

**LAPORAN PRAKTIKUM SISTEM OPERASI  
MODUL 2  
“MENGENAL PROSES PEMBUATAN DISK BOOT”**

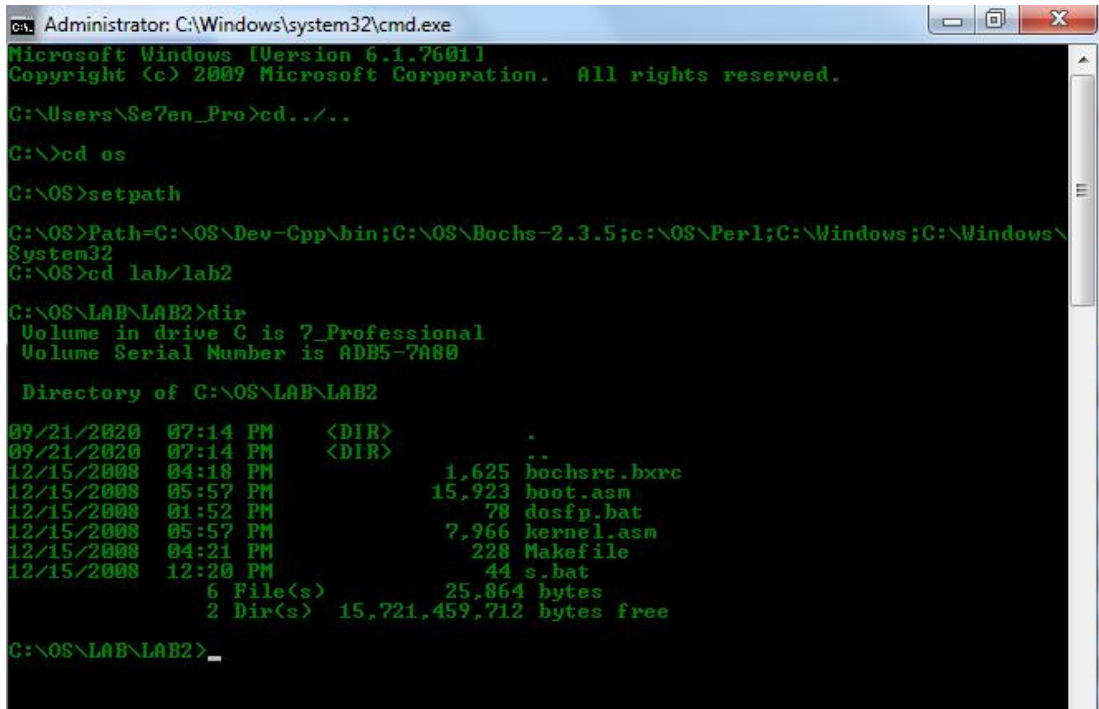


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### Langkah 1

membuka 'Command Prompt' 'Start|run' ketik 'cmd' <ENTER>, 'CD OS', dan jalankan perintah 'setpath', terakhir ketik 'cd LAB/ LAB2'



```
Administrator: C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\Se7en_Pro>cd ../..
C:\>cd os
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>cd lab/lab2
C:\OS\LAB\LAB2>dir
Volume in drive C is 7_Professional
Volume Serial Number is ADB5-7A80

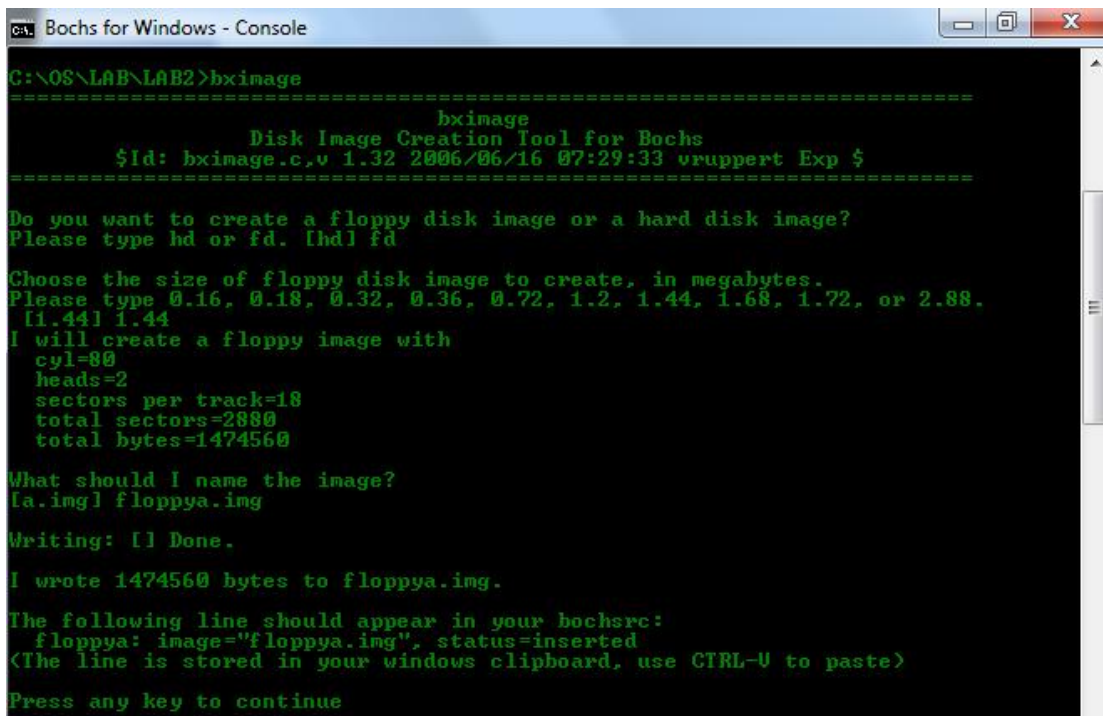
Directory of C:\OS\LAB\LAB2

09/21/2020  07:14 PM    <DIR>          .
09/21/2020  07:14 PM    <DIR>          ..
