LAPORAN KEGIATAN PRAKTIKUM

PENGENALAN SISTEM PENGEMBANGAN

OS DENGAN PC SIMULATOR 'BOCHS'

Disusun oleh :

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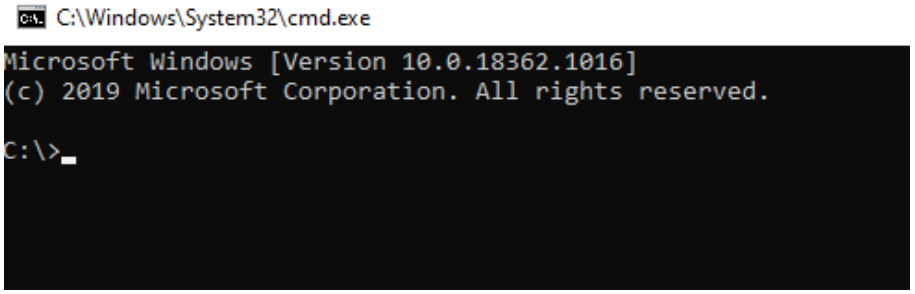
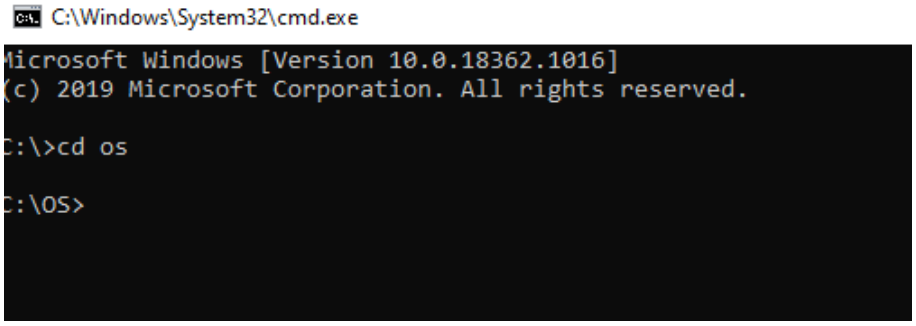
Langkah Kerja

Menuju ke direktori kerja.

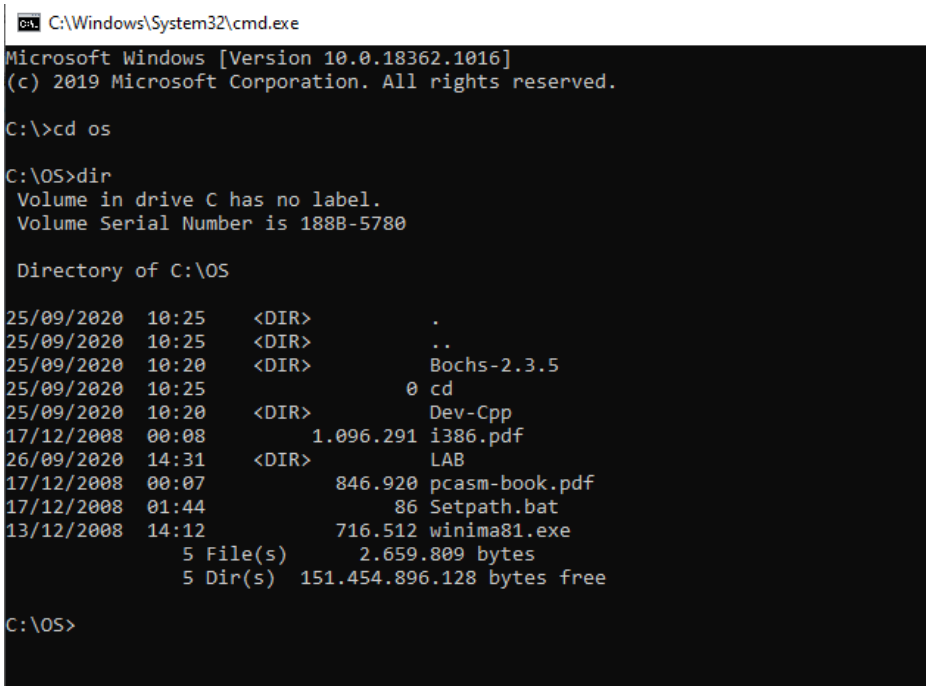
1. Jalankan program command promt atau cmd. Maka akan muncul tampilan sebagai berikut.



