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Menghidupkan setpath

```
C:\Windows\system32\cmd.exe

Directory of C:\OS

25/09/2018  18:37    <DIR>        .
25/09/2018  18:37    <DIR>        ..
25/09/2018  18:39    <DIR>        OS
               0 File(s)            0 bytes
               3 Dir(s)  45.658.779.648 bytes free

C:\OS>cd OS

C:\OS\OS>dir
Volume in drive C is System
Volume Serial Number is 9A6A-6078

Directory of C:\OS\OS

25/09/2018  18:39    <DIR>        .
25/09/2018  18:39    <DIR>        ..
20/09/2017  15:23    <DIR>        Bochs-2.3.5
12/09/2016  05:33    <DIR>        0 bimage
20/09/2017  15:23    <DIR>        Dev-Cpp
17/12/2008  07:08    1.096.291 i386.pdf
25/09/2018  18:39    <DIR>        LAB
25/09/2018  18:39    <DIR>        LAB2
25/09/2018  18:34    282.922 LAB2.rar
17/12/2008  07:07    846.920 pcasm-book.pdf
17/12/2008  08:44    86 Setpath.bat
13/12/2008  21:12    716.512 winima81.exe
               6 File(s)      2.942.731 bytes
               6 Dir(s)  45.658.681.344 bytes free

C:\OS\OS>setpath.bat

C:\OS\OS>Path=C:\OS\Dev-Cpp\bin;C:\OS\Bochs-2.3.5;c:\OS\Perl;c:\Windows;C:\Windows\System32
C:\OS\OS>LAB
'LAB' is not recognized as an internal or external command,
operable program or batch file.

C:\OS\OS>cd LAB

C:\OS\OS\LAB>cd LAB2

C:\OS\OS\LAB\LAB2>cd LAB2
```

- Menyiapkan file floppy.img

```
C:\Windows\system32\cmd.exe

operable program or batch file.

C:\OS\OS>cd LAB

C:\OS\OS\LAB>cd LAB2

C:\OS\OS\LAB\LAB2>bxiImage
=====
                    bxiImage
          Disk Image Creation Tool for Bochs
          $Id: bxiImage.c,v 1.32 2006/06/16 07:29:33 vruppert Exp $
=====

Do you want to create a floppy disk image or a hard disk image?
Please type hd or fd. [hd] fd

Choose the size of floppy disk image to create, in megabytes.
Please type 0.16, 0.18, 0.32, 0.36, 0.72, 1.2, 1.44, 1.68, 1.72, or 2.88.
[1.44] 1.44
I will create a floppy image with
  cyl=80
  heads=2
  sectors per track=18
  total sectors=2880
  total bytes=1474560

What should I name the image?
[a.img] floppy.img

The disk image 'floppy.img' already exists. Are you sure you want to replace it?
Please type yes or no. [no] yes

Writing: [] Done.

I wrote 1474560 bytes to floppy.img.

The following line should appear in your bochsrc:
  floppy: image="floppy.img", status=inserted
(The line is stored in your windows clipboard, use CTRL-V to paste)

Press any key to continue

C:\OS\OS\LAB\LAB2>
C:\OS\OS\LAB\LAB2>
```

```
C:\Windows\system32\cmd.exe
total sectors=2880
total bytes=1474560

What should I name the image?
[a.img] floppy.img

The disk image 'floppy.img' already exists. Are you sure you want to replace it?
Please type yes or no. [no] yes

Writing: [] Done.

I wrote 1474560 bytes to floppy.img.

The following line should appear in your bochsrc:
floppya: image="floppy.img", status=inserted
(The line is stored in your windows clipboard, use CTRL-V to paste)

Press any key to continue

C:\OS\OS\LAB\LAB2>
C:\OS\OS\LAB\LAB2>dir
Volume in drive C is System
Volume Serial Number is 9A6A-6078

Directory of C:\OS\OS\LAB\LAB2

25/09/2018 18:40 <DIR> .
25/09/2018 18:40 <DIR> ..