12/15/2008  04:18 PM               1,625 bochsrc.bxrc
12/15/2008  05:57 PM            15,923 boot.asm
12/15/2008  01:52 PM               78 dosfp.bat
12/15/2008  05:57 PM             7,966 kernel.asm
12/15/2008  04:21 PM               228 Makefile
12/15/2008  12:20 PM                44 s.bat
               6 File(s)          25,864 bytes
               2 Dir(s)  15,721,459,712 bytes free

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

### Langkah 2

Menyiapkan file 'floppya.img'. Jalankan 'bxImage'



```
Bochs for Windows - Console

C:\OS\LAB\LAB2>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] 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.

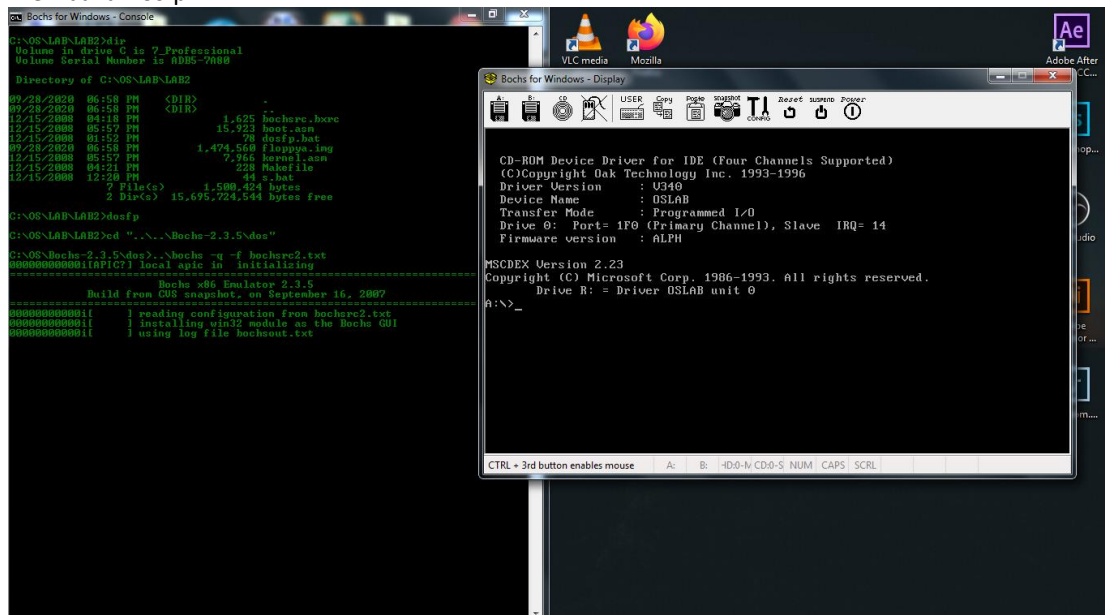
I wrote 1474560 bytes to floppya.img.

