

Using Yoda on an x86 may be hazardous to your systems' health

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In former times very cross-platform NTVDM was. If you view `NTVDM.EXE` in a hex editor, you'll find the message "Using Yoda on an x86 may be hazardous to your systems' health" buried inside it. Yoda was the name of the internal debugger that was used to debug the MS-DOS emulator, also known as the Virtual DOS Machine or VDM. (Buried inside the Yoda source code are such wonderful variables as "luke" and "chewy".) The Intel 80386 has a mode known as "Virtual-8086 mode" or just "V86 mode" wherein the CPU ran as if it were an 8086, except that if the program did anything interesting like issue a privileged instruction, call a software interrupt, or fault, control would return to the protected-mode supervisor for handling. (Win386 used this same CPU mode to support multiple MS-DOS sessions.) When running on an 80386-class processor, NTVDM used this mode to do its emulation, making the CPU do the heavy lifting of decoding instructions and emulating them, which took place at very close to full speed. On the other hand, NTVDM on the non-x86 processors (Alpha, PPC, MIPS, etc.) had to implement an entire 8086 emulator, with all the decoding and execution performed in software. Yoda was the debugger you used if you needed to debug the emulator. And that's why NTVDM has a message warning you not to use Yoda on an x86. Because on an x86, there is no instruction emulator. There is nothing to debug.

(My thanks to Andrew McLaren and Tony Gaston for providing historical background.)

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