```

## Sub ITabDelete

Example

Example

Delete a table from memory with effective memory release.

**Usage:**

ITabDelete Handle&

**NB!**

After a table is deleted the handle is invalid. Using a handle for a deleted table will cause an error. Of course, the variable holding the handle value may be reused for new tables.

## Example ITabDelete

```
Function FileLength& (ByVal FileName$)
    tempTab& = ITabDir(FileName$, 3)           'create a table using ITabDir
                                              'consists of ? rows and 3 cols
    FileLength& = ITabGetLong(tempTab&, 1, 3) 'Read data from row 1 and col 3
                                              'and return filelength as Long
Integer.
    ITabDelete tempTab&                       'delete table free resources
End Function
```

## Sub ITabDir

Example

Example

Example

Create a table with a list of filenames and/or directory names, and optionally, more detailed information connected to these. The function returns a handle to the new table.

### Usage:

```
Handle& = ITabDir(FileMask$, Type%)
```

FileMask\$ can be a file / directory name, or a standard wildcard mask using the characters: "?" and "\*\*"

	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6
Type%						
1	File.Ext					
2	Filename	Ext				
3	Filename	Ext	Size			
4	Filename	Ext	Size	Date		
5	Filename	Ext	Size	Date	Time	
6	Filename	Ext	Size	Date	Time	Attr
7	As type 6, but includes <b>hidden</b> and <b>system</b> files in addition to normal files.					
8	As type 7, but <b>also</b> includes <b>subdirectories</b> .					
9	As type 6, but includes <b>only subdirectories</b>					
10	As type=9, but the resulting table will not include ".\" (current dir.) and "..\" (parent dir).					

Date format: "YYYYMMDD"

Time format: "HH:MM:SS"

Attr format: "ADHRS", the single letter will be found in the given position, (D=2, R=4 ...), when the attribute is active.

A: Archive (set when file is changed - used by back-up systems)

D: Directory name

H: Hidden file

R: Read-Only file

S: System file

The number of columns in the newly created table will be equal to Type% up to 6, and 6 for the rest.

Directory names will always be terminated by the character "\". Obs, beware: The directory name can include the ".EXT", in that case the character "\" will be found in column 2 (for types 8 and 9).

Remember to delete the table, using [ITabDelete](#), when it is no longer needed (free system resources).

## Example ITabDir

Make a function for returning the size of a given file.

Will return 0 if the file does not exist (not runtime error as FileLen):

```
Function FileLength& (ByVal FileName$)
    tempTab& = ITabDir(FileName$, 3)
    FileLength& = ITabGetLong(tempTab&, 1, 3)
    ITabDelete tempTab&
End Function
```



See Also  
[I](#)[TabDelete](#)

## Function ITabEnvList

Example

Example

Example

Create a new table containing all environment strings defined. The table will have two columns where the first column contains the variable name, and the second the environment setting.

### Usage:

```
Handle& = ITabEnvList()
```

Remember to delete the table, using [ITabDelete](#), when it is no longer needed (free system resources)

Sample collection

## Example ITabEnvList

```
envTab& = ITabEnvList()
```

```
' the table may look like this:  
,
```

<b>1st column</b>	<b>2nd column</b>
CONFIG	QEMM
COMSPEC	C:\DOS\COMMAND.COM
SHARE	ON
TMP	E:\TMP
APPEND	D:\PROG
LIST	E:\TMP
BLASTER	A220 I7 D1 H5 P330 T6
LIB	C:\MSVC\LIB;C:\MSVC\MFC\LIB;..\LIB
WINDIR	D:\WINDOWS

```
row% = ITabFind(envTab&, "COMSPEC", 1, 1, IT_EXACT) ' search  
CommandPath$ = ITabGet(envTab&,row%,2) ' read col 2  
Else  
CommandPath$ = "" ' not found  
EndIf  
ITabDelete envTab& ' clean up
```

See Also  
[ITabEnvString](#)

## Function ITabEnvString

Example

Example

Example

This function will create a table from a given environment variable. The Table will consist of one row per "word" which is separated with ;

ITabEnvString is very useful in decoding variables such as **PATH, INCLUDE, LIB** etc

### Usage:

```
handle& = ITabEnvString(envVar$)
```

If the variable does not exist, the function returns 0 (zero, no table is created)

Remember to delete the table when its no longer needed.

## Example ITabEnvString

```
table& = ITabEnvString("PATH")
```

the table may then look like this

```
C:\DOS  
c:\windows  
d:\bat  
e:\PROG  
C:\UTIL  
.....o.s.v.
```

See Also  
[ITabEnvList](#)

## Function ITabFastSort

### Example

Extremely fast sorting of a table. This routine does not format the text in any way during the sorting. The comparison is done directly on the binary data in the table. In other words, the sorting is case sensitive; capital letters are "less than" small letters and non-ascii letters will not likely appear in a logical sorting order. If you need more sophisticated sorting, use ITabSmartSort.

For descending sorting, use negative column.

This routine will not preserve previous sorting order for equality (ITabSmartSort will).

This routine is suitable for preparing a table for the extremely fast binary search routine ITabFindGE.

### Usage:

```
ITabFastSort table&, column%
```



## Function ITabFind

Example

Example

Example

Search in a table for data, given column to search in, given from-which-row to search from.

The function returns the row number of the first match-occurrence. If no matching-occurrence is found, the function returns a zero.

### Usage:

```
Result% = ITabFind(Handle&, data$, row%, col%, type%)
```

Types:

**IT\_EXACT**

The comparison is done exact.

**IT\_WILD**

Search substring in any position of the column, as a wildcard search "**\*substring\***". The "\*" should not be included.

**IT\_GE**

Search substring in position 1 of the column, as a wildcard search "**\*substring\***". The "\*" should not be included.  
Will return the line number of the first line where the corresponding data is greater or equal (GE) than the given substring.

The IT\_\* parameters are defined as global constants in then file "VBIT.BAS"

## Example ITabFind

```
FileSubstStr "MYPROG.TXT", "OLDLIB", "NEW LIB"
```

This call is supposed to open the file "MYPROG.TXT", replace all occurrences of the string "OLDLIB" with "NEW LIB" and write the file back to disk. The code for this task can be written like this:

```
Sub FileSubstStr (ByVal FileName$, ByVal FromStr$, ByVal ToStr$)
    table& = ITabRead(FileName$, IT_TEXTFILE)
    row% = 0
    Do
        row% = ITabFind(table&, FromStr$, row% + 1, 1, IT_WILD)
        If row% = 0 Then Exit Do
        ITabPutLine table&, row%, SubstAll(FromStr$, ToStr$, ITabGetLine(table&, row%))
    Loop
    ok% = ITabWrite(table&, FileName$, IT_TEXTFILE)
    ITabDelete table&
End Sub
```

The line `ITabPutLine table&, row%, SubstAll(FromStr$, ToStr$, ITabGetLine(table&, row%))` may look unreadable, but this illustrates the power of routines returning strings that can be used directly as an argument to another routine and so on.

The line could have been split into 3 lines like this:

```
temp1$ = ITabGetLine(table&, row%)
temp2$ = SubstAll(FromStr$, ToStr$, temp1$)
ITabPutLine table&, row%, temp2$
```

See Also  
[ITabFindGE](#)

## Function ITabFindGE

Example

Example

Example

Search in a sorted table, given column, for "data\*". The data comparison is exact. Folded/not folded letters are evaluated differently. It is essential that the table is pre-sorted. The function returns the row number of the first match-occurrence which is greater or equal(GE). If no matching-occurrence is found, the function returns a zero.

### Usage:

```
Result% = ITabFindGE(Handle&, findStr$, col%)
```

## Example ITabFindGE

A very fast way to look up data from a huge ascii file can be done this way:

An ascii file consists of 20,000 lines where each line is 80 + 2 positions long. (Cr/LF=2). In a VB loop the 8 first characters of each line in the ascii file is read into an array. The file is assumed to be sorted.

### **To get hold of data from the ascii file:**

Search in the table and get match based on the 8 characters. If match, the function ITabfindGE returns the row number. Knowing the fact that each line is 82 bytes long, the exact bytes position within the ascii file is [(matching row number-1) \* 82].

```
Dim Found, BytePos As integer
Dim DataLine As string
Found = ITabFindGE(MyTable&, "1234PROD", 1)
BytePos = (Found-1) * 82

are

DataLine=String(82," ")
read in
Open "Data.Txt" #1
Seek #1, , BytePos
position in the file
Get #1, , DataLine
file
Close #1
```

'Search in the table  
'Knowing the absolute byte  
  
'position the Basic operators  
  
'used:  
'Define the variable to be  
  
'Open the ascii file  
'Set file pointer to exact  
  
'Get the data line from the  
  
'Close the ascii file

See Also  
[ITabFind](#)

## Function ITabFromString

### Example

Create a one-dimensional tabel from string of words separated with a given delimiter character.

#### Usage:

```
Handle& = ITabFromString(streng$, skilletegn$)
```

Words that are enclosed with the Chr\$(34) may contain the delimiter character.

#### Example 1)

```
handle& = ItabFromString("word1;word2;word3";";")
```

we would create a tabel of 3 rows (one column):

```
word1  
word2  
word3
```

#### Example 2)

suppose string\$ contains the following :

```
col1,coloumn 2,"column 3, with delim. char",column4
```

```
handle& = ItabFromString(string$,",")
```

we would then have created a table looking like this:

```
col1  
column 2  
column 3, with delim. char  
column4
```

#### Example 3)

```
handle& = ItabFromString("D:\WINDOWS\UTIL\BITMAP\PIC.BMP","\"")
```

Will create a table with the following lines.