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

Press any key to continue
```

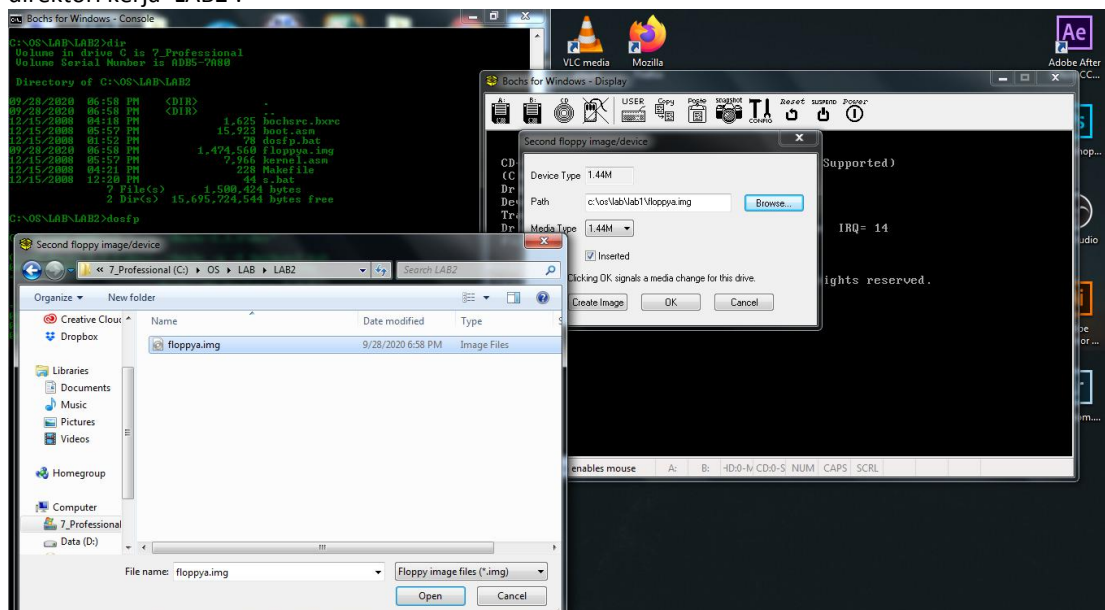
### Langkah 3

#### Membuka Dosfp



### Langkah 4

#### Selanjutnya atur lokasi file image sehingga menunjuk ke file 'floppya.img' yang terdapat pada direktori kerja 'LAB2'.



Memformat dengan mengetikan format b:/s

Bochs for Windows - Display

A: B: CD USER Copy Paste snapshot CONFIG Reset SUSPEND Power

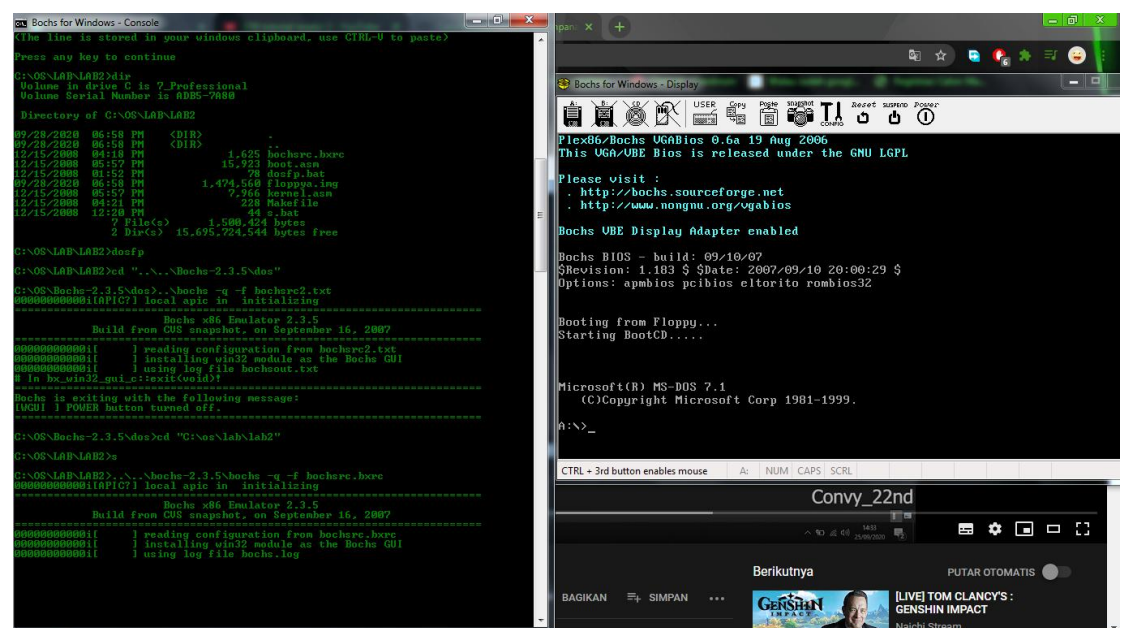
