

More User Defined Excel Functions (UDF #2)

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Let's create several more user defined functions:

A "Time Stamp" function:

Any user defined function must be written in a "Module" for it to work. The function will record a fixed time (time stamp) when the formula is entered in the cell:

```
Function TimeStamp() As Date  
    TimeStamp = TimeValue(Now)  
End Function
```

function declaration – it has no argument and it returns a date

TimeValue(Now) is a construct which returns the time at the moment the macro or the function is being activated (typed in)

End of function declaration

- In a new worksheet called "TimeFunctions" type "**= timestamp()**" in cell B4
- Format cell B4 as "time" (Format -> Cells -> Time)
- You can copy down B4 with few seconds delay and see how time stamping works (don't forget to pre-format those cells as "Time" before the copy operation)

Another Time Function, a Concatenation Date-Text:

While using concatenation of text with a date in a cell, the format of the date will be messed up. In order to preserve the date format let's write a new function.

Any user defined must function be written in a "Module" in order to work. The function will concatenate a custom formatted date with a string of text:

function declaration – it has two arguments, a date and a string and it returns a string

```
Function DateText(DateNow as Date, Literal_Argument As String) As String
```

```
    DateText = Format(DateNow, "mm/dd/yyyy") & " " & Literal_Argument
```

```
End Function
```

End of function declaration

A construct which while used in a macro or function formats an argument number as a date in a chosen format

Space

The second argument (string)

Typical VBA concatenation (you can search Google for more info)

Excel implementation of the time-text concatenation function:

- After writing the "DateText()" function code in "Module1" fill in cells "B20" and "B24:B28" with the labels shown in the picture to the right

- Cell B21: "= Now()" → this will print the date in the cell if B21 is formatted as "Date"

- Cell B24: "= datetext(B\$21,A24)"

- Cell B25: "= datetext(B\$21,A25)"

- Cell B26: "=datetext(B\$21,"Something we write")"

- Cell B27: "=datetext(B\$21,A27)"

- Cell B28: "=datetext(B\$21,A28)" – (I typed few spaces before "BP" in cell "A28" to demonstrate that the spaces in the string are transmitted in the concatenated expression)

- There are other ways to format the data and several options are explained in the worksheet (see the yellow table)

	A	B
16		
17		
18		
19		
20		A certain date
21		1/19/2011
22		
23		
24	Shell oil	01/19/2011 Shell oil
25	Valdez	01/19/2011 Valdez
26		01/19/2011 Something we write
27	Exxon	01/19/2011 Exxon
28	BP	01/19/2011 BP
29		
30		
31		
32		
33		
34		