25/09/2018 18:42 10.156 bochs.log
15/12/2008 23:18 1.625 bochsrc.bxrc
19/09/2018 12:08 15.922 boot.asm
08/09/2016 13:33 512 boot.bin
16/09/2007 23:22 18.432 bximage.exe
27/02/2007 03:50 342.016 dd.exe
15/12/2008 20:52 78 dosfp.bat
25/09/2018 18:40 1.474.560 floppy.img
19/09/2018 12:09 7.966 kernel.asm
08/09/2016 13:36 604 kernel.bin
15/12/2008 23:21 228 Makefile
15/12/2008 19:20 44 s.bat
12 File(s) 1.872.143 bytes
2 Dir(s) 45.658.316.800 bytes free

C:\OS\OS\LAB\LAB2>
```

- Memformat floppy.img

```
Bochs for Windows - Console
The following line should appear in your bochsrc:
floppya: image="floppy.img", status=inserted
(The line is stored in your windows clipboard, use CTRL-V to paste)

Press any key to continue

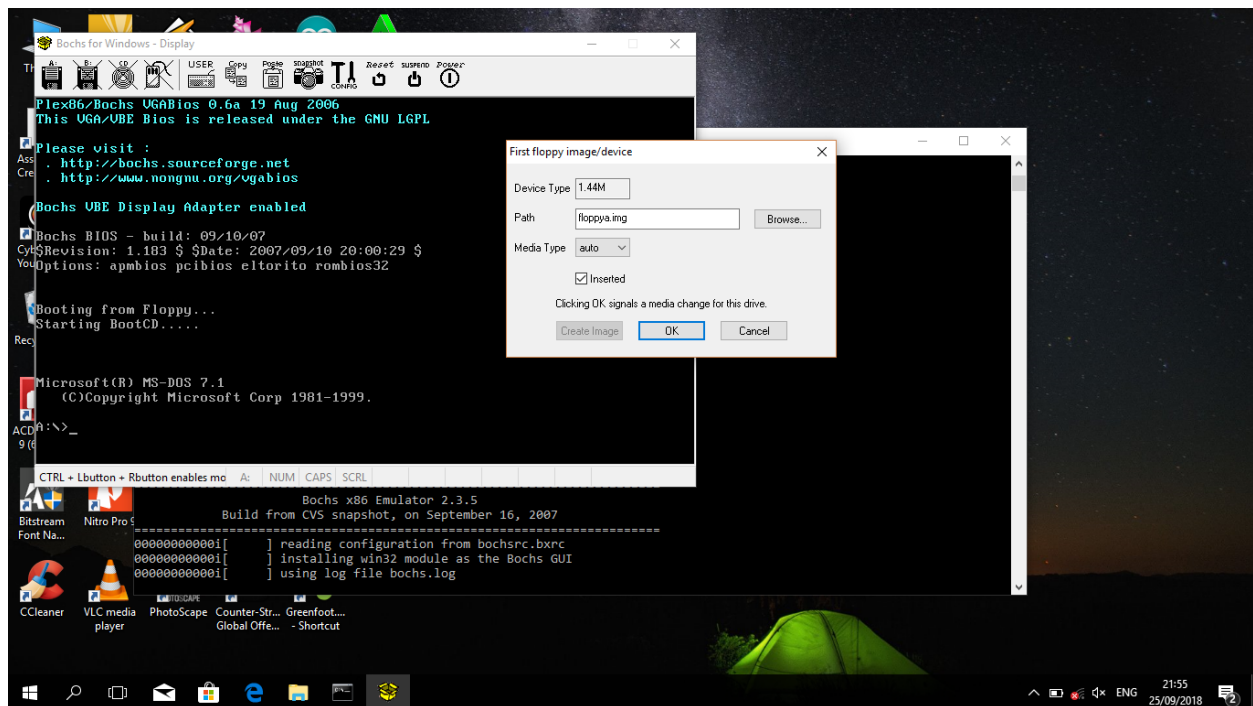
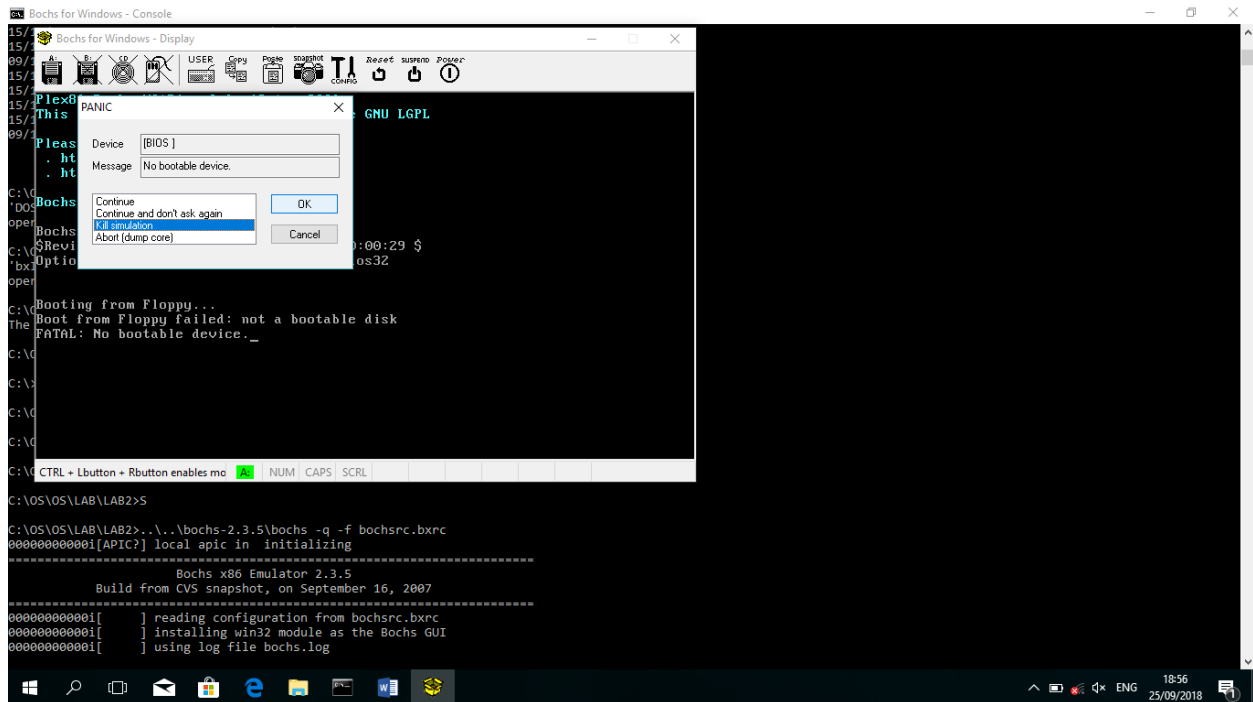
C:\OS\OS\LAB\LAB2>
C:\OS\OS\LAB\LAB2>dir
Volume in drive C is System