CD-ROM Device Driver for IDE (Four Channels Supported)  
 (C)Copyright Oak Technology Inc. 1993-1996  
 Driver Version : U340  
 Device Name : OSLAB  
 Transfer Mode : Programmed I/O  
 Drive 0: Port= 1F0 (Primary Channel), Slave IRQ= 14  
 Firmware version : ALPH

MSCDEX Version 2.23  
 Copyright (C) Microsoft Corp. 1986-1993. All rights reserved.  
 Drive R: = Driver OSLAB unit 0

A:\>format b:/s  
 Insert new diskette for drive B:  
 and press ENTER when ready...

Checking existing disk format.  
 Formatting 1.44M  
 Format complete.  
 System transferred

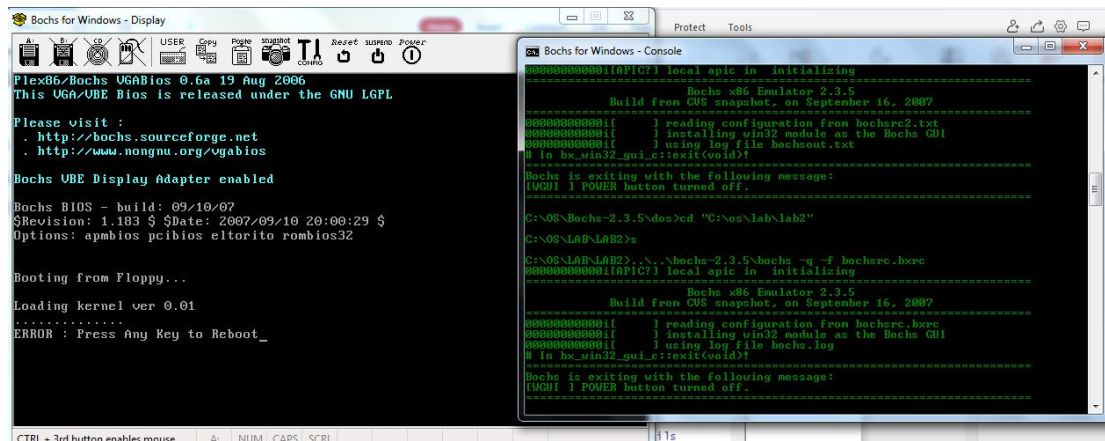
Volume label (11 characters, ENTER for none)? \_





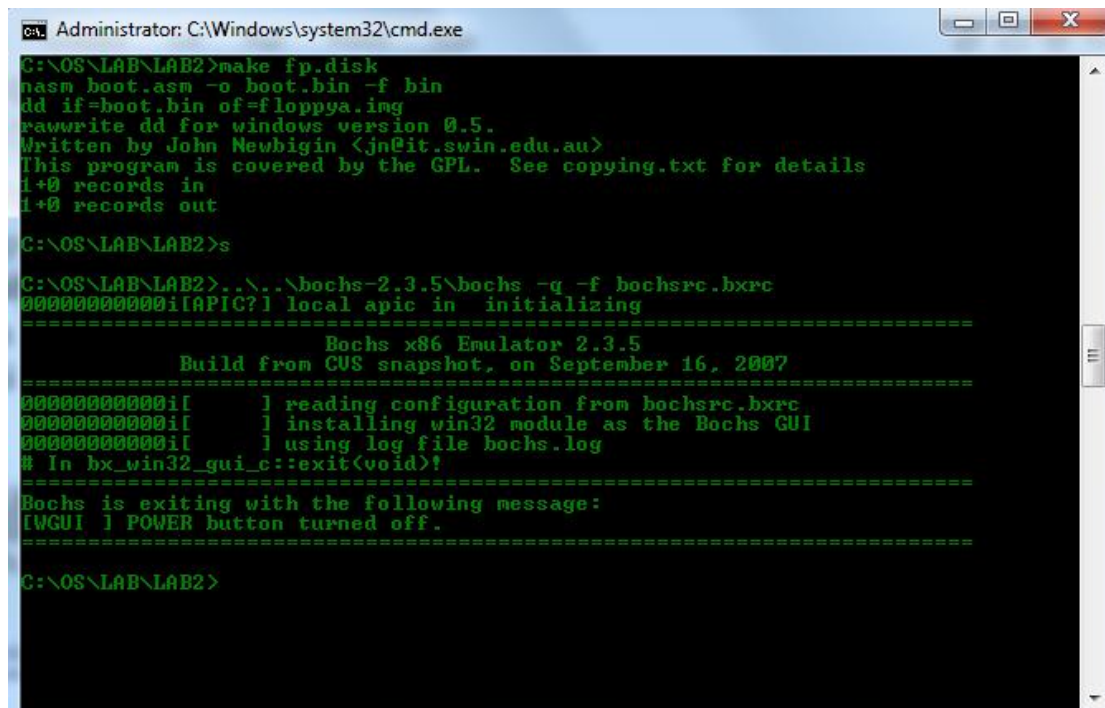
## Langkah 6

BOOT PC-simulator dengan file 'floppya.img'.



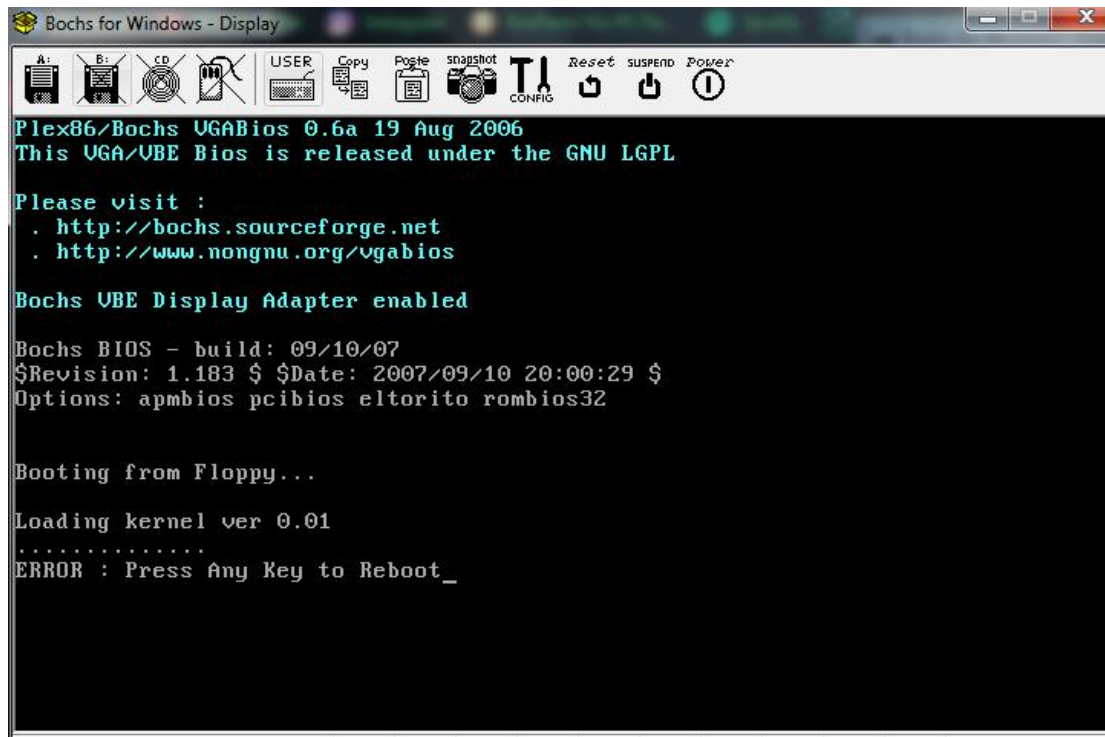
## Langkah 7

Selanjutnya jalankan perintah 'make fp.disk' <ENTER>.



### Langkah 8

Boot PC Simulator dengan program bootstaploader yang baru.



