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;link:<http://hi.baidu.com/justear>
;copy the NASM assembler, and use the command
;nasm.exe -f bin boot.asm
;Date:2010 年 05 月 14 日
;安装方法:
;将原始 MBR 拷贝到第二扇区, 并将本程序编译生成的二进制代码拷贝到第一扇区, 另外请确认第一扇区的分区表信息
;与原始 MBR 的分区表信息完全相同, 不同机器分区表都不尽相同
;password: kevin

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;=====
CPU 486
BITS 16

        xor ebx,ebx
        mov ds,bx
        mov ax,[0x413]          ;40:13,BIOS 数据区保存常规的内存大小,单位:KBs.
        and al,0xfc              ;要求分配的物理内存地址,以页作为基
地址
        sub ax,4
        mov [0x413],ax          ;开辟一段内存, 实现程序的驻留
        shl ax,0x6              ;bx *= 1024 / 16 (KBs->线性地址=KBs*1024,段:除以 16)
        mov es,ax              ;存储段地址

        mov si,0x7c00           ;拷贝代码到驻留内存中执行
        xor di,di              ;偏移地址为 0
        mov cx,0x100           ;拷贝 512
        rep movsw

        mov ax,0x201
        mov cl,0x2
        cdq                    ;Convert Double to Quad (386+)把 edx 扩展为 eax 的高位,
也就是说变为 64 位。

        push es
        push word password
        retf

;=====
password:          ;校验密码
        MOV SI,ShowAuthorMessage
        CALL SHOWMESSAGE
        mov si,ShowEnterMessage
        CALL SHOWMESSAGE
        CALL GETKEY
        cmp cx,PassWordLength
        je bootloader

again:              ;第二次校验密码
        mov si,ShowError
        call SHOWMESSAGE
        mov si,ShowEnterMessage
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CALL SHOWMESSAGE
CALL GETKEY
cmp cx,PassWordLength
je bootloader
lasttime:                                     ;最后一次校验密码
mov si,ShowLastError
call SHOWMESSAGE
mov si,ShowEnterMessage
CALL SHOWMESSAGE
CALL GETKEY
cmp cx,PassWordLength
je bootloader
wrong:                                       ;登陆失败
mov si,ShowByeBye
CALL SHOWMESSAGE
jmp $

bootloader:                                ;校验密码成功，开始登陆

mov si,ShowWelcome
call SHOWMESSAGE
CALL GETENTER

mov es,dx
mov eax,0x201
mov ecx,02h                               ;读第二扇区的原始 MBR 引导开机
mov edx,0x80
mov ebx,0x7c00
int 0x13

popad
pop ds
pop sp

jmp 0x0:0x7c00    ;jmp to original mbr from hard drive
;=====
;=====
;=====
SHOWMESSAGE:
mov bx,0007h                               ; Page Number = 0,
Attribute = 07h
mov ah,0Eh                                 ; Function 0Eh:
Teletype Output
cs lodsb                                   ; load
the first character
Next_Char:
int 10h
cs lodsb                                   ; al = next character
or al,al                                   ; last letter?
jnz Next_Char                             ; if not print next
letter
RETURNBACK:
ret
;=====
;=====

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GETKEY:
    XOR CX,CX
LOOP:
    MOV AH,0
    INT 16H
    mov bl,al
    AND BX,0xFF
    CMP AL,0DH                                ;判断是否 Enter 键
    JZ RETURNBACK
    ADD CX,bx                                ;存入 CX 中
    MOV AL,2AH
    MOV BX,07H
    MOV AH,0EH
    INT 10H                                ;显示*号，继续等待
    输入
    JMP LOOP
;=====
GETENTER:                                ;判断是否 Enter 键，如果是则返回，若不是继续等待输入
    MOV AH,0
    INT 16H
    AND AX,0xFF
    CMP AL,0DH
    JNZ GETENTER
    RET
;=====
ShowAuthorMessage db 10, 13, "Author:sbha0909@yahoo.com.cn", 0;
ShowEnterMessage db 10, 13, "Enter PassWord:", 0
ShowError db 10, 13, "wrong password!...Try again", 0
ShowLastError db 10, 13, "wrong password!...Try Last Time", 0
PassWordLength EQU 021DH ;"lenght of 'kevin'"
ShowByeBye db 10, 13, "Sorry...Perhaps this is not your computer!", 0
ShowWelcome db 10, 13, "Welcome bingger...!Press Enter to load Windows",
0
;=====
CodeEnd EQU $

times 510-($-$$) db 0 ;填充 00h
Boot_Signature dw 0AA55h
;=====

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;End, use nasm.exe -f bin boot.asm 编译生成 bin 文件就可以在安装程序中使用