FORMAT Discussion

Required reading before continuing with this document.

[Template\_Structure\_Discussion.docx](file:///\\Atlantic.int.ec.gc.ca\shares\Branches\EPB\ShellFish\Non-LabSOP'S\Template_Structure_Discussion.docx)

**Below are examples to discuss the Template Structure:**

Please indicate 7 as Startup ID (which is New Brunswick)



Also indicate just 1 item.



**Note:** If you are not seeing any three bars (|) in this document it’s because you are probably looking at the result file C:\CSSPReportTemplates\FORMAT\_Discussion.docx. For this document to make sense (ya right) it’s better to read it as the Template i.e. C:\CSSPReportTemplates\Template\_FORMAT\_Discussion.docx. To really understand the document you will need to run it through the parser by selecting the word document type, selecting the templates radio button and selecting the Template\_FORMAT\_Discussion.docx from the combo box after the template has been copied under the C:\CSSPReportTemplates\.

Steps:

* click on Word
* click on Templates
* select the Template\_FORMAT\_Discussion.docx file
* Open the file to read or modify by using the Open button
* Test the template and the changes you might have made by clicking on the Test Selected Template

Below you will find a series of formatting examples. You can also find all the options at

* **Appendix A and B – Standard and custom formatting of numbers**
* **Appendix C and D – Standard and custom formatting of dates**

If Province\_Lat equal **46.56532** then:

|||Start Province en

Province\_Name

Province\_Lat

|||

|||Province\_Name|||

* **Standard formatting**
* No formatting should produce: 46.56532 -> test: (|||Province\_Lat|||)
* F0 should produce: 47 -> test: (|||Province\_Lat FORMAT F0|||)
* F1 should produce: 46.6 -> test: (|||Province\_Lat FORMAT F1|||)
* F2 should produce: 46.57 -> test: (|||Province\_Lat FORMAT F2|||)
* F3 should produce: 46.565 -> test: (|||Province\_Lat FORMAT F3|||)
* F4 should produce: 46.5653 -> test: (|||Province\_Lat FORMAT F4|||)
* F5 should produce: 46.56532 -> test: (|||Province\_Lat FORMAT F5|||)
* F6 should produce: 46.565320 -> test: (|||Province\_Lat FORMAT F6|||)
* F7 should produce: 46.5653200 -> test: (|||Province\_Lat FORMAT F7|||)
* E1 should produce: 4.7E+001 -> test: (|||Province\_Lat FORMAT E1|||)
* E2 should produce: 4.66E+001 -> test: (|||Province\_Lat FORMAT E2|||)
* **Custom formatting**
* 0000 should produce: 0047 -> test: (|||Province\_Lat FORMAT 0000|||)
* #### should produce: 47 -> test: (|||Province\_Lat FORMAT ####|||)
* ##.## should produce: 46.57 -> test: (|||Province\_Lat FORMAT ##.##|||)

|||End Province en|||

If Province\_Last\_Update\_Date\_And\_Time\_UTC equal **02/12/2014 4:58:19 PM** then:

|||Start Province en

Province\_Name

Province\_Last\_Update\_Date\_And\_Time\_UTC

|||

|||Province\_Name|||

* **Standard formatting**
* No formatting should produce: 02/12/2014 4:58:19 PM -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC |||)
* d should produce: 02/12/2014 -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT d|||)
* D should produce: December-02-14 -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT D|||)
* f should produce: December-02-14 4:58 PM -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT f|||)
* F should produce: December-02-14 4:58:19 PM -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT F|||)
* g should produce: 02/12/2014 4:58 PM -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT g|||)
* G should produce: 02/12/2014 4:58:19 PM -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT G|||)
* M or m should produce: December 02 -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT m|||)
* O or o should produce: 2014-12-02T16:58:19.8230000-04:00-> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT o|||)
* R or r should produce: Tue, 02 Dec 2014 16:58:19 GMT -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT r|||)
* s should produce: 2014-12-02T16:58:19 -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT s|||)
* t should produce: 4:58 PM -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT t|||)
* T should produce: 4:58:19 PM -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT T|||)
* u should produce: 2014-12-02 16:58:19Z-> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT u|||)
* U should produce: December-02-14 8:58:19 PM -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT U|||)
* Y or y should produce: December, 2014 -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT y|||)
* **Custom formatting**
* dd should produce: 02 -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT dd|||)
* ddd should produce: Tue -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT ddd|||)
* dddd should produce: Tuesday -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT dddd|||)
* hh should produce: 04 -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT hh|||)
* HH should produce: 16 -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT HH|||)
* mm should produce: 58 -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT mm|||)
* MM should produce: 12 -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT MM|||)
* MMM should produce: Dec -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT MMM|||)
* MMMM should produce: December -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT MMMM|||)
* ss should produce: 19 -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT ss|||)
* t should produce: 4:58 PM -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT t|||)
* tt should produce: PM -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT tt|||)
* yy should produce: 14 -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT yy|||)
* yyyy should produce: 2012 -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT yyyy|||)
* zz should produce: -04 -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT zz|||)
* zzz should produce: -04.00 -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT zzz|||)
* NOTE: below the \* will be replaced by a space
* yyyy\*MMM\*dd should produce: 2014 Dec 2 -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT yyyy\*MMM\*dd|||)
* yyyy\*MMMM\*dd should produce: 2014 December 2 -> test: (|||Province\_Last\_Update\_Date\_And\_Time\_UTC FORMAT yyyy\*MMMM\*dd|||)