2. Selanjutnya ketik perintah ‘cd os’ lalu <ENTER>.



3. Selanjutnya ketik perintah ‘dir’ maka akan muncul seperti di bawah ini.



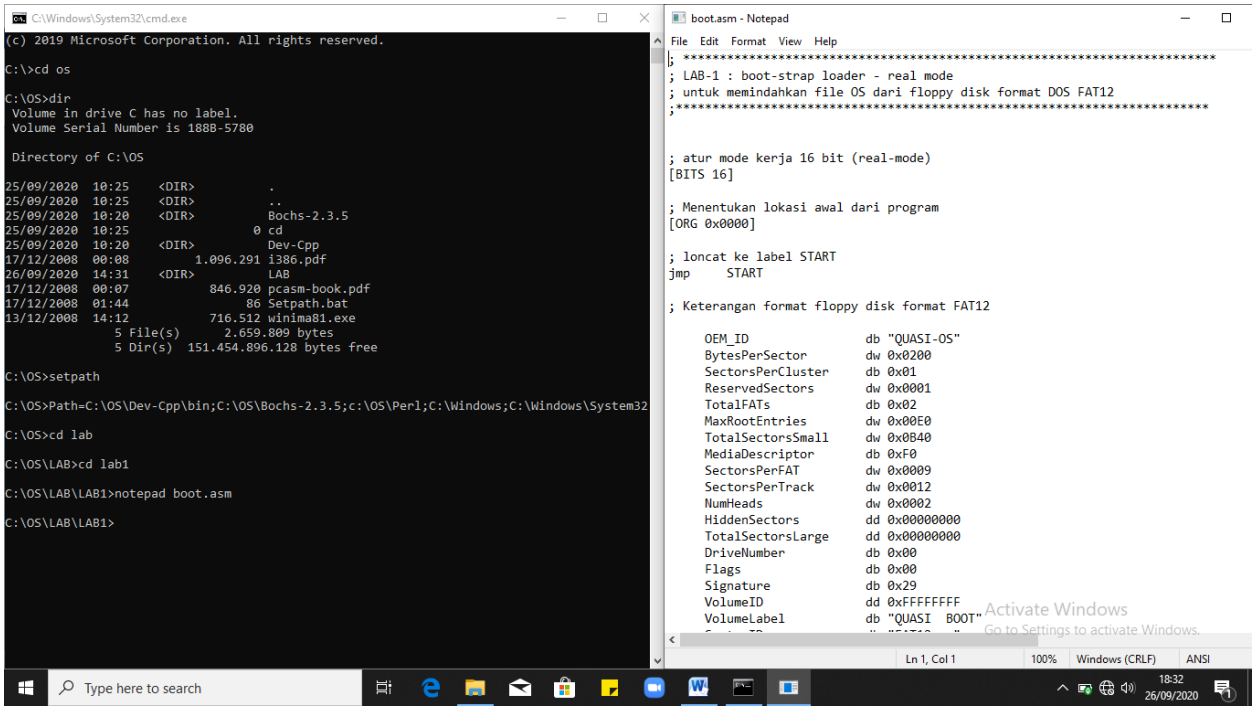
4. Untuk menjalankan file setpath klik ‘setpath’ tekan <ENTER>

```
C:\OS>setpath

C:\OS>Path=C:\OS\Dev-Cpp\bin;C:\OS\Bochs-2.3.5;c:\OS\Perl;C:\Windows;C:\Windows\System32
C:\OS>
```

