

What are the "OEM" keys in the System.Windows.Forms.Keys enumeration?

Asked 15 years, 9 months ago Modified 4 years, 7 months ago Viewed 52k times



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A friend was having trouble figuring out how to assign "Ctrl + +" as a shortcut key to a `ToolStripMenuItem`. I pointed out that the `Keys.OemPlus` key would work and the display string for the shortcut needed to be set, but the `Keys` enumeration mystifies me.



What's the deal with these "OEM" keys? I've done a little searching and it seems like it's because the keys are only supported in Win2k or later, but that seems ridiculous as I'm certain people have been using the plus key decades before Win2k. Why's there no "OemEquals"? Are there other keys that are completely absent from the `Keys` enumeration?



I'm mostly looking for an answer to why these special-named values exist, but I'd love to hear discussion about the other questions. Is it safe to assume that since the plus sign is on top of the equals sign on my keyboard that using `Keys.OemPlus` and checking the Shift modifier key is an OK to tell if Ctrl + = was clicked? Are there other keys that were omitted?

Note this is *not* a WPF question, though the `System.Windows.Forms.Keys` and `System.Windows.Input.Key` enumerations look identical (though `key` is named incorrectly according to the Framework Design Guidelines ;))

.net

keyboard

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edited Oct 11, 2013 at 12:42



Hjalte

307 ● 2 ● 12

asked Feb 24, 2009 at 16:16



OwenP

25.4k ● 13 ● 70 ● 105

2 Answers

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They were introduced with the Windows API, they are not specific to WPF.



First, these are **KEY** codes, not character codes: they identify a key on your keyboard, not a character - e.g. the 'A' character is usually generated by pressing the A key while holding down a SHIFT key or having CAPS LOCK active.



The **OEM keys** are the keys that **vary with local keyboards**. Where the US keyboard has brackets and braces, german keyboards have umlauts.



They are called "OEM" because the Original Equipment Manufacturer (of the keyboard) was responsible for defining their functionality.

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edited Jan 1, 2010 at 19:47

answered Feb 24, 2009 at 16:45



dance2die

36.9k ● 39 ● 135 ● 197



peterchen

41k ● 22 ● 108 ● 192

2 I believe the various media keys are OEM keys as well. – Matthew Olenik Jan 1, 2010 at 19:48

So for instance for `Oem3` which is the back tick `` key is that saying it isn't common on non US keyboards so it doesn't get to be `Key.BackTick` but as long as I'm on a US layout it should always represent the back-tick key? – Simon_Weaver Oct 25, 2017 at 1:17

@Simon_Weaver Yes, correct. Switching layout can have a different key and symbols represent `Oem3`. Furthermore, the software can read what the unshifted symbol is on the key and display it as "Ctrl + ..." so the user knows what key it represents on their keyboard – Liggliluff Aug 5, 2019 at 0:14 ✎



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OEM means "Original Equipment Manufacturer" (or something relatively close to that). I think it's an attempt on WPF's part to be somewhat platform neutral. That's just an opinion though.

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answered Feb 24, 2009 at 16:34

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JaredPar