|||End Province en|||

Other document to produce:

* [Template\_Structure\_Discussion.docx](file:///\\Atlantic.int.ec.gc.ca\shares\Branches\EPB\ShellFish\Non-LabSOP'S\Template_Structure_Discussion.docx)
* <Template_Table_Discussion.docx>
* [Template\_Filtering\_Discussion.docx](file:///\\Atlantic.int.ec.gc.ca\shares\Branches\EPB\ShellFish\Non-LabSOP'S\Template_Filtering_Discussion.docx)

Appendix A: Standard formatting of numbers

Source: <https://msdn.microsoft.com/en-us/library/dwhawy9k(v=vs.110).aspx>

|  |  |  |  |
| --- | --- | --- | --- |
| **Format specifier** | **Name** | **Description** | **Examples** |
| "C" or "c" | Currency | Result: A currency value.  Supported by: All numeric types.  Precision specifier: Number of decimal digits.  Default precision specifier: Defined by[NumberFormatInfo.CurrencyDecimalDigits](https://msdn.microsoft.com/en-us/library/system.globalization.numberformatinfo.currencydecimaldigits(v=vs.110).aspx).  More information: [The Currency ("C") Format Specifier](https://msdn.microsoft.com/en-us/library/dwhawy9k(v=vs.110).aspx#CFormatString). | 123.456 ("C", en-US) -> $123.46  123.456 ("C", fr-FR) -> 123,46 €  123.456 ("C", ja-JP) -> ¥123  -123.456 ("C3", en-US) -> ($123.456)  -123.456 ("C3", fr-FR) -> -123,456 €  -123.456 ("C3", ja-JP) -> -¥123.456 |
| "D" or "d" | Decimal | Result: Integer digits with optional negative sign.  Supported by: Integral types only.  Precision specifier: Minimum number of digits.  Default precision specifier: Minimum number of digits required.  More information: [The Decimal("D") Format Specifier](https://msdn.microsoft.com/en-us/library/dwhawy9k(v=vs.110).aspx#DFormatString). | 1234 ("D") -> 1234  -1234 ("D6") -> -001234 |
| "E" or "e" | Exponential (scientific) | Result: Exponential notation.  Supported by: All numeric types.  Precision specifier: Number of decimal digits.  Default precision specifier: 6.  More information: [The Exponential ("E") Format Specifier](https://msdn.microsoft.com/en-us/library/dwhawy9k(v=vs.110).aspx#EFormatString). | 1052.0329112756 ("E", en-US) -> 1.052033E+003  1052.0329112756 ("e", fr-FR) -> 1,052033e+003  -1052.0329112756 ("e2", en-US) -> -1.05e+003  -1052.0329112756 ("E2", fr\_FR) -> -1,05E+003 |
| "F" or "f" | Fixed-point | Result: Integral and decimal digits with optional negative sign.  Supported by: All numeric types.  Precision specifier: Number of decimal digits.  Default precision specifier: Defined by[NumberFormatInfo.NumberDecimalDigits](https://msdn.microsoft.com/en-us/library/system.globalization.numberformatinfo.numberdecimaldigits(v=vs.110).aspx).  More information: [The Fixed-Point ("F") Format Specifier](https://msdn.microsoft.com/en-us/library/dwhawy9k(v=vs.110).aspx#FFormatString). | 1234.567 ("F", en-US) -> 1234.57  1234.567 ("F", de-DE) -> 1234,57  1234 ("F1", en-US) -> 1234.0  1234 ("F1", de-DE) -> 1234,0  -1234.56 ("F4", en-US) -> -1234.5600  -1234.56 ("F4", de-DE) -> -1234,5600 |