```
D:  
WINDOWS  
UTIL  
BITMAP  
PIC.BMP
```

First line line will contain the disk-name, and the last line will contain the filename.

## Function ITabGetColWidth

Example

Example

The function returns the width, as an integer, of a given column

### Usage:

```
Result% = ITabGetColWidth(Handle&, Col%)
```



## See Also

[ITabGet](#)

[ITabGetInt](#)

[ITabGetLine](#)

[ITabGetLong](#)

[ITabGetNumColumns](#)

[ITabGetNumLines](#)

[ITabGetReal](#)

[ITabGetSize](#)

## Function ITabGet

Example

Example

Example

Read data from a cell in a table.

### Usage:

```
Result$ = ITabGet(Handle&, Row%, Col%)
```

## Example ITabGet

'Display search path in a ListBox:

```
eTab& = ITabEnvList()
row% = ITabFind(eTab&, "PATH", 1, 1, IT_EXACT)
path$ = ITabGet(eTab&, row%, 2) ' e.g. "C:\DOS;C:\WINDOWS;D:\UTILS;E:\PROG" i
%=1
Do
    p$ = PickWord(path$, i%, Asc(";"))
    If Len(p$) = 0 Then End Loop
    List1.AddItem p$
    i% = i% + 1
Loop
ITabDelete eTab&
```

## See Also

[ITabGetColWidth](#)

[ITabGetInt](#)

[ITabGetLine](#)

[ITabGetLong](#)

[ITabGetNumColumns](#)

[ITabGetNumLines](#)

[ITabGetReal](#)

[ITabGetSize](#)

## Function ITabGetInt

Example

Example

Read data from a cell in a table and return an Integer.

**Usage:**

```
Result% = ITabGetInt(Handle&, Row%, Col%)
```

ITabGetColWidth  
ITabGet  
ITabGetLine  
ITabGetLong  
ITabGetNumColumns  
ITabGetNumLines  
ITabGetReal  
ITabGetSize

## Function ITabGetLine

Example

Example

Read data from a line in a table. This is practical when reading rows from tables with only one column.

**Usage:**

```
Result$ = ITabGetLine(Handle&, Row%)
```

## See also

[ITabGetColWidth](#)

[ITabGet](#)

[ITabGetInt](#)

[ITabGetLong](#)

[ITabGetNumColumns](#)

[ITabGetNumLines](#)

[ITabGetReal](#)

[ITabGetSize](#)



## Function ITabGetLong

Example

Example

Read data from a cell in a table and return a Long Integer.

**Usage:**

```
Result& = ITabGetLong(Handle&, Row%, Col%)
```

## See also

[ITabGetColWidth](#)

[ITabGet](#)

[ITabGetInt](#)

[ITabGetLine](#)

[ITabGetNumColumns](#)

[ITabGetNumLines](#)

[ITabGetReal](#)

[ITabGetSize](#)

## Function ITabGetNumColumns

Example

Example

Example

The function returns the number of columns the table consists of.

### **Usage:**

```
Result% = ITabGetNumColumns(Handle&)
```

## Example ITabGetNumColumns

Find out how many columns there are in a TAB-delimited file:

```
aTab& = ITabRead("DATAFILE.CSV", IT_CSVFILE + 9)
numCols% = ITabGetNumColumns(aTab&)
ITabDelete(aTab&)
```

## See also

[ITabGetColWidth](#)

[ITabGet](#)

[ITabGetInt](#)

[ITabGetLine](#)

[ITabGetLong](#)

[ITabGetNumLines](#)

[ITabGetReal](#)

[ITabGetSize](#)

## Function ITabGetNumLines

Example

Example

Example

This function returns the current number of lines the table.

### Usage:

```
Result% = ITabGetNumLines(Handle&)
```

Note: The number of lines in a table is not static.  
Several routines are capable of changing the number of lines i a table:

- ITabInsertLine
- ITabInsertLines
- ITabRemoveLine
- ITabRemoveLines

Calling ***ITabGetNumLines*** is normaly the logical thing to do after the following calls:

- ITabRead
- ITabReadFixedRecLenFile
- ITabEnvList
- ITabDir
- ITabCopyFromVTSS

## Example ITabGetNumLines

```
table& = ITabRead ("\AUTOEXEC.BAT", IT_TEXTFILE)
lines% = ITabGetNumLines(table&)
```

Note: is lines%=0, there are two possibilities:

A) the file exists and has 0 lines

B) the file does not exist (suppose we had the wrong drive?)

If the difference is significant, you should check for the existence of the file before you attempt to read it.

' The following function determines whether a file exist or not:

```
Function FileExist% (ByVal FileName$)
    tempTab& = ITabDir(FileName$, 1)
    If ITabGetNumLines(tempTab&) Then
        FileExist% = True
    Else
        FileExist% = False
    End If
    ITabDelete tempTab&
End Function
```

Please refer to FileExist function.

## See also

[ITabGetColWidth](#)

[ITabGet](#)

[ITabGetInt](#)

[ITabGetLine](#)

[ITabGetLong](#)

[ITabGetNumColumns](#)

[ITabGetReal](#)

[ITabGetSize](#)



## Function ITabGetReal

Example

Example

Read data from a cell in a table and return a Real (double precision floating point) number.

### Usage:

```
Result# = ITabGetReal (Handle&, Row%, Col%)
```

## See also

[ITabGetColWidth](#)

[ITabGet](#)

[ITabGetInt](#)

[ITabGetLine](#)

[ITabGetLong](#)

[ITabGetNumColumns](#)

[ITabGetNumLines](#)

[ITabGetSize](#)

## Function ITabGetSize

Example

Example

The function returns the size of a given table in bytes. Once the table is dimensioned by the ITabNew operator, the table does not occupy memory space of any consideration. When data is loaded into the table an, increase in memory consumption can be observed. The memory consumption is dynamic and depends on the amount of loaded data.

### Usage:

```
Result& = ITabGetSize(Handle&)
```

## See also

[ITabGetColWidth](#)

[ITabGet](#)

[ITabGetInt](#)

[ITabGetLine](#)

[ITabGetLong](#)

[ITabGetNumColumns](#)

[ITabGetNumLines](#)

[ITabGetReal](#)

## Sub ITabInsertLine

Example

Example

Insert a blank line/row in a table at a given line number, atLine%. The new inserted line will contain blank cells in all columns. The lines at and below the insert point will be pushed down one position. The number of lines in the table will be affected/changed, see [ITabGetNumLines](#)(+1).

### Usage:

```
ITabInsertLine Handle&, atLine%
```

See also  
[ITabInsertLines](#)

## Sub ITabInsertLines

Example

Example

Insert blank lines/rows in a table at a given line number, atLine%. The new inserted lines will contain blank cells in all columns. The lines at and below the insert point will be pushed down as many positions as the number of inserted lines, numLines%. The number of lines in the table will be affected/changed, see [ITabGetNumLines\(+n\)](#)

### Usage:

```
ITabInsertLines Handle&, atLine%, numLines%
```

See also  
[ITabInsertLine](#)



## Function ITabNew

Example

Example

Example

Create and dimension a new table. Returns a handle which will identify the table.  
May be used to create table with 0 rows.

### Usage:

```
Handle& = ITabNew(rows%, columns%)
```

Remember to delete the table, using [ITabDelete](#), when it is no longer needed (free system resources).

Sample collection

## Example ITabNew

```
'Define a table consisting of 100 rows and 10 columns pr row.  
Mytab&= ITabNew(100, 10)
```

See also  
[ITabNewArray](#)

## Function ITabNewArray

Example

Example

Example

Create a table with one column . The function returns a handle which will identify the table.  
May be used to create table with 0 rows.

### Usage:

```
Handle& = ITabNewArray(ByVal lines%)
```

Remember to delete the table, using [ITabDelete](#), when it is no longer needed (free system resources).

## Example ITabNewArray

Define a table consisting of 100 lines (one column).  
Mytab&= ITabNewArray(100)

See also

[ITabNew](#)

## Sub ITabPut

Example

Example

Put string data into a cell in the table.

### Usage:

ITabPut Handle&, Row%, Col%, DataString\$

See also

[ITabPutInt](#)

[ITabPutLine](#)

[ITabPutLong](#)

[ITabPutReal](#)



## Sub ITabPutInt

Example

Example

Put numeric (integer) data into a cell in the table.

### Usage:

```
ITabPutInt Handle&, Row%, Col%, IntegerNumber%
```

See also

[ITabPut](#)

[ITabPutLine](#)

[ITabPutLong](#)

[ITabPutReal](#)

## Sub ITabPutLine

Example

Example

Put data into a line in the table (as string). This is a practical call for writing lines to tables with only one column.

### Usage:

```
ITabPutLine Handle&, Row%, DataString$
```

See also

[ITabPut](#)

[ITabPutInt](#)

[ITabPutLong](#)

[ITabPutReal](#)

## Sub ITabPutLong

Example

Example

Put numeric data into a cell in the table (as Long).

### Usage:

ITabPutLong Handle&, Row%, Col%, LongNumber&

See also

[ITabPut](#)

[ITabPutInt](#)

[ITabPutLine](#)

[ITabPutReal](#)

## Sub ITabPutReal

Example

Example

Put numeric data into a cell in the table (as Double).

**Usage:**

ITabPutReal Handle&, Row%, Col%, DoubleRealNumber#

See also

[ITabPut](#)

[ITabPutInt](#)

[ITabPutLine](#)

[ITabPutLong](#)



## Function ITabRead

Example

Example

Read a file into a new table. The table is dimensioned depending on the contents of the disk file.

### Usage:

```
Handle& = ITabRead(FileName$, FileType%)
```

Remember to delete the table, using ITabDelete, when it is no longer needed (free system resources):

#### **Filetype:**

<b>IT_TABFILE</b>	Read an earlier written table.
<b>IT_TEXTFILE</b>	An ordinary text file
<b>IT_CSVFILE + Delim.</b>	Read a file where the columns are delimited by a given character
<b>IT_CSV0FILE + Delim</b>	As above, but the first line in the file is written to line zero in the

table (typically for column headers)

The **IT\_\*** parameters are defined as global constants in the file "**VBIT.BAS**"

#### **Additional parameters:**

<b>+ IT_ASCII</b>	Translate from DOS characters to Windows characters
<b>+ STRIP_T</b>	Remove trailing blanks

Delim is the ascii value of then delimiter character: Tab=9,(Asc";"),(Asc",")

If a table file, **IT\_TABFILE**, is read, the file that was written from a table as source, the table will gain the same dimension as the source table had.

If an ordinary textfile, **IT\_TEXTFILE**, is read, the table will become an array.

Remember to delete the table, using ITabDelete, when it is no longer needed (free system resources):

When reading a CSV-file, the character Chr\$(34), will be taken into consideration.

Columns that are enclosed with Chr\$(34), may contain the delimiter character. Chr\$(34) will be removed during read.

### **Consider this :**

```
col1,column 2,"column 3, with Delim char ",column4
```

woud be read like this :

```
col1
column 2
column 3, with Delim char ,
column4
```

## Example ITabRead

Read an earlier written table file named "Written.Tab" to memory. How the table is dimensioned is determined by the dimension of the read table/file "Written.Tab"

```
Mytab&= ITabRead("Written.Tab", IT_TABFILE)
```

Read a textfile named "Text.fil" to memory and pr line remove trailing blanks, optional, and translate from DOS to Windows characters-set, optional. The table becomes an array.

```
Mytab& = ITabRead(Text.fil,IT_TEXTFILE[+ STRIP_T][ + IT_ASCII])
```

## Function ITabReadFixedRecLenFile

Example

Example

Read a file with fixed record length to a new table. The function returns the table handle.

### Usage:

```
Handle& = ITabReadFixedRecLenFile(FileName$, fmt$)
```

Remember to delete the table, using [ITabDelete](#), when it is no longer needed (free system resources):

A linefeed between each record is assumed. The "fmt\$" parameter tells the system what to be picked from the record and placed to which column in the table. Capitalised letters (A-Z) are used for giving the position and length (repeated) in the record, The letter used. also indicates which column the data is to be put into. "A" is column 1, "B" = 2 and "C" = 3..."Y" = 25 and "Z" = 26. The width is given by repeating the letter. "A" means, pick one character and put it in column 1. "BBBB" means pick four characters and put it in column 2.

"ZZZ" means 3 characters to column 26. The sequence can mixed, order, according to the datafile, as long as "A" comes before "B".

Further on empty columns can be reserved in the table by skipping letters in the sequence. Leading and trailing blanks will be stripped before data is put to the table.

From version 1.24, it is possible to read more than 26 columns using characters following "Z" in the ascii table: "...XYZ[\]^\_`abcde..." up to ascii value 126 ("~"). This makes it possible to read up to 62 columns.

## Example ITabReadFixedRecLenFile

The first line shows the "fmt\$" and the 10 to follow the datalines within a datafile:

```
"AAAAAAAAAAAAABBBBBBBB DD CC EE FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF"
File Name      Size      Date      Description
=====
TOLL20.ZIP    35652    04-28-93  Tool Button Custom Control For VBasic
VB2_TB.ZIP    162895   01-14-93  The Ultimate VBASIC v2.0 Add-On, Supe
VB4EX.ZIP     116486   03-14-92  Example Of How To Use DLL's With VisB
VBE1NG.ZIP    118521   04-04-93  Visual Basic Engine For Making DataBa
VGX3.ZIP      194111   01-06-93  VGA Graphics File Lib For QB/BASIC Pr

VXBASE.ZIP    212606   03-25-92  XBase Windows Visual BASIC Functions
VXBD0C.ZIP    132274   03-19-92  XBase Windows Visual BASIC Docs [2/2]
WBB12.ZIP     266520   09-10-92  BasicBasic For Windows v1.2
```

The table defined with 6 columns and 10 lines:

```
1.      2.      3. 4. 5. 6.column:
File Name      Size      e Da      Description
=====
TOLL20.ZIP    35652    28 04 93  Tool Button Custom Control For VBasic
VB2_TB.ZIP    162895   14 01 93  The Ultimate VBASIC v2.0 Add-On, Supe
e.t.c.
```

## Function ITabReadFmt

### Example

Read a file with fixed record length to a new table. The function returns the table handle.

### Usage:

```
Handle& = ITabReadFmt& (fileName$, fmt$, type%)
```

fmt\$: see [ITabReadFixedRecLenFile](#)

type%:

IT_STRIP_L	:	Remove leading (left)
IT_STRIP_T or IT_STRIP_R	:	Remove trailing (right)
IT_STRIP_LT or IT_STRIP_LR	:	Both leading and trailing
IT_STRIP_ALL	:	Remove all spaces

## Function ITabRemoveLine

Example

Example

Remove a line/row in a table from a given line number, atLine%. The lines below the given linenumber will be scrolled up one line.

The number of lines in the table will be affected/changed, ITabRemoveLines (-1)

### Usage:

ITabRemoveLine Handle&, atLine%

See also  
[ITabRemoveLines](#)

## Function ITabRemoveLines

Example

Example

Remove lines/rows in a table from a given line number, atLine%. The lines below the given linenumber, atLine%, + the number of deleted lines, num%, will scroll up. The number of lines in the table will be affected/changed, ITabGetNumLines (-n)

### Usage:

```
ITabRemoveLines Handle&, atLine%, num%
```



See also  
[ITabRemoveLine](#)

## Sub ITabSmartSort

Example

Example

Sort a table by the contents of the given column. This routine sorts both text and numbers logically. The sorting is not case sensitive. If there are duplicates in the column being sorted, the original order will be kept. This makes it possible to sort on several columns just by repeating this call (sort least significant column first).

### Usage:

```
ITabSmartSort Handle&, Col%
```

If the column number is negative, the sorting will be descending on column (-Col%).

## Example ITabSmartSort

Given then table, "TestTab", consisting of one column and data as follows:

Number 1 of 100  
Number 10 of 100  
Number 100 of 100  
Number 2 of 100  
Number 20 of 100  
Number 20 of 50

(The result of an ordinary sort in Excel)

**Call ITabSmartsort(TestTable&, 1)**

**The result of "smart"sorting :**

Number 1 of 100  
Number 2 of 100  
Number 10 of 100  
Number 20 of 50  
Number 20 of 100  
Number 100 of 100

## Function ITabWrite

Write a table to a disk file. Returns error code (always 0 in this version).

**Usage:**

```
Result% = ITabWrite(Handle&, FileName$, FileType%)
```

**FileType:**

IT\_TABFILE     The internal format for reading/writing

IT\_TEXTFILE    Ordinary textfile which can be read to a table consisting of one column

**Additional options:**

IT\_ASCII       Translate from Windows to the DOS character set.

The IT\_\* parameters are defined as global constants in VBIT.BAS.

# Revision History

## Ver 1.39

New function ITabToVTSS

## Ver 1.33

Bug fix for FormNum (decimals=0)

## Ver 1.32

Added : Function FormNum

## Ver 1.31

Added : Function ITabReadFmt

## Ver 1.30

ItabNew, ItabNewArray is expanded. May now be used to create new tables with 0 lines/rows.

## Ver 1.29

### BUG Fix

The function "Place\$(from\$,to\$,pos%,num%)" caused wrong result (and sometimes error) when length of "from\$" was bigger than "num%". Corrected. GP

The following routines should now work for dates from 1/1 1800 (day 1) to 28/2 2400

```
dayNumber& = GetDayNumber(dateStr$, dateFmt$)
dateAsLong& = GetDateLong(dayNumber&)
dateString$ = GetDateStr(dateNum&, dateFmt$)
```

## Ver 1.28

### New functions

```
GetDateLong
GetDateStr
GetDayNumber
```

## Ver 1.26

Changed the following routines:

```
GetNumDays& (fromDate$, toDate$, dateFormat$, type%)
Interest# (fromDate$, toDate$, dateFormat$, amount#, rate#, type%)
```

Before : ' Dates must be between year 1901 and 2199

Now : ' Valid results for dates from September 14th 1752  
' to December 31 9999.

## Bug-fix in