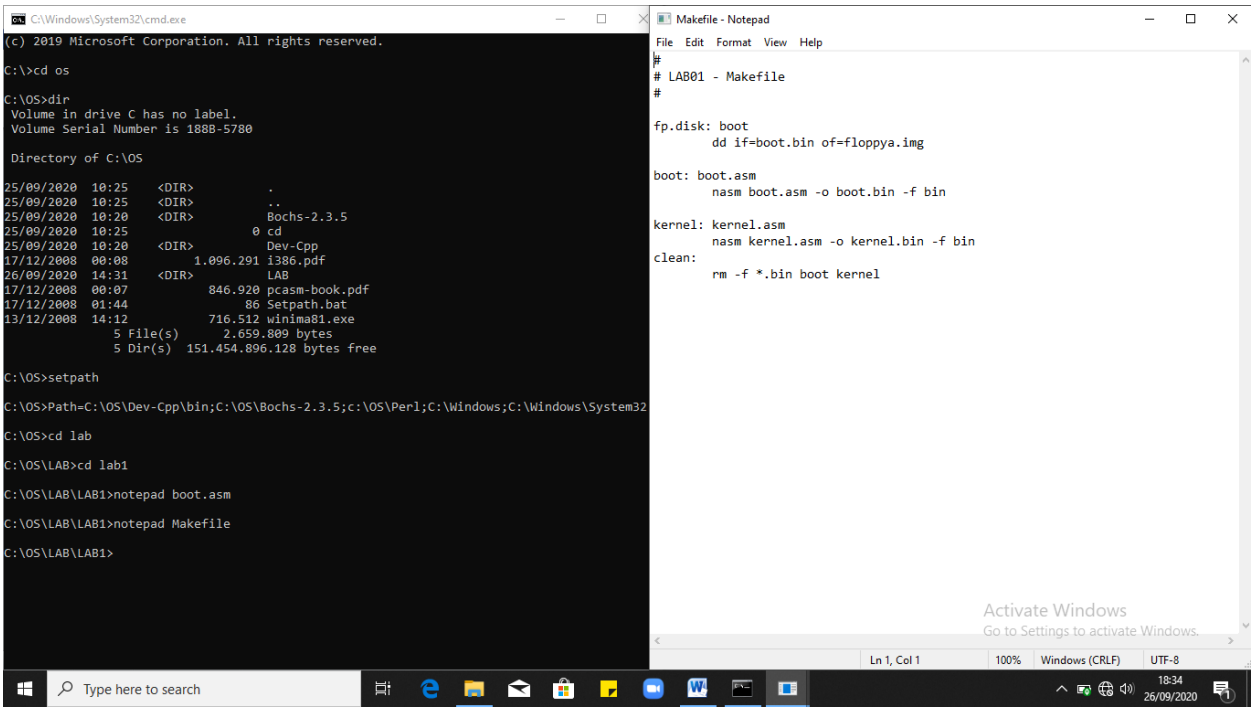
5. Lalu masuk ke direktori kerja pada C:\OS\LAB\LAB1

```
C:\OS>cd lab

C:\OS\LAB>cd lab1

C:\OS\LAB\LAB1>
```

6. Untuk membuka file tersebut, masukkan perintah pada ‘COMMAND PROMPT’ dengan cara ketik ‘notepad boot.asm’ klik <ENTER>. Maka akan muncul tampilan seperti di bawah ini.



7. Selanjutnya tutup notepad, bukalah direktori kerja ‘C:OS\LAB\LAB1’ lalu klik ‘Notepad M’ tekan tombol ‘TAB’ sehingga muncul ‘Notepad Makefile’ lalu klik <ENTER>.



8. Buka ‘COMMAND PROMPT’ ketik make fp. Disk, jika tidak ada kesalahan akan muncul seperti gambar dibawah ini.

```
C:\OS\LAB\LAB1>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\LAB1>
```

9. Ketik ‘del floppy.img /P’ lalu tekan ‘Y’ lalu <ENTER>

```
C:\OS\LAB\LAB1>del floppya.img /P
C:\OS\LAB\LAB1\floppya.img, Delete (Y/N)? Y
```

10. Masukkan perintah ‘dir’ maka akan muncul gambar seperti di bawah. Setelah itu klik ‘bximage’

```
C:\OS\LAB\LAB1>dir
 Volume in drive C has no label.
 Volume Serial Number is 188B-5780

 Directory of C:\OS\LAB\LAB1

26/09/2020  18:38    <DIR>          .
26/09/2020  18:38    <DIR>          ..
10/09/2019  16:19            10.235 bochsout.txt
15/12/2008  16:17             1.628 bochsrc.bxrc
14/12/2008  12:02            14.365 boot.asm
26/09/2020  18:35               512 boot.bin
15/12/2008  00:47                78 dosfp.bat
14/12/2008  11:45             7.966 kernel.asm
15/12/2008  16:21               227 Makefile
15/12/2008  12:20                44 s.bat
               8 File(s)         35.055 bytes
               2 Dir(s)  151.450.845.184 bytes free

C:\OS\LAB\LAB1>bximage
========================================================================
                             bximage
                Disk Image Creation Tool for Bochs
        $Id: bximage.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] _
```