Volume Serial Number is 9A6A-6078

Directory of C:\OS\OS\LAB\LAB2

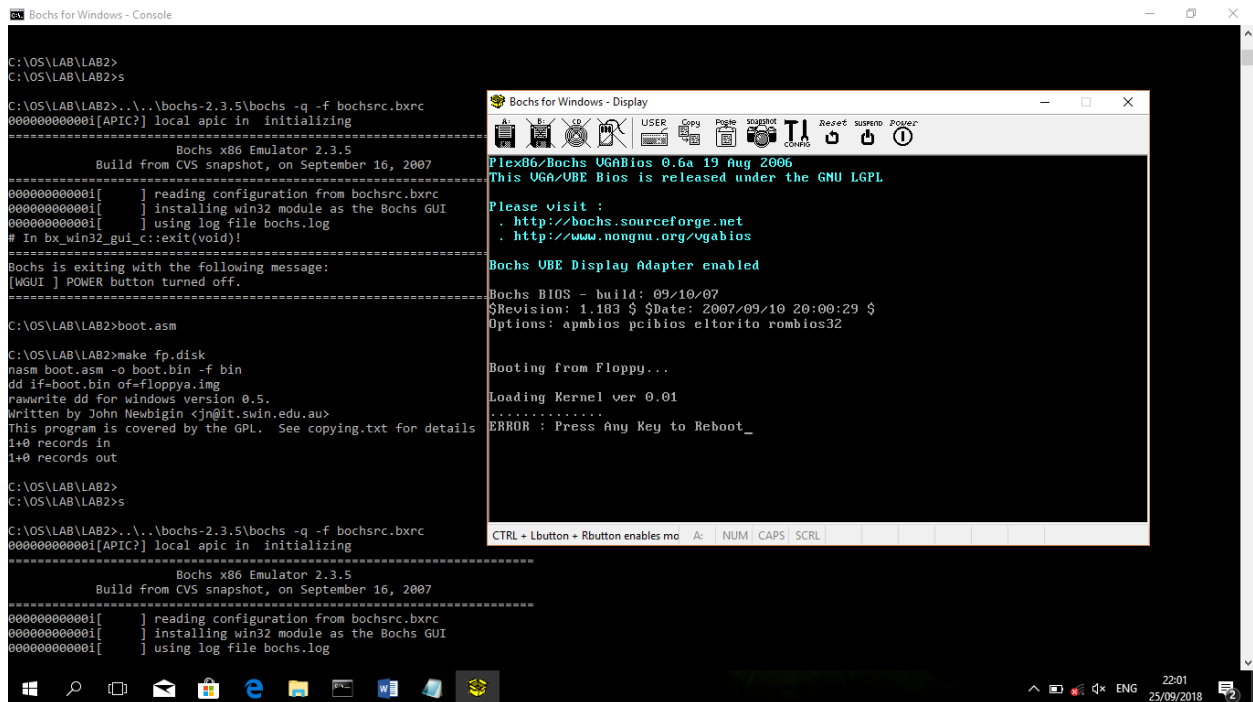
25/09/2018 18:40 <DIR> .
25/09/2018 18:40 <DIR> ..
25/09/2018 18:42 10.156 bochs.log
15/12/2008 23:18 1.625 bochsrc.bxrc
19/09/2018 12:08 15.922 boot.asm
08/09/2016 13:33 512 boot.bin
16/09/2007 23:22 18.432 bximage.exe
27/02/2007 03:50 342.016 dd.exe
15/12/2008 20:52 78 dosfp.bat
25/09/2018 18:40 1.474.560 floppy.img
19/09/2018 12:09 7.966 kernel.asm
08/09/2016 13:36 604 kernel.bin
15/12/2008 23:21 228 Makefile
15/12/2008 19:20 44 s.bat
12 File(s) 1.872.143 bytes
2 Dir(s) 45.658.316.800 bytes free

C:\OS\OS\LAB\LAB2>dosfp
C:\OS\OS\LAB\LAB2>cd "..\..\Bochs-2.3.5\dos"
C:\OS\OS\Bochs-2.3.5\dos>..\bochs -q -f bochsrc2.txt
000000000000[APIC?] local apic in initializing
=====
Bochs x86 Emulator 2.3.5
Build from CVS snapshot, on September 16, 2007
=====
000000000000[ ] reading configuration from bochsrc2.txt
000000000000[ ] installing win32 module as the Bochs GUI
000000000000[ ] using log file bochsout.txt
```

PC SIMULATOR melakukan BOOTING



BOOT PC simulator dengan program bootsaploader yang baru



```
C:\OS\LAB\LAB2>
C:\OS\LAB\LAB2>s

C:\OS\LAB\LAB2>..\..\bochs-2.3.5\bochs -q -f bochsrc.bxrc
000000000001[APIC?] local apic in initializing
=====
Bochs x86 Emulator 2.3.5
Build from CVS snapshot, on September 16, 2007
=====
000000000001[ ] reading configuration from bochsrc.bxrc
000000000001[ ] installing win32 module as the bochs GUI
000000000001[ ] using log file bochs.log
# In bx_win32_gui.c:exit(void)!

Bochs is exiting with the following message:
[VGUI ] POWER button turned off.
=====
C:\OS\LAB\LAB2>boot.asm

C:\OS\LAB\LAB2>make fp.disk
nasm boot.asm -o boot.bin -f bin
dd if=boot.bin of=floppya.img
rawwrite dd for windows version 0.5.