| "G" or "g" | General | Result: The more compact of either fixed-point or scientific notation.  Supported by: All numeric types.  Precision specifier: Number of significant digits.  Default precision specifier: Depends on numeric type.  More information: [The General ("G") Format Specifier](https://msdn.microsoft.com/en-us/library/dwhawy9k(v=vs.110).aspx#GFormatString). | -123.456 ("G", en-US) -> -123.456  -123.456 ("G", sv-SE) -> -123,456  123.4546 ("G4", en-US) -> 123.5  123.4546 ("G4", sv-SE) -> 123,5  -1.234567890e-25 ("G", en-US) -> -1.23456789E-25  -1.234567890e-25 ("G", sv-SE) -> -1,23456789E-25 |
| "N" or "n" | Number | Result: Integral and decimal digits, group separators, and a decimal separator with optional negative sign.  Supported by: All numeric types.  Precision specifier: Desired number of decimal places.  Default precision specifier: Defined by[NumberFormatInfo.NumberDecimalDigits](https://msdn.microsoft.com/en-us/library/system.globalization.numberformatinfo.numberdecimaldigits(v=vs.110).aspx).  More information: [The Numeric ("N") Format Specifier](https://msdn.microsoft.com/en-us/library/dwhawy9k(v=vs.110).aspx#NFormatString). | 1234.567 ("N", en-US) -> 1,234.57  1234.567 ("N", ru-RU) -> 1 234,57  1234 ("N1", en-US) -> 1,234.0  1234 ("N1", ru-RU) -> 1 234,0  -1234.56 ("N3", en-US) -> -1,234.560  -1234.56 ("N3", ru-RU) -> -1 234,560 |
| "P" or "p" | Percent | Result: Number multiplied by 100 and displayed with a percent symbol.  Supported by: All numeric types.  Precision specifier: Desired number of decimal places.  Default precision specifier: Defined by[NumberFormatInfo.PercentDecimalDigits](https://msdn.microsoft.com/en-us/library/system.globalization.numberformatinfo.percentdecimaldigits(v=vs.110).aspx).  More information: [The Percent ("P") Format Specifier](https://msdn.microsoft.com/en-us/library/dwhawy9k(v=vs.110).aspx#PFormatString). | 1 ("P", en-US) -> 100.00 %  1 ("P", fr-FR) -> 100,00 %  -0.39678 ("P1", en-US) -> -39.7 %  -0.39678 ("P1", fr-FR) -> -39,7 % |
| "R" or "r" | Round-trip | Result: A string that can round-trip to an identical number.  Supported by: [Single](https://msdn.microsoft.com/en-us/library/system.single(v=vs.110).aspx), [Double](https://msdn.microsoft.com/en-us/library/system.double(v=vs.110).aspx), and [BigInteger](https://msdn.microsoft.com/en-us/library/system.numerics.biginteger(v=vs.110).aspx).  Precision specifier: Ignored.  More information: [The Round-trip ("R") Format Specifier](https://msdn.microsoft.com/en-us/library/dwhawy9k(v=vs.110).aspx#RFormatString). | 123456789.12345678 ("R") -> 123456789.12345678  -1234567890.12345678 ("R") -> -1234567890.1234567 |
| "X" or "x" | Hexadecimal | Result: A hexadecimal string.  Supported by: Integral types only.  Precision specifier: Number of digits in the result string.  More information: [The HexaDecimal ("X") Format Specifier](https://msdn.microsoft.com/en-us/library/dwhawy9k(v=vs.110).aspx#XFormatString). | 255 ("X") -> FF  -1 ("x") -> ff  255 ("x4") -> 00ff  -1 ("X4") -> 00FF |
| Any other single character | Unknown specifier | Result: Throws a [FormatException](https://msdn.microsoft.com/en-us/library/system.formatexception(v=vs.110).aspx) at run time. |  |