```
Bochs for Windows - Display
Plex86/Bochs VGABios 0.6a 19 Aug 2006
This VGA/VE Bios is released under the GNU LGPL

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

Bochs VBE Display Adapter enabled

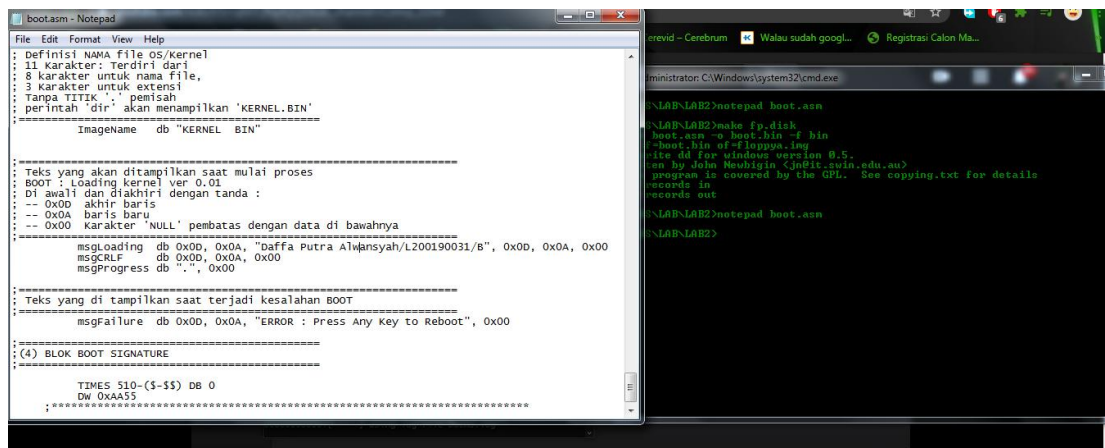
Bochs BIOS - build: 09/10/07
$Revision: 1.183 $ $Date: 2007/09/10 20:00:29 $
Options: apmbios pcibios eltorito rombios32

Booting from Floppy...

