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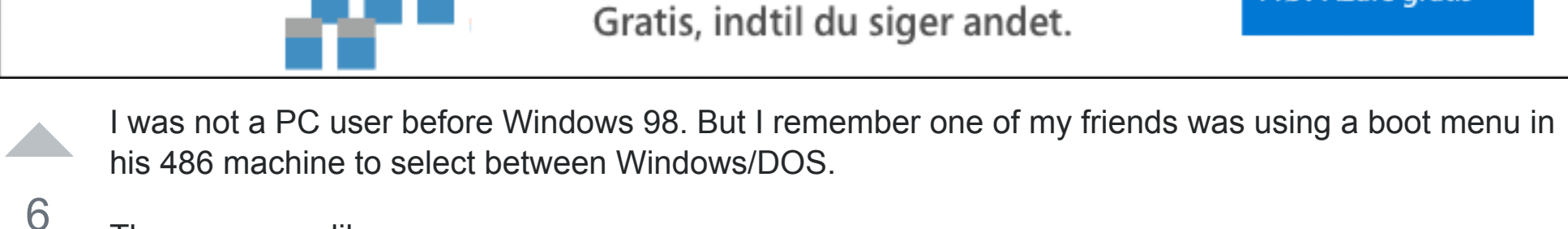
How do I create a boot menu to select between Windows and DOS?

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Asked 1 year, 4 months ago

Active 1 year, 4 months ago

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I was not a PC user before Windows 98. But I remember one of my friends was using a boot menu in his 486 machine to select between Windows/DOS.

The menu was like:

1. EMS
2. XMS
3. Windows

If we would be playing games, we would pick the EMS or XMS option. If we would play SimCity or Command & Conquer, we would pick Windows. To actually enter into Windows (3.1) we had to manually enter the `WIN` command after picking option 3.

Was this menu implemented in *autoexec.bat* or *config.sys*? What would be the difference of the Windows mode? Does anyone have any example of this kind of menu?

ms-dos ibm-pc windows31

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edited Jun 21 '18 at 19:29

Thunderforge
103 • 3

asked Jun 21 '18 at 8:30

wizofwor
1,564 • 1 • 8 • 30

And I don't know if this makes sense to add as its own answer or as an edit to existing answers or what, but [Microsoft still has some DOS 6 documentation on their site of the feature](#). – user616 Jun 21 '18 at 16:43

@Thunderforge as no one even mention `boot.ini` youre probably right so I converted the comment into answer. – Spektre Jun 22 '18 at 7:20

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4 Answers

active oldest votes

Assuming this was a PC running MS-DOS 6 or later, this would typically be implemented using a `CONFIG.SYS` menu:

```
[MENU]
MENUITEM=EMS
MENUITEM=XMS
MENUITEM=Windows

[COMMON]
DEVICE=C:\DOS\HIMEM.SYS

[EMS]
DEVICE=C:\DOS\EMM386.EXE

[XMS]

[Windows]
```

with appropriate settings in the `[XMS]` and `[Windows]` blocks. The `[COMMON]` block is taken into account in all cases, as long as it comes first; it can be repeated if necessary.

The `AUTOEXEC.BAT` can use the `%CONFIG%` variable to adjust its behaviour depending on the chosen entry:

```
@ECHO OFF
:: Common startup here
GOTO %CONFIG%

:EMS
:: EMS-specific setup here
GOTO END

:XMS
:: XMS-specific setup here
GOTO END

:Windows
:: Windows-specific setup here
GOTO END

:END
```

This kind of menu would typically be used to control the configuration of

- the memory manager: `HIMEM.SYS` only (for games which wouldn't work with a V86 memory manager), `EMM386.EXE` with or without EMS (without EMS, you'd get 64K more UMBs)
- the amount of resources assigned to `FILES`, `BUFFERS` etc. (you'd need more for a multi-tasking environment; this could be what your friend's "Windows" configuration changed)
- various drivers (e.g. the CD-ROM driver, sound card setup with a PCI card, network drivers...)
- `SHARE.EXE` when running Windows