Appendix B: Custom formatting of numbers

Source: <https://msdn.microsoft.com/en-us/library/0c899ak8(v=vs.110).aspx>

|  |  |  |  |
| --- | --- | --- | --- |
| **Format specifier** | **Name** | **Description** | **Examples** |
| "0" | Zero placeholder | Replaces the zero with the corresponding digit if one is present; otherwise, zero appears in the result string.  More information: [The "0" Custom Specifier](https://msdn.microsoft.com/en-us/library/0c899ak8(v=vs.110).aspx#Specifier0). | 1234.5678 ("00000") -> 01235  0.45678 ("0.00", en-US) -> 0.46  0.45678 ("0.00", fr-FR) -> 0,46 |
| "#" | Digit placeholder | Replaces the "#" symbol with the corresponding digit if one is present; otherwise, no digit appears in the result string.  Note that no digit appears in the result string if the corresponding digit in the input string is a non-significant 0. For example, 0003 ("####") -> 3.  More information: [The "#" Custom Specifier](https://msdn.microsoft.com/en-us/library/0c899ak8(v=vs.110).aspx#SpecifierD). | 1234.5678 ("#####") -> 1235  0.45678 ("#.##", en-US) -> .46  0.45678 ("#.##", fr-FR) -> ,46 |
| "." | Decimal point | Determines the location of the decimal separator in the result string.  More information: [The "." Custom Specifier](https://msdn.microsoft.com/en-us/library/0c899ak8(v=vs.110).aspx#SpecifierPt). | 0.45678 ("0.00", en-US) -> 0.46  0.45678 ("0.00", fr-FR) -> 0,46 |
| "," | Group separator and number scaling | Serves as both a group separator and a number scaling specifier. As a group separator, it inserts a localized group separator character between each group. As a number scaling specifier, it divides a number by 1000 for each comma specified.  More information: [The "," Custom Specifier](https://msdn.microsoft.com/en-us/library/0c899ak8(v=vs.110).aspx#SpecifierTh). | Group separator specifier:  2147483647 ("##,#", en-US) -> 2,147,483,647  2147483647 ("##,#", es-ES) -> 2.147.483.647  Scaling specifier:  2147483647 ("#,#,,", en-US) -> 2,147  2147483647 ("#,#,,", es-ES) -> 2.147 |
| "%" | Percentage placeholder | Multiplies a number by 100 and inserts a localized percentage symbol in the result string.  More information: [The "%" Custom Specifier](https://msdn.microsoft.com/en-us/library/0c899ak8(v=vs.110).aspx#SpecifierPct). | 0.3697 ("%#0.00", en-US) -> %36.97  0.3697 ("%#0.00", el-GR) -> %36,97  0.3697 ("##.0 %", en-US) -> 37.0 %  0.3697 ("##.0 %", el-GR) -> 37,0 % |
| "‰" | Per mille placeholder | Multiplies a number by 1000 and inserts a localized per mille symbol in the result string.  More information: [The "‰" Custom Specifier](https://msdn.microsoft.com/en-us/library/0c899ak8(v=vs.110).aspx#SpecifierPerMille). | 0.03697 ("#0.00‰", en-US) -> 36.97‰  0.03697 ("#0.00‰", ru-RU) -> 36,97‰ |
| "E0"  "E+0"  "E-0"  "e0"  "e+0"  "e-0" | Exponential notation | If followed by at least one 0 (zero), formats the result using exponential notation. The case of "E" or "e" indicates the case of the exponent symbol in the result string. The number of zeros following the "E" or "e" character determines the minimum number of digits in the exponent. A plus sign (+) indicates that a sign character always precedes the exponent. A minus sign (-) indicates that a sign character precedes only negative exponents.  More information: [The "E" and "e" Custom Specifiers](https://msdn.microsoft.com/en-us/library/0c899ak8(v=vs.110).aspx#SpecifierExponent). | 987654 ("#0.0e0") -> 98.8e4  1503.92311 ("0.0##e+00") -> 1.504e+03  1.8901385E-16 ("0.0e+00") -> 1.9e-16 |
| \ | Escape character | Causes the next character to be interpreted as a literal rather than as a custom format specifier.  More information: [The "\" Escape Character](https://msdn.microsoft.com/en-us/library/0c899ak8(v=vs.110).aspx#SpecifierEscape). | 987654 ("\###00\#") -> #987654# |
| 'string'  "string" | Literal string delimiter | Indicates that the enclosed characters should be copied to the result string unchanged. | 68 ("# ' degrees'") -> 68 degrees  68 ("#' degrees'") -> 68 degrees |
| ; | Section separator | Defines sections with separate format strings for positive, negative, and zero numbers.  More information: [The ";" Section Separator](https://msdn.microsoft.com/en-us/library/0c899ak8(v=vs.110).aspx#SectionSeparator). | 12.345 ("#0.0#;(#0.0#);-\0-") -> 12.35  0 ("#0.0#;(#0.0#);-\0-") -> -0-  -12.345 ("#0.0#;(#0.0#);-\0-") -> (12.35)  12.345 ("#0.0#;(#0.0#)") -> 12.35  0 ("#0.0#;(#0.0#)") -> 0.0  -12.345 ("#0.0#;(#0.0#)") -> (12.35) |
| Other | All other characters | The character is copied to the result string unchanged. | 68 ("# °") -> 68 ° |