(Membuat file image floppy tahap-1)

11. Klik ‘fd’ lalu tekan <ENTER>

```
C:\OS\LAB\LAB1>bximage
========================================================================
                             bximage
                Disk Image Creation Tool for Bochs
        $Id: bximage.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]
```

(Membuat file image floppy tahap-2)

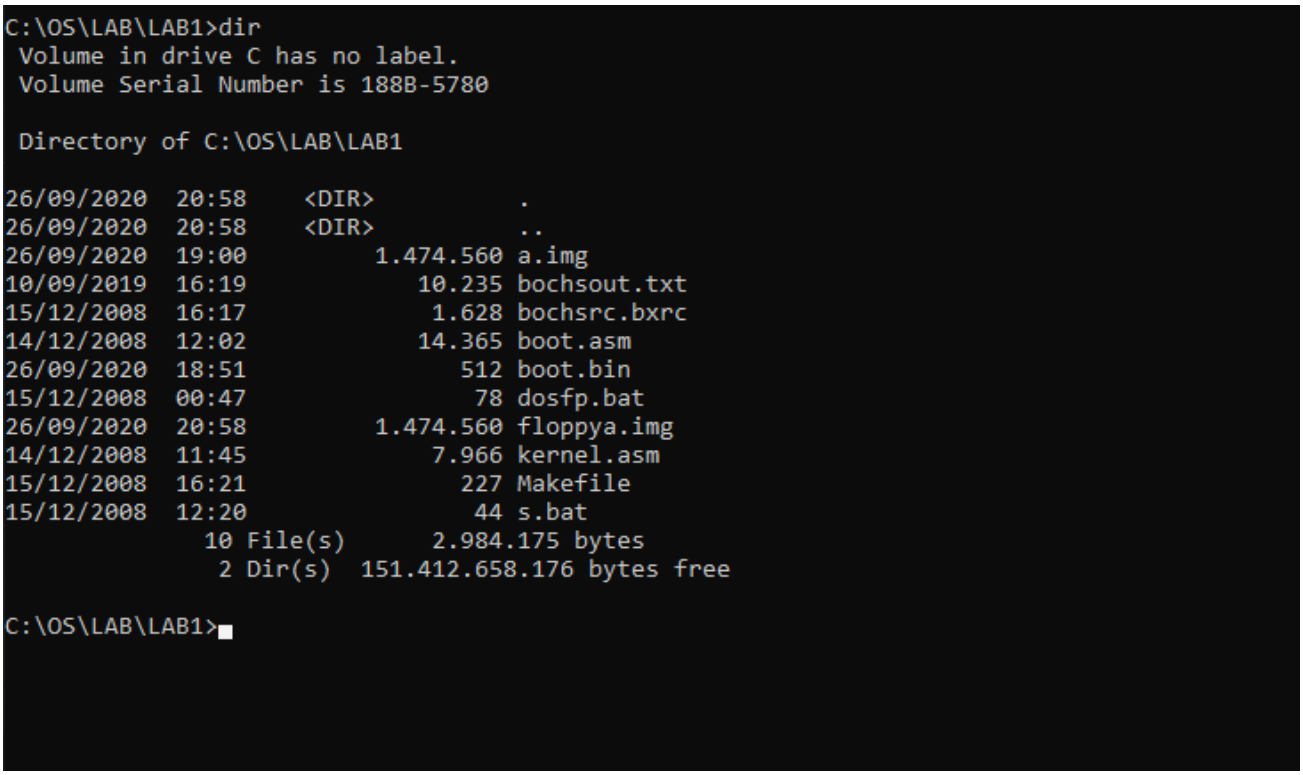
```
C:\OS\LAB\LAB1>bximage
========================================================================
                                bximage
                  Disk Image Creation Tool for Bochs
        $Id: bximage.c,v 1.32 2006/06/16 07:29:33 vruppert Exp $
========================================================================

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]
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] _
```

(Membuat file image foppy tahap-3)