Loading kernel ver 0.01
.....
ERROR : Press Any Key to Reboot_
```

### Langkah 9

Menyunting file 'boot.asm', ketikan 'notepad boot. Dengan mengganti "Loading Kernel" menjadi Nama Nim saya

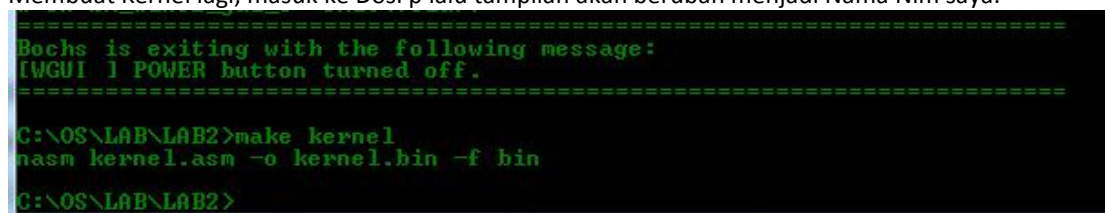


```
boot.asm - Notepad
File Edit Format View Help
: Definisi NAMA file os/kernel
: 11 karakter: Terdiri dari
: 8 karakter untuk nama file,
: 3 karakter untuk ekstensi
: Tanpa titik '.' pemisah
: perintah 'dir' akan menampilkan 'KERNEL.BIN'
:
: imageName db 'KERNEL.BIN'
:
: =====
: Teks yang akan ditampilkan saat mulai proses
: BOOT : Loading kernel ver 0.01
: Di awal dan diakhiri dengan tanda :
: -- 0x00 akhir baris
: -- 0x0A baris baru
: -- 0x00 karakter 'NULL' pembatas dengan data di bawahnya
:
: msgLoading db 0x00, 0x0A, "Daffa Putra Alwansyah/L200190031/B", 0x00, 0x0A, 0x00
: msgRLF db 0x00, 0x0A, 0x00
: msgProgress db ".", 0x00
:
: =====
: Teks yang di tampilkan saat terjadi kesalahan BOOT
:
: msgFailure db 0x00, 0x0A, "ERROR : Press Any Key to Reboot", 0x00
:
: (4) BLOK BOOT SIGNATURE
:
: TIMES 510-($-$$) DB 0
: DW 0xAA55
:
: =====