Appendix C: Standard formatting of dates

Source : <https://msdn.microsoft.com/en-us/library/az4se3k1(v=vs.110).aspx>

|  |  |  |
| --- | --- | --- |
| **Format specifier** | **Description** | **Examples** |
| "d" | Short date pattern.  More information:[The Short Date ("d") Format Specifier](https://msdn.microsoft.com/en-us/library/az4se3k1(v=vs.110).aspx" \l "ShortDate). | 2009-06-15T13:45:30 -> 6/15/2009 (en-US)  2009-06-15T13:45:30 -> 15/06/2009 (fr-FR)  2009-06-15T13:45:30 -> 2009/06/15 (ja-JP) |
| "D" | Long date pattern.  More information:[The Long Date ("D") Format Specifier](https://msdn.microsoft.com/en-us/library/az4se3k1(v=vs.110).aspx" \l "LongDate). | 2009-06-15T13:45:30 -> Monday, June 15, 2009 (en-US)  2009-06-15T13:45:30 -> 15 июня 2009 г. (ru-RU)  2009-06-15T13:45:30 -> Montag, 15. Juni 2009 (de-DE) |
| "f" | Full date/time pattern (short time).  More information: [The Full Date Short Time ("f") Format Specifier](https://msdn.microsoft.com/en-us/library/az4se3k1(v=vs.110).aspx#FullDateShortTime). | 2009-06-15T13:45:30 -> Monday, June 15, 2009 1:45 PM (en-US)  2009-06-15T13:45:30 -> den 15 juni 2009 13:45 (sv-SE)  2009-06-15T13:45:30 -> Δευτέρα, 15 Ιουνίου 2009 1:45 μμ (el-GR) |
| "F" | Full date/time pattern (long time).  More information: [The Full Date Long Time ("F") Format Specifier](https://msdn.microsoft.com/en-us/library/az4se3k1(v=vs.110).aspx#FullDateLongTime). | 2009-06-15T13:45:30 -> Monday, June 15, 2009 1:45:30 PM (en-US)  2009-06-15T13:45:30 -> den 15 juni 2009 13:45:30 (sv-SE)  2009-06-15T13:45:30 -> Δευτέρα, 15 Ιουνίου 2009 1:45:30 μμ (el-GR) |
| "g" | General date/time pattern (short time).  More information: [The General Date Short Time ("g") Format Specifier](https://msdn.microsoft.com/en-us/library/az4se3k1(v=vs.110).aspx#GeneralDateShortTime). | 2009-06-15T13:45:30 -> 6/15/2009 1:45 PM (en-US)  2009-06-15T13:45:30 -> 15/06/2009 13:45 (es-ES)  2009-06-15T13:45:30 -> 2009/6/15 13:45 (zh-CN) |
| "G" | General date/time pattern (long time).  More information: [The General Date Long Time ("G") Format Specifier](https://msdn.microsoft.com/en-us/library/az4se3k1(v=vs.110).aspx#GeneralDateLongTime). | 2009-06-15T13:45:30 -> 6/15/2009 1:45:30 PM (en-US)  2009-06-15T13:45:30 -> 15/06/2009 13:45:30 (es-ES)  2009-06-15T13:45:30 -> 2009/6/15 13:45:30 (zh-CN) |
| "M", "m" | Month/day pattern.  More information: [The Month ("M", "m") Format Specifier](https://msdn.microsoft.com/en-us/library/az4se3k1(v=vs.110).aspx#MonthDay). | 2009-06-15T13:45:30 -> June 15 (en-US)  2009-06-15T13:45:30 -> 15. juni (da-DK)  2009-06-15T13:45:30 -> 15 Juni (id-ID) |