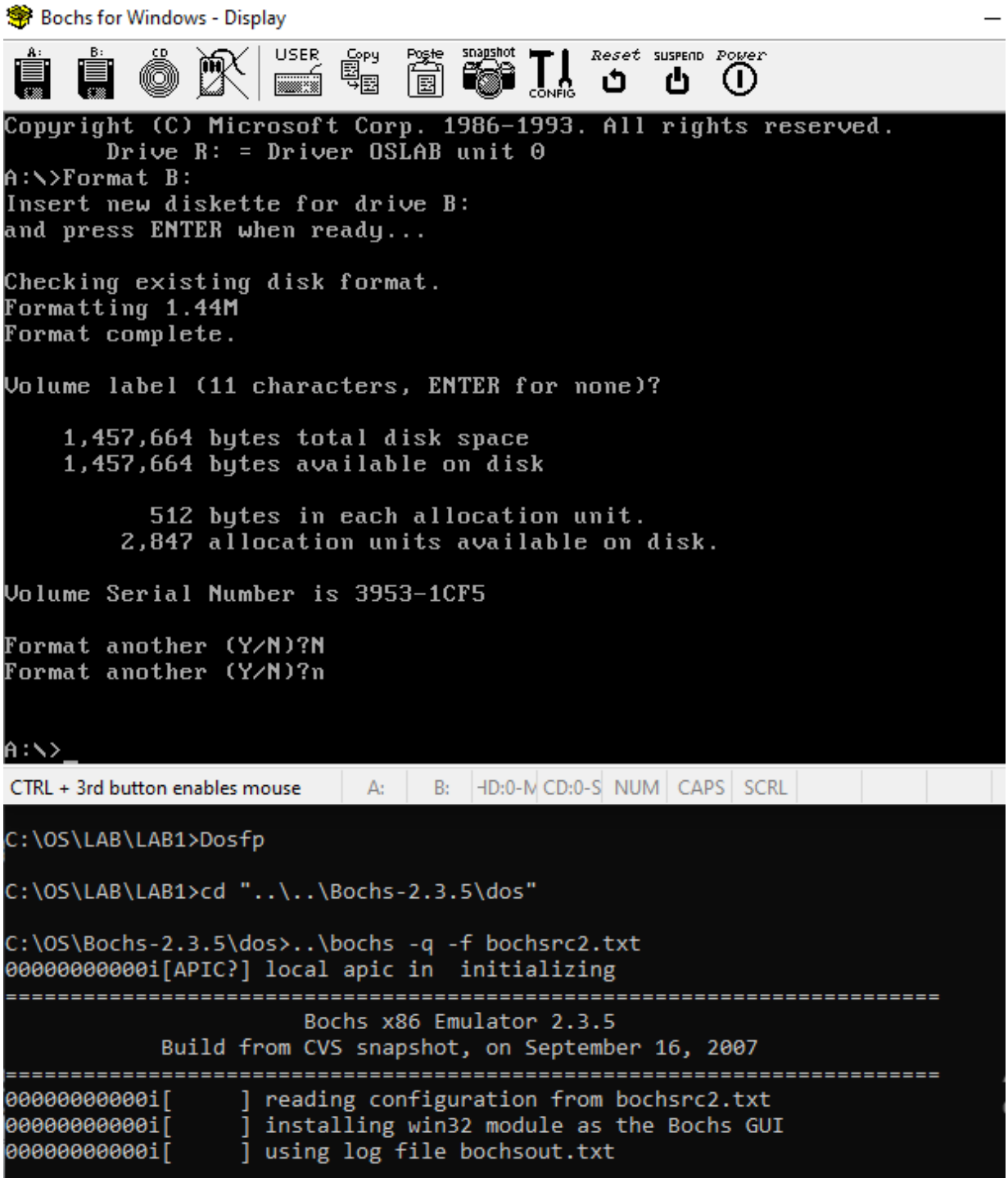
12. Untuk memberikan nama file, ketiklah ‘floppya.img’ lalu <ENTER>

```
C:\OS\LAB\LAB1>bximage
========================================================================
                                bximage
                  Disk Image Creation Tool for Bochs
        $Id: bximage.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]
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] floppya.img

Writing: [] Done.

I wrote 1474560 bytes to floppya.img.

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

Press any key to continue
```

13. Pastikan bahwa nama file imagenya adalah ‘floppy.img’ dengan memasukkan perintah ‘dir’ lalu <ENTER>. Jika belum ada maka Anda harus mengulangi proses dari awal dengan memanggil program ‘bximage’.