Written by John Newbigin <jn@it.swin.edu.au>
This program is covered by the GPL. See copying.txt for details
1+0 records in
1+0 records out

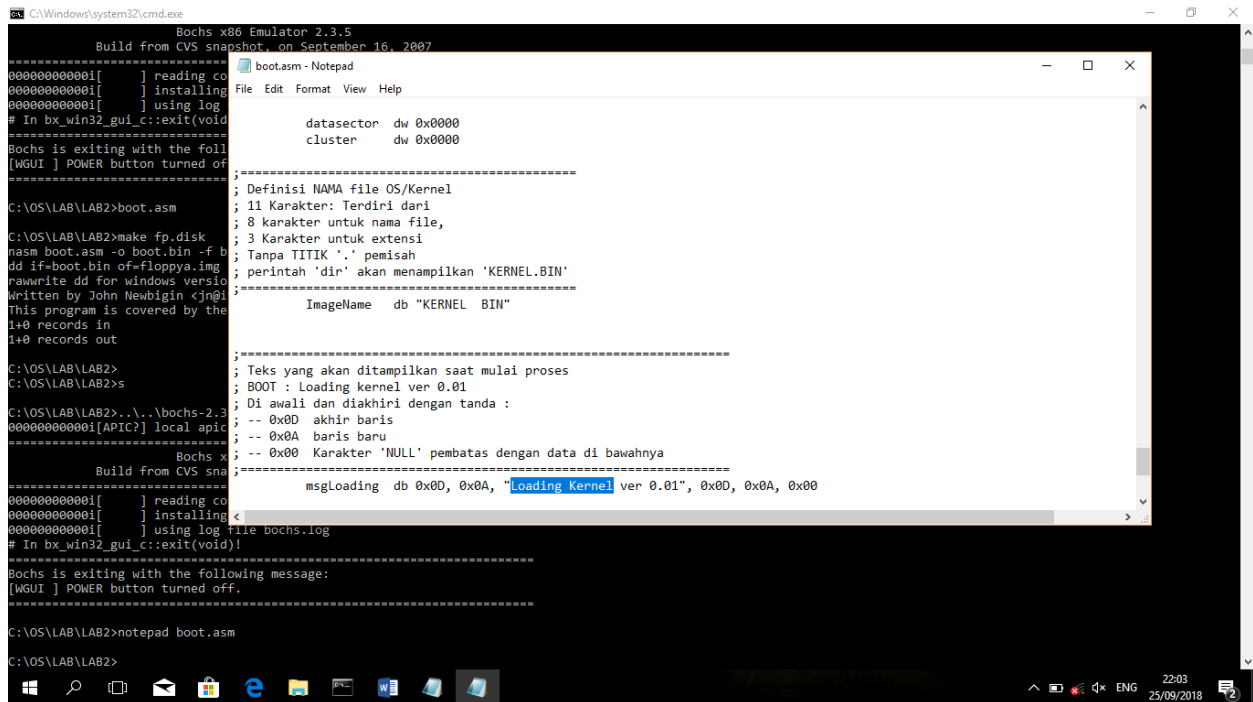
C:\OS\LAB\LAB2>
C:\OS\LAB\LAB2>s

C:\OS\LAB\LAB2>..\..\bochs-2.3.5\bochs -q -f bochsrc.bxrc
000000000001[APIC?] local apic in initializing
=====
Bochs x86 Emulator 2.3.5
Build from CVS snapshot, on September 16, 2007
=====
000000000001[ ] reading configuration from bochsrc.bxrc
000000000001[ ] installing win32 module as the bochs GUI
000000000001[ ] using log file bochs.log
=====
Bochs BIOS - build: 09/10/07
$Revision: 1.183 $ $Date: 2007/09/10 20:00:29 $
Options: apmbios pcibios eltorito rombios32

Booting from Floppy...
Loading Kernel ver 0.01
.....
ERROR : Press Any Key to Reboot_

CTRL + Lbutton + Rbutton enables mo A: NUM CAPS SCRL
```

Menyunting file Boot.asm



```
C:\Windows\system32\cmd.exe

Bochs x86 Emulator 2.3.5
Build from CVS snapshot, on September 16, 2007

boot.asm - Notepad
File Edit Format View Help

datasetor dw 0x0000
cluster dw 0x0000

;=====
; Definisi NAMA file OS/Kernel
; 11 Karakter: Terdiri dari
; 8 karakter untuk nama file,
; 3 Karakter untuk ekstensi
; Tanpa TITIK '.' pemisah
; perintah 'dir' akan menampilkan 'KERNEL.BIN'
;=====
ImageName db "KERNEL BIN"

;=====
; Teks yang akan ditampilkan saat mulai proses
; BOOT : Loading kernel ver 0.01
; Di awali dan diakhiri dengan tanda :
; -- 0x0D akhir baris
; -- 0x0A baris baru
; -- 0x00 Karakter 'NULL' pembatas dengan data di bawahnya
;=====
msgLoading db 0x0D, 0x0A, "Loading Kernel ver 0.01", 0x0D, 0x0A, 0x00

000000000001[ ] reading co
000000000001[ ] installing c
000000000001[ ] using log
000000000001[ ] using log file bochs.log
# In bx_win32_gui.c:exit(void)!

Bochs is exiting with the following message:
[VGUI ] POWER button turned off.