| "O", "o" | Round-trip date/time pattern.  More information: [The Round-trip ("O", "o") Format Specifier](https://msdn.microsoft.com/en-us/library/az4se3k1(v=vs.110).aspx#Roundtrip). | [DateTime](https://msdn.microsoft.com/en-us/library/system.datetime(v=vs.110).aspx) values:  2009-06-15T13:45:30 (DateTimeKind.Local) --> 2009-06-15T13:45:30.0000000-07:00  2009-06-15T13:45:30 (DateTimeKind.Utc) --> 2009-06-15T13:45:30.0000000Z  2009-06-15T13:45:30 (DateTimeKind.Unspecified) --> 2009-06-15T13:45:30.0000000  [DateTimeOffset](https://msdn.microsoft.com/en-us/library/system.datetimeoffset(v=vs.110).aspx) values:  2009-06-15T13:45:30-07:00 --> 2009-06-15T13:45:30.0000000-07:00 |
| "R", "r" | RFC1123 pattern.  More information: [The RFC1123 ("R", "r") Format Specifier](https://msdn.microsoft.com/en-us/library/az4se3k1(v=vs.110).aspx#RFC1123). | 2009-06-15T13:45:30 -> Mon, 15 Jun 2009 20:45:30 GMT |
| "s" | Sortable date/time pattern.  More information: [The Sortable ("s") Format Specifier](https://msdn.microsoft.com/en-us/library/az4se3k1(v=vs.110).aspx#Sortable). | 2009-06-15T13:45:30 (DateTimeKind.Local) -> 2009-06-15T13:45:30  2009-06-15T13:45:30 (DateTimeKind.Utc) -> 2009-06-15T13:45:30 |
| "t" | Short time pattern.  More information: [The Short Time ("t") Format Specifier](https://msdn.microsoft.com/en-us/library/az4se3k1(v=vs.110).aspx#ShortTime). | 2009-06-15T13:45:30 -> 1:45 PM (en-US)  2009-06-15T13:45:30 -> 13:45 (hr-HR)  2009-06-15T13:45:30 -> 01:45 م (ar-EG) |
| "T" | Long time pattern.  More information: [The Long Time ("T") Format Specifier](https://msdn.microsoft.com/en-us/library/az4se3k1(v=vs.110).aspx#LongTime). | 2009-06-15T13:45:30 -> 1:45:30 PM (en-US)  2009-06-15T13:45:30 -> 13:45:30 (hr-HR)  2009-06-15T13:45:30 -> 01:45:30 م (ar-EG) |
| "u" | Universal sortable date/time pattern.  More information: [The Universal Sortable ("u") Format Specifier](https://msdn.microsoft.com/en-us/library/az4se3k1(v=vs.110).aspx#UniversalSortable). | With a [DateTime](https://msdn.microsoft.com/en-us/library/system.datetime(v=vs.110).aspx) value: 2009-06-15T13:45:30 -> 2009-06-15 13:45:30Z  With a [DateTimeOffset](https://msdn.microsoft.com/en-us/library/system.datetimeoffset(v=vs.110).aspx) value: 2009-06-15T13:45:30 -> 2009-06-15 20:45:30Z |
| "U" | Universal full date/time pattern.  More information: [The Universal Full ("U") Format Specifier](https://msdn.microsoft.com/en-us/library/az4se3k1(v=vs.110).aspx#UniversalFull). | 2009-06-15T13:45:30 -> Monday, June 15, 2009 8:45:30 PM (en-US)  2009-06-15T13:45:30 -> den 15 juni 2009 20:45:30 (sv-SE)  2009-06-15T13:45:30 -> Δευτέρα, 15 Ιουνίου 2009 8:45:30 μμ (el-GR) |
| "Y", "y" | Year month pattern.  More information: [The Year Month ("Y") Format Specifier](https://msdn.microsoft.com/en-us/library/az4se3k1(v=vs.110).aspx#YearMonth). | 2009-06-15T13:45:30 -> June, 2009 (en-US)  2009-06-15T13:45:30 -> juni 2009 (da-DK)  2009-06-15T13:45:30 -> Juni 2009 (id-ID) |
| Any other single character | Unknown specifier. | Throws a run-time [FormatException](https://msdn.microsoft.com/en-us/library/system.formatexception(v=vs.110).aspx). |