```
SysInfo(DIR_WINDOWS)
SysInfo(DIR_WINDOWS_SYSTEM)
```

If path was the root, these routines would return "P:\\".  
All routines in VBIT returning path are supposed to return one (and only one) trailing "\" regardless of the path being root or not. The reason for this is that the application programmer should not have to mess up the application program with tests for root and appending "\", as you have to when

using the standard Visual Basic routines and API calls for this.

#### **Ver 1.25**

NEW routines:

GetNumDays&  
Interest#

Changed routine

Sound

#### **Ver 1.24**

Expanded ITabReadFixedRecLenFile:

From version 1.24, it is possible to read more than 26 columns using characters following "Z" in the ascii table: "...XYZ[ ]^\_`abcde..." up to ascii value 126 ("~"). This makes it possible to read up to 62 columns.

NEW routine:

SOUND

#### **Ver 1.21**

Bug-fix:

ITabDir with type=9 went into an endless loop ("hang") when number of matching subdirectories was 0.

This problem would typically occur on a diskette.

New features:

+ ITabDir - new type=10:

As type=9, but the resulting table will not include ".\" (current dir.) and "..\" (parent dir).

+ SysInfo:

DISK\_TYPE can now return "CDROM" (returned "REMOTE" before)

+ SysInfo and SysInfoNum - new types:

+ DISK\_CLUSTER\_SIZE [+ drive]

+ DISK\_SECTOR\_SIZE [+ drive]

+ DISK\_SECTORS\_PR\_CLUSTER [+ drive]

+ DISK\_AVAILABLE\_CLUSTERS [+ drive]

+ DISK\_TOTAL\_CLUSTERS [+ drive]

Note: Number of clusters is limited to &Hffff (16 bit), so this information will be incorrect for very big drives, such as CD-ROMs (most programs, including Windows File Manager, have the same problem). If the number of clusters is &Hffff and the drive type is CDROM, SysInfo/SysInfoNum will now return 650000 for type ( DISK\_SIZE\_KB [+ drive] ).

#### **Ver 1.20**

Official release April 10th 1995

#### **Ver 1.19**

Errors in ITabFastSort and ITabFindGE corrected.

There was a possibility for GPF if the tabel contained blank lines.

ITabFastSort and ITabSmartSort will show hourglass while sorting is in progress.

Strip function changed. Second parameter for function should now be a string.

#### **Ver 1.18**

NEW table functions

IT\_GE parameter type added to ITabFind function

Correct BROWS sequence in HLP file, minor corrections

#### **Ver 1.17**

NEW table functions

ITabCopy

ITabFastSort

#### **Ver 1.16**

NEW file functions

FileExist

FileGetAttr

FileGetDate

FileGetExt

FileFindPath

FileGetFileName

FileGetPath

FileGetSize

FileGetTime

#### **Ver 1.15**

Name changed

Several function are renamed !

Please read Important infomation

#### **Ver 1.14**

NEW functions Spreadsheet

VTSSget

VTSSput

ITabSetMaxDecimalsFromVTSS

NEW functions Table

ITabEnvString

ITabFromString

#### **Ver 1.13**

+ ITabCopyToVTSS will not clear cell formatting any

more (i.e. allignment, formatting of numbers etc).

+ ITabCopyToVTSS will not cause blank cells to be displayed as 0 any more.

+ New function: ITabCopyDataToVTSS.  
Similar to ITabCopyToVTSS, but will not adjust column width and not use row 0 as column headers.

+ IDBTOOLS.HLP added to the package.

#### Ver 1.12

+ ITabRead\* did not handle files with more than 16383 lines consistently. The number of lines read was determined by the actual number of lines & &H3fff...

Now it will read up to 16128 lines. If reported number of lines is bigger than 16000, you can assume that not all of the file has been read.

+ ITabCopyToVTSS will not cause blank cells to be displayed as 0 any more.

+ New function: ITabCopyDataToVTSS.  
Similar to ITabCopyToVTSS, but will not adjust column width and not use row 0 as column headers.

+ IDBTOOLS.HLP added to the package.

+ New call: ITabSetMaxDecimalsFromVTSS(maxDec%)  
Will force the next call to ITabCopyFromVTSS to round decimal numbers to maxDec% decimals.  
NOTE: This is a potentially dangerous call since it will set a global variable in the DLL. The danger is minimized since this variable will be reset by the

next call to ITabCopyFromVTSS. Still there is a very small possibility of another application calling ITabCopyFromVTSS before your application, and both applications may get unexpected results. The chances for this to happen are microscopic, but you should minimize the risk by calling ITabCopyFromVTSS immediately after this call.

#### Ver 1.11

+ Bug fix in ITabPutReal: got protection error when writing small negative numbers with many decimals. This call will no longer convert very big or very small numbers to scientific notation (eñnnn), but instead store all digits (may cause long strings for very big/small numbers). This should not be a problem for real life applications....

+ ITabCopyFromVTSS will now convert decimal numbers to strings using "." (period) as the decimal delimiter,

regardless of the system settings. This makes it



possible to read such numbers as strings into variants getting the expected result.

# Sample Collection

- AnsiToAscii Sample  
Sample using the AnsiToAscii function to convert from Windows to DOS character set. Also showing the special character sets for Norway and Denmark
- DosToUnix Sample  
Function converting from DOS to UNIX character set
- UnixToDos Sample  
Converting from UNIX to DOS character set
- FileSubstStr Sample
- GetNumWords Sample  
Return number of words in a string given a delimiter  
Leading, trailing and repeated embedded delimiters are ignored
- MakeArray Sample  
Sample showing the difference between ITabNew and VB array
- ShowPath Sample  
Display search path in List1

```
Sub AnsiToAsciiSample ()
  Open "scan-dos.txt" For Output As #1
  Print #1, "In Norway and Denmark, we use some special characters:"
  Print #1, AnsiToAscii("[Æ]=[AE], [Ø]=[OE] and [Å]=[AA]")
  Print #1, AnsiToAscii("[æ]=[ae], [ø]=[oe] and [å]=[aa]")
  Print #1, AnsiToAscii("In Sweden, they use [Ä] instead of [E],")
  Print #1, AnsiToAscii("[ä]=[æ], [Ö]=[Ø] and [ö]=[ø].")
  Close #1
End Sub
```