=====
C:\OS\LAB\LAB2>boot.asm

C:\OS\LAB\LAB2>make fp.disk
nasm boot.asm -o boot.bin -f b
dd if=boot.bin of=floppya.img
rawwrite dd for windows versio
Written by John Newbigin <jn@i
This program is covered by the
1+0 records in
1+0 records out

C:\OS\LAB\LAB2>
C:\OS\LAB\LAB2>s

C:\OS\LAB\LAB2>..\..\bochs-2.3
000000000001[APIC?] local apic
=====
Bochs x
=====
Build from CVS sna
=====
000000000001[ ] reading co
000000000001[ ] installing c
000000000001[ ] using log
000000000001[ ] using log file bochs.log
# In bx_win32_gui.c:exit(void)!

Bochs is exiting with the following message:
[VGUI ] POWER button turned off.
=====
C:\OS\LAB\LAB2>notepad boot.asm

C:\OS\LAB\LAB2>
```

```
C:\Windows\system32\cmd.exe
Bochs x86 Emulator 2.3.5
Build from CVS snapshot, on September 16, 2007

=====
000000000001[ ] reading co
000000000001[ ] installing
000000000001[ ] using log
# In bx_win32_gui_c:exit(void)
Bochs is exiting with the foll
[VGUI ] POWER button turned of
=====
C:\OS\LAB\LAB2>boot.asm

C:\OS\LAB\LAB2>make fp.disk
nasm boot.asm -o boot.bin -f b
dd if=boot.bin of=floppya.img
rawwrite dd for windows versio
Written by John Newbigin <jn@i
This program is covered by the
1+0 records in
1+0 records out

C:\OS\LAB\LAB2>
C:\OS\LAB\LAB2>s

C:\OS\LAB\LAB2>..\..\bochs-2.3
000000000001[APIC?] local apic
=====
Bochs x
Build from CVS sna
=====
000000000001[ ] reading co
000000000001[ ] installing c
000000000001[ ] using log file bochs.log
# In bx_win32_gui_c:exit(void)!
Bochs is exiting with the following message:
[VGUI ] POWER button turned off.
=====
C:\OS\LAB\LAB2>notepad boot.asm

C:\OS\LAB\LAB2>
```

```
Bochs for Windows - Console
C:\OS\LAB\LAB2>
C:\OS\LAB\LAB2>s

C:\OS\LAB\LAB2>..\..\bochs-2.3.5\bochs -f bochsrc.bxrc
000000000001[APIC?] local apic in initializing
=====
Bochs x86 Emulator 2.3.5
Build from CVS snapshot, on September 16, 2007

=====
000000000001[ ] reading configuration from bochsrc.bxrc
000000000001[ ] installing win32 module as the Bochs GUI
000000000001[ ] using log file bochs.log
# In bx_win32_gui_c:exit(void)!
Bochs is exiting with the following message:
[VGUI ] POWER button turned off.
=====
C:\OS\LAB\LAB2>notepad boot.asm

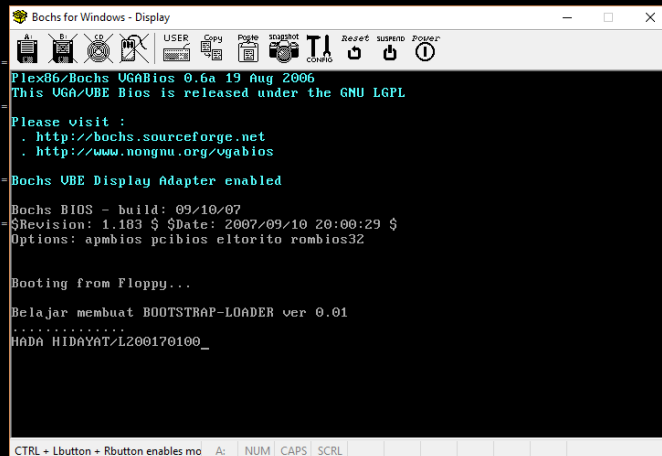
C:\OS\LAB\LAB2>boot.asm

C:\OS\LAB\LAB2>make fp.disk
nasm boot.asm -o boot.bin -f bin
dd if=boot.bin of=floppya.img
rawwrite dd for windows version 0.5.