14. Jalankan PC-Simulator dari ‘COMMAND PROMPT’ klik perintah ‘DosFp’. Maka akan muncul gambar seperti dibawah ini. Setelah A:\> klik ‘Format B:’ Lalu klik <ENTER> 2X tetapi beri jeda.



15. Tutup PC-Simulator dengan klik tombol power. Copy 512 byte data bootsektor ke dalam file terpisah. Buka ‘Command Prompt’ ketik ‘dd if=floppy.img of=boots.bin count=1’ lalu <ENTER>

```
C:\OS\LAB\LAB1>Dosfp

C:\OS\LAB\LAB1>cd "..\..\Bochs-2.3.5\dos"

C:\OS\Bochs-2.3.5\dos>..\bochs -q -f bochsrc2.txt
00000000000i[APIC?] local apic in  initializing
========================================================================
                      Bochs x86 Emulator 2.3.5
            Build from CVS snapshot, on September 16, 2007
========================================================================
00000000000i[     ] reading configuration from bochsrc2.txt
00000000000i[     ] installing win32 module as the Bochs GUI
00000000000i[     ] using log file bochsout.txt
# In bx_win32_gui_c::exit(void)!
========================================================================
Bochs is exiting with the following message:
[WGUI ] POWER button turned off.
========================================================================

C:\OS\Bochs-2.3.5\dos>cd "C:\os\lab\lab1"

C:\OS\LAB\LAB1>dd if=floppya.img of=boots.bin count=1
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\LAB1>
```