For older versions of MS-DOS, there were separate boot configuration tools available, including some which allowed for early-boot selection of `CONFIG.SYS` directives. DR DOS 5 and later implemented its own menu system, in a more manual fashion.

share improve this answer

edited Jun 21 '18 at 10:05

answered Jun 21 '18 at 8:50

Stephen Kitt
82.2k • 9 • 214 • 219

Although your answer is way more explicit and readable, it still seems like a duplicate of what @tommylee2k wrote. Wouldn't it be nice if the two could be merged? (Or maybe incooperating his parts where he included the menu line text parameter in an over all better commented config.sys) Just wondering. – RafZahn Jun 21 '18 at 10:16

add a comment

It was an option in (afaik) MS-Dos 6.0 and later, where you were able to define different sections in `config.sys`

```
[MENU]
REM syntax: Name, Descriptopn
MENUITEM=DOS, DOS w/o CD
MENUITEM=DOSCD, DOS with CD
MENUITEM=WIN, Windows

[COMMON]
DEVICE=C:\DOS\HIMEM.SYS
DOS=HIGH,UMB

[DOSCD]
REM this is only loaded when "DOSCD" is selected
DEVICE=C:\DOS\EMM386.EXE NOEMS
DEVICE=C:\DOS\CDROMDRV.SYS /D:CD1

[DOS]
REM this is only loaded when "DOS" is selected
DEVICE=C:\DOS\EMM386.EXE NOEMS

[WIN]
REM and this for "WIN", items can even be empty
```

the configuration chosen was also promoted to `autoexec.bat` with the environment-Variable `'CONFIG'`:

```
...

REM Uses the identifier from CONFIG.SYS to goto a label
GOTO %CONFIG%

REM DOSCD: add mscdex
:DOSCD
LH C:\DOS\MSCDDEX.EXE /D:CD1
GOTO EXIT

REM no mscdex needed
:DOS
GOTO EXIT

REM right into Windows
:WIN
WIN :

:EXIT
```

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edited Jun 21 '18 at 14:15

answered Jun 21 '18 at 8:42

Tommylee2k
550 • 2 • 14

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Yes **MS-DOS** menu is in `autoexec.bat` and `config.sys`. These two files are use by **MS-DOS** startup. The `config.sys` is for loading drivers and `autoexec.bat` is used to set prompt, variables, **TSRs** and run desired apps.

So up to **w9x** it can be also used to select **OS** as the **Windows** was just an executable on top of **MS-DOS**. So you add menu entry in `config.sys` with drivers needed (windows has its own drivers but **IIRC** it needed `himem.sys` before running `win.exe`)

Here are mine:

Autoexec.bat

```
@echo off
PROMPT $P$G
PATH e:\rescue;e:\rescue\dos98;e:\rescue\vcnew;e:\rescue\pack;e:\rescue\views
e:
cd rescue
SET TEMP=e:\rescue\temp
SET BLASTER=A220 I5 D1 H5 P330 E620 T6
SET SOUND=e:\rescue\SB16
SET MIDI=SYNTH:1 MAP:E MODE:0
e:\rescue\SB16\DIAGNOSE /S
e:\rescue\SB16\AWUTIL /S
e:\rescue\SB16\MIXERSET /P /Q

goto %config%
:a
:b
:c
:d
:e

lh gmouse
lh vc
```