Appendix D: Custom formatting of dates

Source: <https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx>

|  |  |  |
| --- | --- | --- |
| **Format specifier** | **Description** | **Examples** |
| "d" | The day of the month, from 1 through 31.  More information: [The "d" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#dSpecifier). | 2009-06-01T13:45:30 -> 1  2009-06-15T13:45:30 -> 15 |
| "dd" | The day of the month, from 01 through 31.  More information: [The "dd" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#ddSpecifier). | 2009-06-01T13:45:30 -> 01  2009-06-15T13:45:30 -> 15 |
| "ddd" | The abbreviated name of the day of the week.  More information: [The "ddd" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#dddSpecifier). | 2009-06-15T13:45:30 -> Mon (en-US)  2009-06-15T13:45:30 -> Пн (ru-RU)  2009-06-15T13:45:30 -> lun. (fr-FR) |
| "dddd" | The full name of the day of the week.  More information: [The "dddd" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#ddddSpecifier). | 2009-06-15T13:45:30 -> Monday (en-US)  2009-06-15T13:45:30 -> понедельник (ru-RU)  2009-06-15T13:45:30 -> lundi (fr-FR) |
| "f" | The tenths of a second in a date and time value.  More information: [The "f" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#fSpecifier). | 2009-06-15T13:45:30.6170000 -> 6  2009-06-15T13:45:30.05 -> 0 |
| "ff" | The hundredths of a second in a date and time value.  More information: [The "ff" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#ffSpecifier). | 2009-06-15T13:45:30.6170000 -> 61  2009-06-15T13:45:30.0050000 -> 00 |
| "fff" | The milliseconds in a date and time value.  More information: [The "fff" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#fffSpecifier). | 6/15/2009 13:45:30.617 -> 617  6/15/2009 13:45:30.0005 -> 000 |
| "ffff" | The ten thousandths of a second in a date and time value.  More information: [The "ffff" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#ffffSpecifier). | 2009-06-15T13:45:30.6175000 -> 6175  2009-06-15T13:45:30.0000500 -> 0000 |
| "fffff" | The hundred thousandths of a second in a date and time value.  More information: [The "fffff" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#fffffSpecifier). | 2009-06-15T13:45:30.6175400 -> 61754  6/15/2009 13:45:30.000005 -> 00000 |
| "ffffff" | The millionths of a second in a date and time value.  More information: [The "ffffff" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#ffffffSpecifier). | 2009-06-15T13:45:30.6175420 -> 617542  2009-06-15T13:45:30.0000005 -> 000000 |
| "fffffff" | The ten millionths of a second in a date and time value.  More information: [The "fffffff" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#fffffffSpecifier). | 2009-06-15T13:45:30.6175425 -> 6175425  2009-06-15T13:45:30.0001150 -> 0001150 |
| "F" | If non-zero, the tenths of a second in a date and time value.  More information: [The "F" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#F_Specifier). | 2009-06-15T13:45:30.6170000 -> 6  2009-06-15T13:45:30.0500000 -> (no output) |
| "FF" | If non-zero, the hundredths of a second in a date and time value.  More information: [The "FF" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#FF_Specifier). | 2009-06-15T13:45:30.6170000 -> 61  2009-06-15T13:45:30.0050000 -> (no output) |
| "FFF" | If non-zero, the milliseconds in a date and time value.  More information: [The "FFF" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#FFF_Specifier). | 2009-06-15T13:45:30.6170000 -> 617  2009-06-15T13:45:30.0005000 -> (no output) |
| "FFFF" | If non-zero, the ten thousandths of a second in a date and time value.  More information: [The "FFFF" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#FFFF_Specifier). | 2009-06-15T13:45:30.5275000 -> 5275  2009-06-15T13:45:30.0000500 -> (no output) |
| "FFFFF" | If non-zero, the hundred thousandths of a second in a date and time value.  More information: [The "FFFFF" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#FFFFF_Specifier). | 2009-06-15T13:45:30.6175400 -> 61754  2009-06-15T13:45:30.0000050 -> (no output) |
| "FFFFFF" | If non-zero, the millionths of a second in a date and time value.  More information: [The "FFFFFF" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#FFFFFF_Specifier). | 2009-06-15T13:45:30.6175420 -> 617542  2009-06-15T13:45:30.0000005 -> (no output) |
| "FFFFFFF" | If non-zero, the ten millionths of a second in a date and time value.  More information: [The "FFFFFFF" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#FFFFFFF_Specifier). | 2009-06-15T13:45:30.6175425 -> 6175425  2009-06-15T13:45:30.0001150 -> 000115 |
| "g", "gg" | The period or era.  More information: [The "g" or "gg" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#gSpecifier). | 2009-06-15T13:45:30.6170000 -> A.D. |
| "h" | The hour, using a 12-hour clock from 1 to 12.  More information: [The "h" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#hSpecifier). | 2009-06-15T01:45:30 -> 1  2009-06-15T13:45:30 -> 1 |
| "hh" | The hour, using a 12-hour clock from 01 to 12.  More information: [The "hh" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#hhSpecifier). | 2009-06-15T01:45:30 -> 01  2009-06-15T13:45:30 -> 01 |
| "H" | The hour, using a 24-hour clock from 0 to 23.  More information: [The "H" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#H_Specifier). | 2009-06-15T01:45:30 -> 1  2009-06-15T13:45:30 -> 13 |
| "HH" | The hour, using a 24-hour clock from 00 to 23.  More information: [The "HH" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#HH_Specifier). | 2009-06-15T01:45:30 -> 01  2009-06-15T13:45:30 -> 13 |
