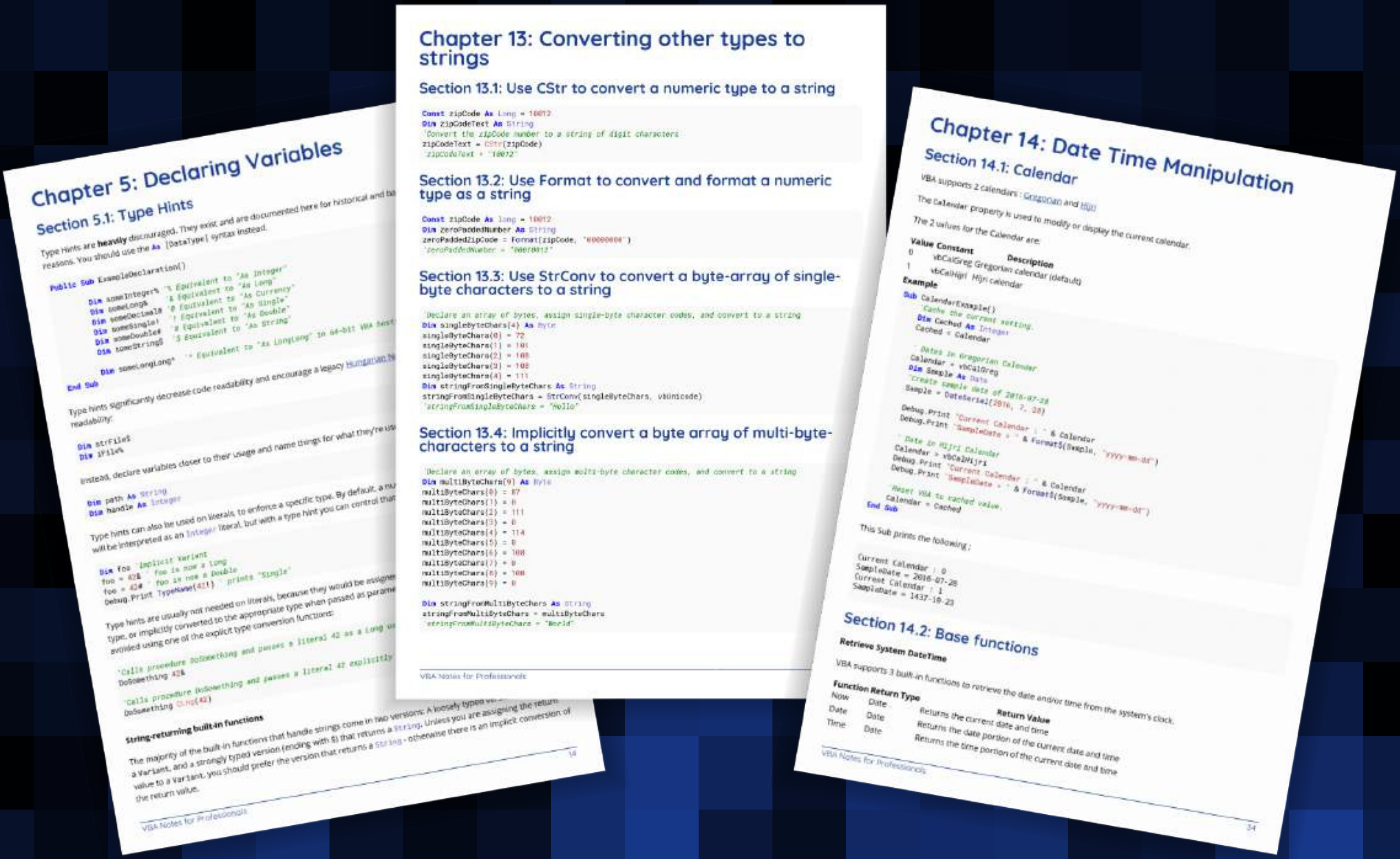
VBA

Notes for Professionals



Chapter 5: Declaring Variables

Section 5.1: Type Hints

Type Hints are **heavily** discouraged. They exist and are documented here for historical and ba reasons. You should use the `As [DataType]` syntax instead.

Type hints significantly decrease code readability and encourage a legacy Hungarian N

Instead, declare variables closer to their usage and name things for what they're us

Type hints can also be used on literals, to enforce a specific type. By default, a nu will be interpreted as an `Integer` literal, but with a type hint you can control that

Type hints are usually not needed on literals, because they would be assigne type, or implicitly converted to the appropriate type when passed as parame avoided using one of the explicit type conversion functions:

String-returning built-in functions

The majority of the built-in functions that handle strings come in two versions: A loosely typed ve a `Variant`, and a strongly typed version (ending with `$`) that returns a `String`. Unless you are assigning the return value to a `Variant`, you should prefer the version that returns a `String` - otherwise there is an implicit conversion of the return value.

Chapter 13: Converting other types to strings

Section 13.1: Use CStr to convert a numeric type to a string

```
Const zipCode As Long = 10012
Dim zipCodeText As String
'Convert the zipCode number to a string of digit characters
zipCodeText = CStr(zipCode)
'zipCodeText = "10012"
```

Section 13.2: Use Format to convert and format a numeric type as a string

```
Const zipCode As Long = 10012
Dim zeroPaddedNumber As String
zeroPaddedZipCode = Format(zipCode, "00000000")
'zeroPaddedNumber = "00010012"
```

Section 13.3: Use StrConv to convert a byte-array of single-byte characters to a string

```
'Declare an array of bytes, assign single-byte character codes, and convert to a string
Dim singleByteChars(4) As Byte
singleByteChars(0) = 72
singleByteChars(1) = 101
singleByteChars(2) = 108
singleByteChars(3) = 108
singleByteChars(4) = 111
Dim stringFromSingleByteChars As String
stringFromSingleByteChars = StrConv(singleByteChars, vbUnicode)
'stringFromSingleByteChars = "Hello"
```

Section 13.4: Implicitly convert a byte array of multi-byte-characters to a string

```
'Declare an array of bytes, assign multi-byte character codes, and convert to a string
Dim multiByteChars(9) As Byte
multiByteChars(0) = 87
multiByteChars(1) = 0
multiByteChars(2) = 111
multiByteChars(3) = 0
multiByteChars(4) = 114
multiByteChars(5) = 0
multiByteChars(6) = 108
multiByteChars(7) = 0
multiByteChars(8) = 100
multiByteChars(9) = 0

Dim stringFromMultiByteChars As String
stringFromMultiByteChars = multiByteChars
'stringFromMultiByteChars = "World"
```

VBA Notes for Professionals

Chapter 14: Date Time Manipulation

Section 14.1: Calendar

VBA supports 2 calendars : Gregorian and Hijri

The Calendar property is used to modify or display the current calendar.

The 2 values for the Calendar are:

Value	Constant	Description
0	vbCalGreg	Gregorian calendar (default)
1	vbCalHijri	Hijri calendar

Example

This Sub prints the following ;

```
Current Calendar : 0
SampleDate = 2016-07-28
Current Calendar : 1
SampleDate = 1437-10-23
```

Section 14.2: Base functions

Retrieve System DateTime

VBA supports 3 built-in functions to retrieve the date and/or time from the system's clock.

Function	Return Type	Return Value
Now	Date	Returns the current date and time
Date	Date	Returns the date portion of the current date and time
Time	Date	Returns the time portion of the current date and time

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