```

Sub DosToUnix (ByVal FromFile$, ByVal ToFile$)
  BytesToRead& = FileLen(FromFile$)
  If FileLength(ToFile$) > 0 Then Kill (ToFile$)
  Open FromFile$ For Input As #1
  Open ToFile$ For Binary Access Write As #2
  Const maxBuff& = 30000 ' Read up to 30000 bytes each time
  Do While BytesToRead& > 0
    BuffSize& = BytesToRead&
    If BuffSize& > maxBuff& Then BuffSize& = maxBuff&
    buffer$ = CRLF(Input$(BuffSize&, #1), 10) ' Read and convert LF
to CR/LF
    ' NB: Problem if CR/LF is found exactly at a maxBuff& boundary:
    If Asc(Pick(buffer$, BuffSize&, 1)) = 13 Then ' Fix it:
      buffer$ = Pick(buffer$, 1, BuffSize& - 1) ' remove CR (last chr)
    End If
    Put #2, , buffer$
    BytesToRead& = BytesToRead& - BuffSize&
  Loop
  Close #1
  Close #2
End Sub

```

```
Sub UnixToDos (ByVal FromFile$, ByVal ToFile$)
  BytesToRead& = FileLen(FromFile$)
  ' If FileLength(ToFile$) > 0 Then Kill (ToFile$)
  If FileExist(ToFile$) Then Kill (ToFile$)
  Open FromFile$ For Input As #1
  Open ToFile$ For Binary Access Write As #2
  Const maxBuff& = 30000 ' Read up to 30000 bytes each time
  Do While BytesToRead& > 0
    BuffSize& = BytesToRead&
    If BuffSize& > maxBuff& Then BuffSize& = maxBuff&
    buffer$ = CRLF(Input$(BuffSize&, #1), -10) ' Read and convert CR/LF to
LF
    Put #2, , buffer$
    BytesToRead& = BytesToRead& - BuffSize&
  Loop
  Close #1
  Close #2
End Sub
```

```
Sub FileSubstStr (ByVal FileName$, ByVal FromStr$, ByVal ToStr$)
    table& = ITabRead(FileName$, IT_TEXTFILE)
    row% = 0
    Do
        row% = ITabFind(table&, FromStr$, row% + 1, 1, IT_WILD)
        If row% = 0 Then Exit Do
        ITabPutLine table&, row%, SubstAll(FromStr$, ToStr$,
ITabGetLine(table&, row%))
    Loop
    ok% = ITabWrite(table&, FileName$, IT_TEXTFILE)
    ITabDelete table&
End Sub
```

```
' Return number of words in a string given a delimiter
' Leading, trailing and repeted embedded delimiters are ignored '
Function GetNumWords% (ByVal FileMask$, ByVal Delim$)
    bs% = -Asc(Delim$)
    n% = 0
    While Len(PickWord(FileMask$, n% + 1, bs%))
        n% = n% + 1
    Wend
    GetNumWords% = n%
End Function
```

```

Sub MakeArray ()
  Const x% = 5000
  Const y% = 10
  '   Static BigArr(x%, y%) As String
  '   For i% = 1 To x%
  '       For j% = 1 To y%
  '           BigArr(i%, j%) = "TESTING"
  '       Next j%
  '   Next i%

  BigTable& = ITabNew(x%, 10)
  For i% = 1 To x%
      For j% = 1 To 10
          ITabPut BigTable&, i%, j%, "TESTING " & i% & ", " & j%
      Next j%
  Next i%

  '   XXX_TEST!List1.Visible = True
  '   XXX_TEST!List1.ZOrder
  For i% = (x% - 100) To x%
      For j% = 1 To y%
          '       XXX_TEST!List1.AddItem BigArr(i%, j%)
          '       XXX_TEST!List1.AddItem ITabGet(BigTable&, i%, j%)
      Next j%
  Next i%

End Sub

```



```
Sub ShowPath ()
' Display search path in List1:
eTab& = ITabEnvList()
row% = ITabFind(eTab&, "PATH", 1, 1, IT_EXACT)
path$ = ITabGet(eTab&, row%, 2) ' e.g. "C:\DOS;C:\WINDOWS;D:\UTILS;E:\PROG"
i% = 1
Do
    p$ = PickWord(path$, i%, Asc(";"))
    If Len(p$) = 0 Then Exit Do
'>> List1.AddItem p$
    i% = i% + 1
Loop
ITabDelete eTab&
End Sub
```

# Ordering Information

## LICENSE-CODES / PRICE

Contact Traders Mascot AS to get a license code.

Current prices are:

In Norway: NOK 495 incl. M.V.A.

All other countries: US \$ 65

A valid license code gives you the right to distribute VBIT.DLL with your programs.

## ORDERING INFORMATION / PAYMENT

Send to:

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**Phone : +47 7012 1120**  
**Fax : +47 7012 4090**  
**e-mail: bjonor01@mimer.no or infotech@telepost.no**

The following information must accompany the payment:

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