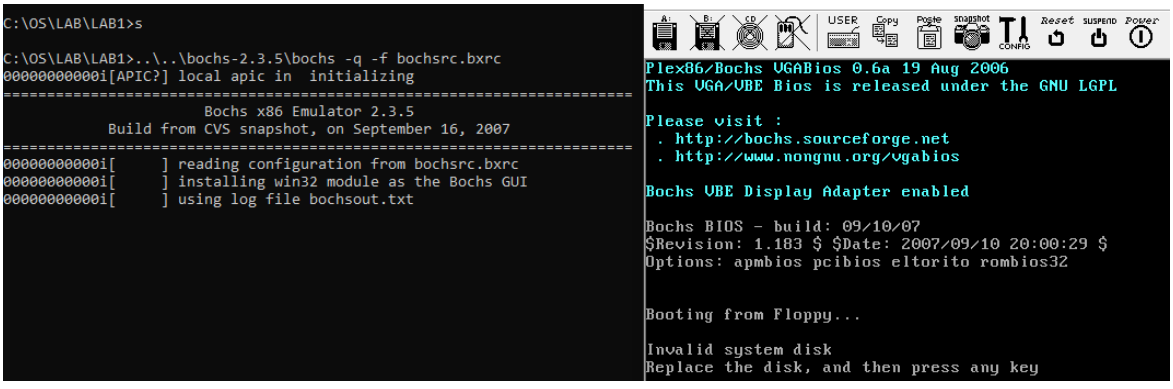
16. Ketik ‘tdump boots.bin’ lalu <ENTER>

```
C:\OS\LAB\LAB1>tdump boots.bin
Turbo Dump  Version 5.0.16.12 Copyright (c) 1988, 2000 Inprise Corporation
                    Display of File BOOTS.BIN

000000: EB 3C 90 4D 53 57 49 4E  34 2E 31 00 02 01 01 00 .<.MSWIN4.1.....
000010: 02 E0 00 40 0B F0 09 00  12 00 02 00 00 00 00 00 ...@............
000020: 00 00 00 00 00 00 29 F5  1C 53 39 4E 4F 20 4E 41 ......)..S9NO NA
000030: 4D 45 20 20 20 20 46 41  54 31 32 20 20 20 33 C9 ME    FAT12   3.
000040: 8E D1 BC FC 7B 16 07 BD  78 00 C5 76 00 1E 56 16 ....{...x..v..V.
000050: 55 BF 22 05 89 7E 00 89  4E 02 B1 0B FC F3 A4 06 U."..~..N.......
000060: 1F BD 00 7C C6 45 FE 0F  38 4E 24 7D 20 8B C1 99 ...|.E..8N$} ...
000070: E8 7E 01 83 EB 3A 66 A1  1C 7C 66 3B 07 8A 57 FC .~...:f..|f;..W.
000080: 75 06 80 CA 02 88 56 02  80 C3 10 73 ED 33 C9 FE u.....V....s.3..
000090: 06 D8 7D 8A 46 10 98 F7  66 16 03 46 1C 13 56 1E ..}.F...f..F..V.
0000A0: 03 46 0E 13 D1 8B 76 11  60 89 46 FC 89 56 FE B8 .F....v.`.F..V..
0000B0: 20 00 F7 E6 8B 5E 0B 03  C3 48 F7 F3 01 46 FC 11  ....^...H...F..
0000C0: 4E FE 61 BF 00 07 E8 28  01 72 3E 38 2D 74 17 60 N.a....(.r>8-t.`
0000D0: B1 0B BE D8 7D F3 A6 61  74 3D 4E 74 09 83 C7 20 ....}..at=Nt...
0000E0: 3B FB 72 E7 EB DD FE 0E  D8 7D 7B A7 BE 7F 7D AC ;.r......}{...}.
0000F0: 98 03 F0 AC 98 40 74 0C  48 74 13 B4 0E BB 07 00 .....@t.Ht......
000100: CD 10 EB EF BE 82 7D EB  E6 BE 80 7D EB E1 CD 16 ......}....}....
000110: 5E 1F 66 8F 04 CD 19 BE  81 7D 8B 7D 1A 8D 45 FE ^.f......}.}..E.
000120: 8A 4E 0D F7 E1 03 46 FC  13 56 FE B1 04 E8 C2 00 .N....F..V......
000130: 72 D7 EA 00 02 70 00 52  50 06 53 6A 01 6A 10 91 r....p.RP.Sj.j..
000140: 8B 46 18 A2 26 05 96 92  33 D2 F7 F6 91 F7 F6 42 .F..&...3......B
000150: 87 CA F7 76 1A 8A F2 8A  E8 C0 CC 02 0A CC B8 01 ...v............
000160: 02 80 7E 02 0E 75 04 B4  42 8B F4 8A 56 24 CD 13 ..~..u..B...V$..
000170: 61 61 72 0A 40 75 01 42  03 5E 0B 49 75 77 C3 03 aar.@u.B.^.Iuw..
000180: 18 01 27 0D 0A 49 6E 76  61 6C 69 64 20 73 79 73 ..'..Invalid sys
000190: 74 65 6D 20 64 69 73 6B  FF 0D 0A 44 69 73 6B 20 tem disk...Disk
0001A0: 49 2F 4F 20 65 72 72 6F  72 FF 0D 0A 52 65 70 6C I/O error...Repl
0001B0: 61 63 65 20 74 68 65 20  64 69 73 6B 2C 20 61 6E ace the disk, an
0001C0: 64 20 74 68 65 6E 20 70  72 65 73 73 20 61 6E 79 d then press any
0001D0: 20 6B 65 79 0D 0A 00 00  49 4F 20 20 20 20 20 20  key....IO
0001E0: 53 59 53 4D 53 44 4F 53  20 20 20 53 59 53 7F 01 SYSMSDOS   SYS..
0001F0: 00 41 BB 00 07 60 66 6A  00 E9 3B FF 00 00 55 AA .A...`fj..;...U.


C:\OS\LAB\LAB1>
```