Config.sys

```
;devicehigh=e:\rescue\dos98\interlnk.exe
shell e:\rescue\dos98\command.com e:\rescue\dos98 /P
lastdrive=M
files=50
buffers=8
stacks=0,0
DOS=HIGH,UMB

[menu]
menuitem=a, QEMM
menuitem=b, EMM EMS
menuitem=c, EMM NOEMS
menuitem=d, STANDART
menuitem=e, RAMDISK 32MB
menudefault=d,1

[a]
device=e:\rescue\dos98\qemm386.sys RAM BE:N
[b]
device=e:\rescue\dos98\himem.sys
devicehigh=e:\rescue\dos98\emm386.exe rammax
[c]
device=e:\rescue\dos98\himem.sys
devicehigh=e:\rescue\dos98\emm386.exe noems
[d]
device=e:\rescue\dos98\himem.sys
[e]
device=e:\rescue\dos98\himem.sys
devicehigh=e:\rescue\dos98\ramdrive.sys 32767 /e
```

taken from: [SQ/SE-Run Turbo C++ in Freedos](#) where you can find also tips on how to run **MS-DOS** on newer machines. Beware that from **W95** the **MS-DOS** is not fully compatible with the old **MS-DOS 6.22** so some games and apps will not work properly or at all. The other answers here cover the **MS-DOS** menu well enough so I see no point in describing the obvious mechanism...

From **NT,W2K** and **XP** there was no more **MS-DOS** just console so for those you need to use `boot.ini` like this:

```
[boot loader]
timeout=30
default=multi(0)disk(0)rdisk(0)partition(1)\WINDOWS
[operating systems]
multi(0)disk(0)rdisk(0)partition(1)\WINDOWS="Microsoft Windows XP Professional" /noexec
```

Each line in the `[operating systems]` represents one **OS** to boot from. You also need separate partition per **OS** so have **MS-DOS** on separate partition (or floppy) there are also utilities like **Lilo** boot that can handle multi **OS**. **IIRC** the `boot.ini` could be edited from `msconfig.exe`.

The above example is from **XP**. The **Vista,W7** and latter do not use `boot.ini` anymore instead they have some kind of boot app (like Lilo boot). The menu is usually created during Windows installation (as the installer detects **OS** in the **PC**) but nowadays **HW** has usually boot menu directly in **BIOS** of the **MB**.

In the past I usually got **MS-DOS 6.22 + W9X + W2K** on single machine as I got plenty of apps running only in those specific **OS** that I was not able to part with...

PS.

At one time I even got **5.25" DD** Floppy with **MS-DOS 6.22** system files (and all the rest was on **HDD** hence the weird `e:\rescue\` path as the floppy did not have enough space. That solution was great as even `command.com` was on the **HDD** so no speed problems due to booting from floppy. That is what

```
shell e:\rescue\dos98\command.com e:\rescue\dos98 /P
```

does in the `config.sys` of mine ... And the `E:` was just logical drive instead of separate partition ...

In case you are going for MS-DOS you should see:

- How to patch binaries in DOS?

on how to deal with **runtime error 200** and for list of apps you should have in your **OS** (with link to archive where many of them are still available).

share improve this answer

edited Jun 22 '18 at 7:40

answered Jun 22 '18 at 7:16

Spektre
3,911 • 7 • 20

What issues did you run into with DOS ?? I used it for a long time with a huge variety of games and don't remember running into insurmountable problems... – Stephen Kitt Jun 22 '18 at 8:18

IIRC custom HW programs like scanners and robotics did not run properly in DOS7. There where also games that did not run but can not remember which I think most of them where 3Dfx related. IIRC They either crashed/restarted or freeze in black screen. It was too long ago ... and it might be just an issue that could be remedied by some SET or utility we did not know of then... but as in MS-DOS 6.22 was all OK we used that instead... – Spektre Jun 22 '18 at 9:31

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I set up my Windows 95 machine to boot to DOS or Windows 3.1 or Windows 95. I believe the machine initially booted via DOS, calling my `autoexec.bat`, which ran a user menu. Choosing "DOS" exited to the DOS prompt. Choosing one of the Windows installations would rename one of the directories to "C:\windows", the other to something outside of the `$PATH`, and then the `autoexec.bat` file would call "win". I can't recall how that "win" call would start up 95 though; it's been 20 years.


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answered Jun 21 '18 at 19:18

kack1e123
1


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
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