Written by John Newbigin <jn@it.swin.edu.au>
This program is covered by the GPL. See copying.txt for details
1+0 records in
1+0 records out

C:\OS\LAB\LAB2>s

C:\OS\LAB\LAB2>..\..\bochs-2.3.5\bochs -f bochsrc.bxrc
000000000001[APIC?] local apic in initializing
=====
Bochs x86 Emulator 2.3.5
Build from CVS snapshot, on September 16, 2007

=====
000000000001[ ] reading configuration from bochsrc.bxrc
000000000001[ ] installing win32 module as the Bochs GUI
000000000001[ ] using log file bochs.log
```



Menyiapkan file kernel.bin

```
C:\Windows\system32\cmd.exe

C:\OS\LAB\LAB2>s

C:\OS\LAB\LAB2>..\..\bochs-2.3.5\bochs -q -f bochsrc.bxrc
0000000000000000[APIC?] local apic in initializing
=====
Bochs x86 Emulator 2.3.5
Build from CVS snapshot, on September 16, 2007
=====
0000000000000000[ ] reading configuration from bochsrc.bxrc
0000000000000000[ ] installing win32 module as the Bochs GUI
0000000000000000[ ] using log file bochs.log
# In bx_win32_gui.c:exit(void)!
=====
Bochs is exiting with the following message:
[VGUI ] POWER button turned off.
=====

C:\OS\LAB\LAB2>make kernel
nasm kernel.asm -o kernel.bin -f bin

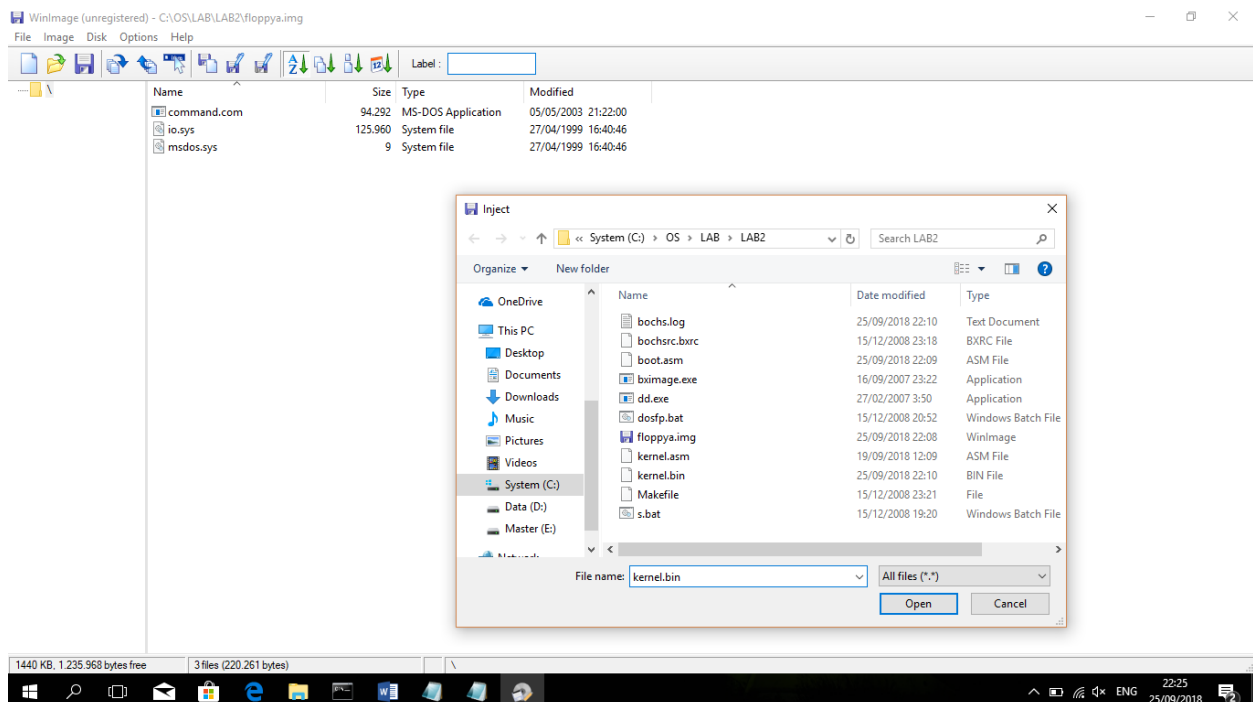
C:\OS\LAB\LAB2>dir
Volume in drive C is System
Volume Serial Number is 9A6A-6078

Directory of C:\OS\LAB\LAB2

25/09/2018  22:10    <DIR>          .