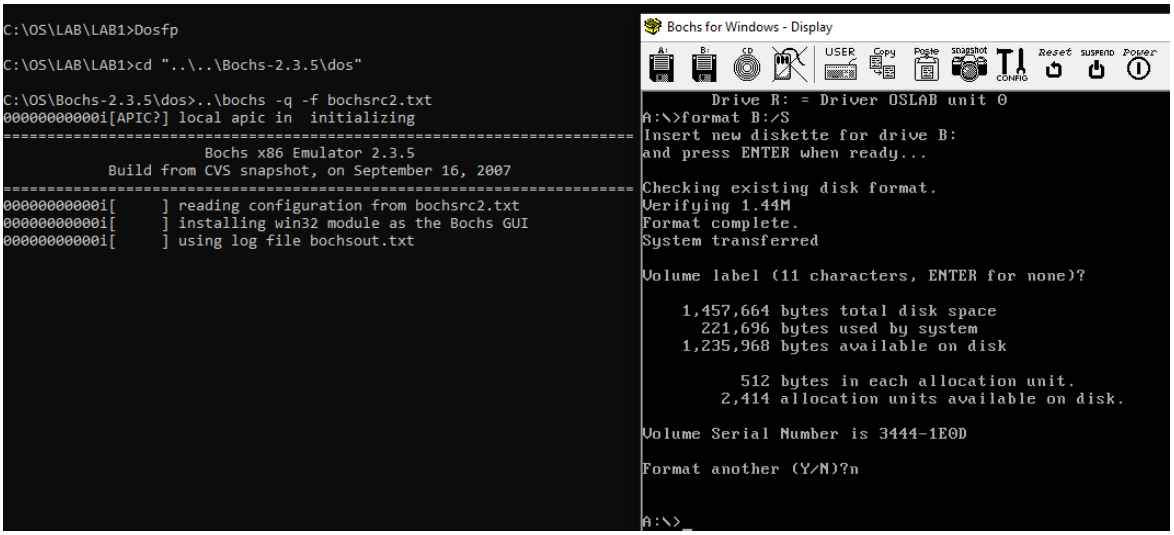
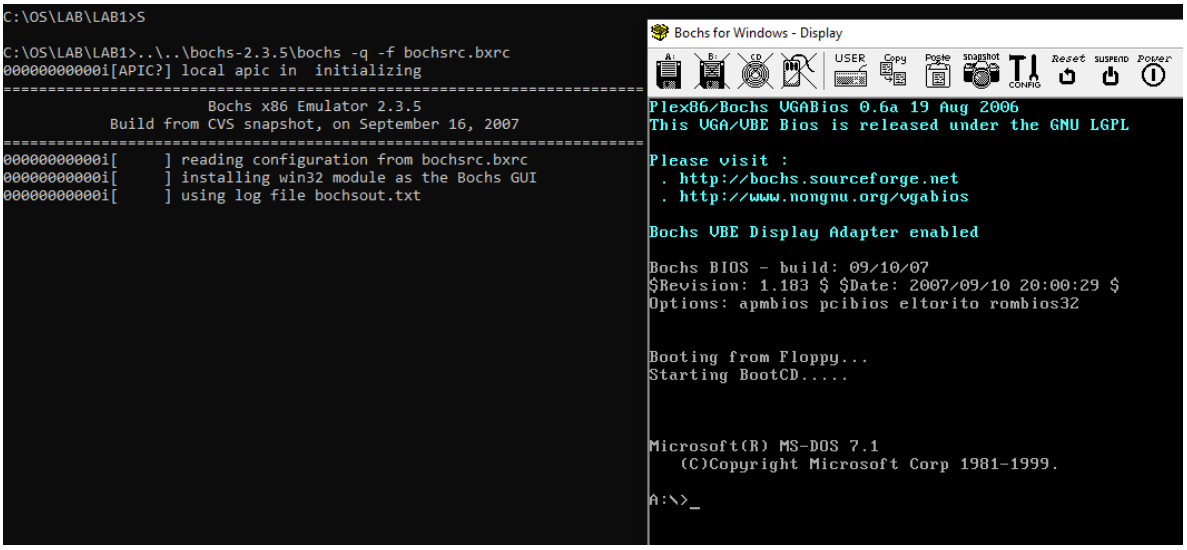
17. Untuk melihat isi file ‘s.bat’ masukkan perintah ‘type s.bat’ lalu <ENTER>

```
C:\OS\LAB\LAB1>type s.bat
..\..\bochs-2.3.5\bochs -q -f bochsrc.bxrc

C:\OS\LAB\LAB1>
```

18. Masukkan perintah ‘s’ lalu klik <ENTER>



19. Ketik ‘Dosfp’ pada command prompt lalu pada windows bochs masukan perintah ‘A:\>format B:/S’ lalu <ENTER>



20. Matikan PC-Simulator dengan klik power. Ketik ‘S’ lalu <ENTER>