| "K" | Time zone information.  More information: [The "K" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#KSpecifier). | With [DateTime](https://msdn.microsoft.com/en-us/library/system.datetime(v=vs.110).aspx) values:  2009-06-15T13:45:30, Kind Unspecified ->  2009-06-15T13:45:30, Kind Utc -> Z  2009-06-15T13:45:30, Kind Local -> -07:00 (depends on local computer settings)  With [DateTimeOffset](https://msdn.microsoft.com/en-us/library/system.datetimeoffset(v=vs.110).aspx) values:  2009-06-15T01:45:30-07:00 --> -07:00  2009-06-15T08:45:30+00:00 --> +00:00 |
| "m" | The minute, from 0 through 59.  More information: [The "m" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#mSpecifier). | 2009-06-15T01:09:30 -> 9  2009-06-15T13:29:30 -> 29 |
| "mm" | The minute, from 00 through 59.  More information: [The "mm" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#mmSpecifier). | 2009-06-15T01:09:30 -> 09  2009-06-15T01:45:30 -> 45 |
| "M" | The month, from 1 through 12.  More information: [The "M" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#M_Specifier). | 2009-06-15T13:45:30 -> 6 |
| "MM" | The month, from 01 through 12.  More information: [The "MM" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#MM_Specifier). | 2009-06-15T13:45:30 -> 06 |
| "MMM" | The abbreviated name of the month.  More information: [The "MMM" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#MMM_Specifier). | 2009-06-15T13:45:30 -> Jun (en-US)  2009-06-15T13:45:30 -> juin (fr-FR)  2009-06-15T13:45:30 -> Jun (zu-ZA) |
| "MMMM" | The full name of the month.  More information: [The "MMMM" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#MMMM_Specifier). | 2009-06-15T13:45:30 -> June (en-US)  2009-06-15T13:45:30 -> juni (da-DK)  2009-06-15T13:45:30 -> uJuni (zu-ZA) |
| "s" | The second, from 0 through 59.  More information: [The "s" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#sSpecifier). | 2009-06-15T13:45:09 -> 9 |
| "ss" | The second, from 00 through 59.  More information: [The "ss" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#ssSpecifier). | 2009-06-15T13:45:09 -> 09 |
| "t" | The first character of the AM/PM designator.  More information: [The "t" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#tSpecifier). | 2009-06-15T13:45:30 -> P (en-US)  2009-06-15T13:45:30 -> 午 (ja-JP)  2009-06-15T13:45:30 -> (fr-FR) |
| "tt" | The AM/PM designator.  More information: [The "tt" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#ttSpecifier). | 2009-06-15T13:45:30 -> PM (en-US)  2009-06-15T13:45:30 -> 午後 (ja-JP)  2009-06-15T13:45:30 -> (fr-FR) |
| "y" | The year, from 0 to 99.  More information: [The "y" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#ySpecifier). | 0001-01-01T00:00:00 -> 1  0900-01-01T00:00:00 -> 0  1900-01-01T00:00:00 -> 0  2009-06-15T13:45:30 -> 9  2019-06-15T13:45:30 -> 19 |
| "yy" | The year, from 00 to 99.  More information: [The "yy" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#yySpecifier). | 0001-01-01T00:00:00 -> 01  0900-01-01T00:00:00 -> 00  1900-01-01T00:00:00 -> 00  2019-06-15T13:45:30 -> 19 |
| "yyy" | The year, with a minimum of three digits.  More information: [The "yyy" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#yyySpecifier). | 0001-01-01T00:00:00 -> 001  0900-01-01T00:00:00 -> 900  1900-01-01T00:00:00 -> 1900  2009-06-15T13:45:30 -> 2009 |
| "yyyy" | The year as a four-digit number.  More information: [The "yyyy" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#yyyySpecifier). | 0001-01-01T00:00:00 -> 0001  0900-01-01T00:00:00 -> 0900  1900-01-01T00:00:00 -> 1900  2009-06-15T13:45:30 -> 2009 |
| "yyyyy" | The year as a five-digit number.  More information: [The "yyyyy" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#yyyyySpecifier). | 0001-01-01T00:00:00 -> 00001  2009-06-15T13:45:30 -> 02009 |
| "z" | Hours offset from UTC, with no leading zeros.  More information: [The "z" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#zSpecifier). | 2009-06-15T13:45:30-07:00 -> -7 |
| "zz" | Hours offset from UTC, with a leading zero for a single-digit value.  More information: [The "zz" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#zzSpecifier). | 2009-06-15T13:45:30-07:00 -> -07 |
| "zzz" | Hours and minutes offset from UTC.  More information: [The "zzz" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#zzzSpecifier). | 2009-06-15T13:45:30-07:00 -> -07:00 |
| ":" | The time separator.  More information: [The ":" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#timeSeparator). | 2009-06-15T13:45:30 -> : (en-US)  2009-06-15T13:45:30 -> . (it-IT)  2009-06-15T13:45:30 -> : (ja-JP) |
| "/" | The date separator.  More Information: [The "/" Custom Format Specifier](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#dateSeparator). | 2009-06-15T13:45:30 -> / (en-US)  2009-06-15T13:45:30 -> - (ar-DZ)  2009-06-15T13:45:30 -> . (tr-TR) |
| "*string*"  '*string*' | Literal string delimiter.  More information: [Character literals](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#Literals). | 2009-06-15T13:45:30 ("arr:" h:m t) -> arr: 1:45 P  2009-06-15T13:45:30 ('arr:' h:m t) -> arr: 1:45 P |
| % | Defines the following character as a custom format specifier.  More information:[Using Single Custom Format Specifiers](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx" \l "UsingSingleSpecifiers). | 2009-06-15T13:45:30 (%h) -> 1 |
| \ | The escape character.  More information: [Character literals](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#Literals) and [Using the Escape Character](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#escape). | 2009-06-15T13:45:30 (h \h) -> 1 h |
| Any other character | The character is copied to the result string unchanged.  More information: [Character literals](https://msdn.microsoft.com/en-us/library/8kb3ddd4(v=vs.110).aspx#Literals). | 2009-06-15T01:45:30 (arr hh:mm t) -> arr 01:45 A |

end of document