25/09/2018  22:10    <DIR>          ..
25/09/2018  22:10                10.156 bochs.log
15/12/2008  23:18                1.625 bochsrc.bxrc
25/09/2018  22:09                15.938 boot.asm
16/09/2007  23:22                18.432 bximage.exe
27/02/2007  03:50                342.016 dd.exe
15/12/2008  20:52                 78 dosfp.bat
25/09/2018  22:08            1.474.568 floppy.img
19/09/2018  12:09                7.966 kernel.asm
25/09/2018  22:10                 611 kernel.bin
15/12/2008  23:21                 228 Makefile
15/12/2008  19:20                 44 s.bat
               11 File(s)      1.871.654 bytes
               2 Dir(s)      45.453.934.592 bytes free

C:\OS\LAB\LAB2>
```

Memindahkan file kernel.bin dalam floppy.img



Memodifikasi kernel.asm

```
Bochs for Windows - Console
=====
Bochs is exiting. Press ENTER when you're ready to close this window.

C:\OS\LAB\LAB2>notepad kernel.asm

C:\OS\LAB\LAB2>make kernel
nasm kernel.asm -o kernel.bin -f bin

C:\OS\LAB\LAB2>s

C:\OS\LAB\LAB2>..\..\bochs-2.3.5\bochs -q -f bochsrc.bxrc
00000000000i[APIC?] local apic in initializing
=====
Bochs x86 Emulator 2.3.5
Build from CVS snapshot, on September 16, 2007
=====
00000000000i[ ] reading configuration from bochsrc.bxrc
00000000000i[ ] installing win32 module as the Bochs GUI
00000000000i[ ] using log file bochs.log
# In bx_win32_gui_c::exit(void)!
=====
Bochs is exiting with the following message:
[GUI ] POWER button turned off.
=====

C:\OS\LAB\LAB2>notepad kernel.asm

C:\OS\LAB\LAB2>make kernel
nasm kernel.asm -o kernel.bin -f bin

C:\OS\LAB\LAB2>s

C:\OS\LAB\LAB2>..\..\bochs-2.3.5\bochs -q -f bochsrc.bxrc
00000000000i[APIC?] local apic in initializing
=====
Bochs x86 Emulator 2.3.5
Build from CVS snapshot, on September 16, 2007
=====
00000000000i[ ] reading configuration from bochsrc.bxrc
00000000000i[ ] installing win32 module as the Bochs GUI
00000000000i[ ] using log file bochs.log
=====

Bochs for Windows - Display
=====
Plex86/Bochs UGABios 0.6a 19 Aug 2006
This UGA/UBE Bios is released under the GNU LGPL

Please visit :
. http://bochs.sourceforge.net
. http://www.nongnu.org/ugabios

Bochs UBE Display Adapter enabled

Bochs BIOS - build: 09/10/07
$Revision: 1.183 $ $Date: 2007/09/10 20:00:29 $
Options: apmbios pcibios eltorito rombios32

Booting from Floppy...

Belajar membuat BOOTSTRAP-LOADER ver 0.01
.....
..
BELAJAR MEMBUAT KERNEL
MY KERNEL$>_

CTRL + Lbutton + Rbutton enables mo A: NUM CAPS SCRL
```