C:\OS\LAB\LAB2>notepad boot.asm
C:\OS\LAB\LAB2>make fp,disk
boot.asm -o boot.bin -f bin
boot.bin of floppy.img
File dd for windows version 0.5.
on by John Neuhoff <jne@it.eui.edu.au>
program is covered by the GPL. See copying.txt for details
records in
records out
C:\OS\LAB\LAB2>notepad boot.asm
C:\OS\LAB\LAB2>
```

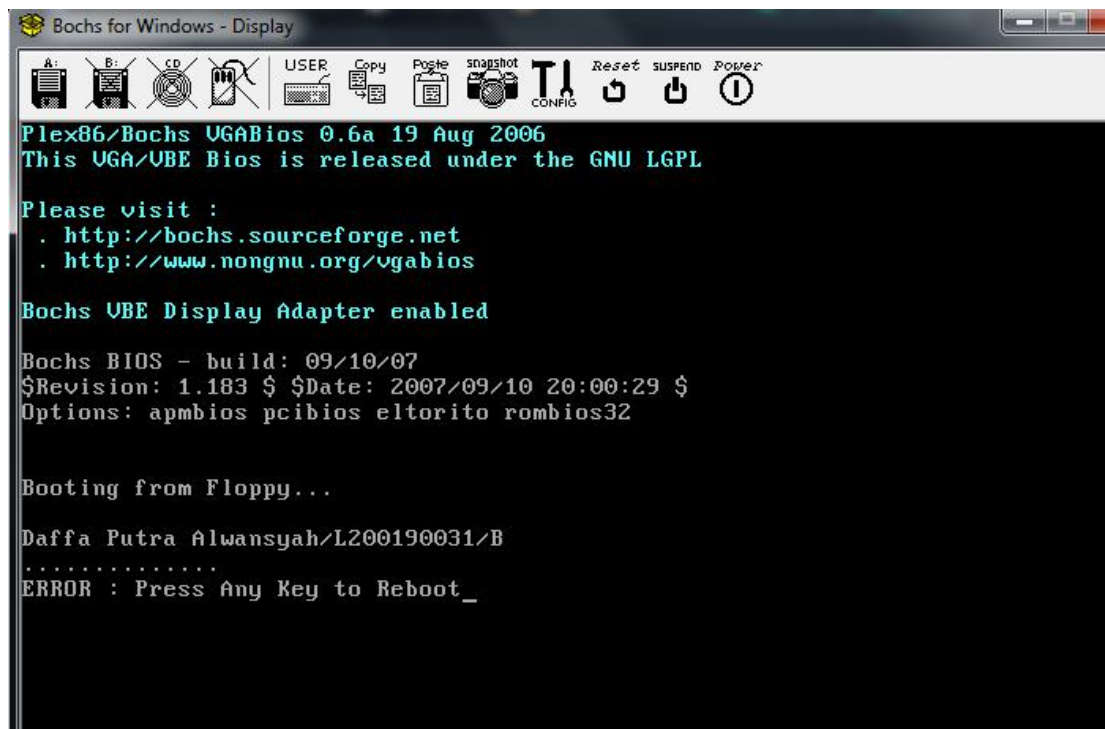
### Langkah 10

Membuat Kernel lagi, masuk ke DosFp lalu tampilan akan berubah menjadi Nama Nim saya.



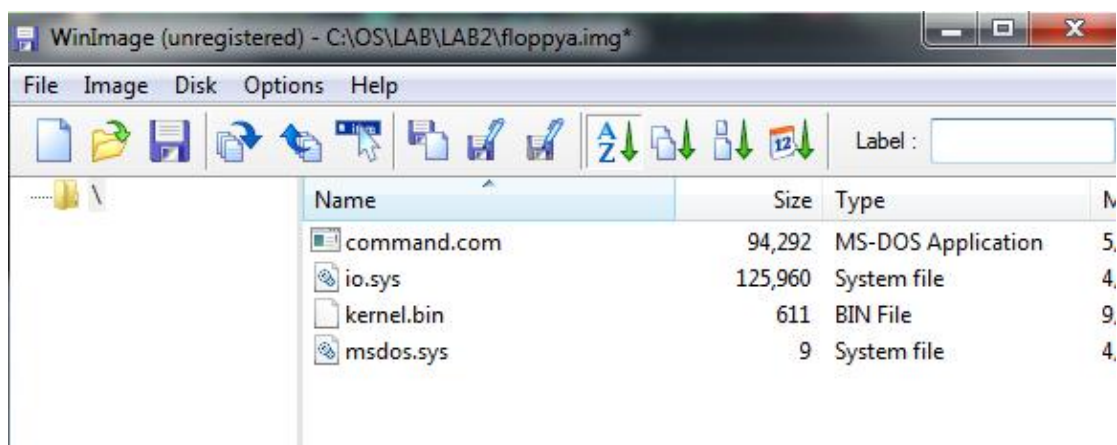
```
Bochs is exiting with the following message:
[VGUI 1 POWER button turned off.]

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



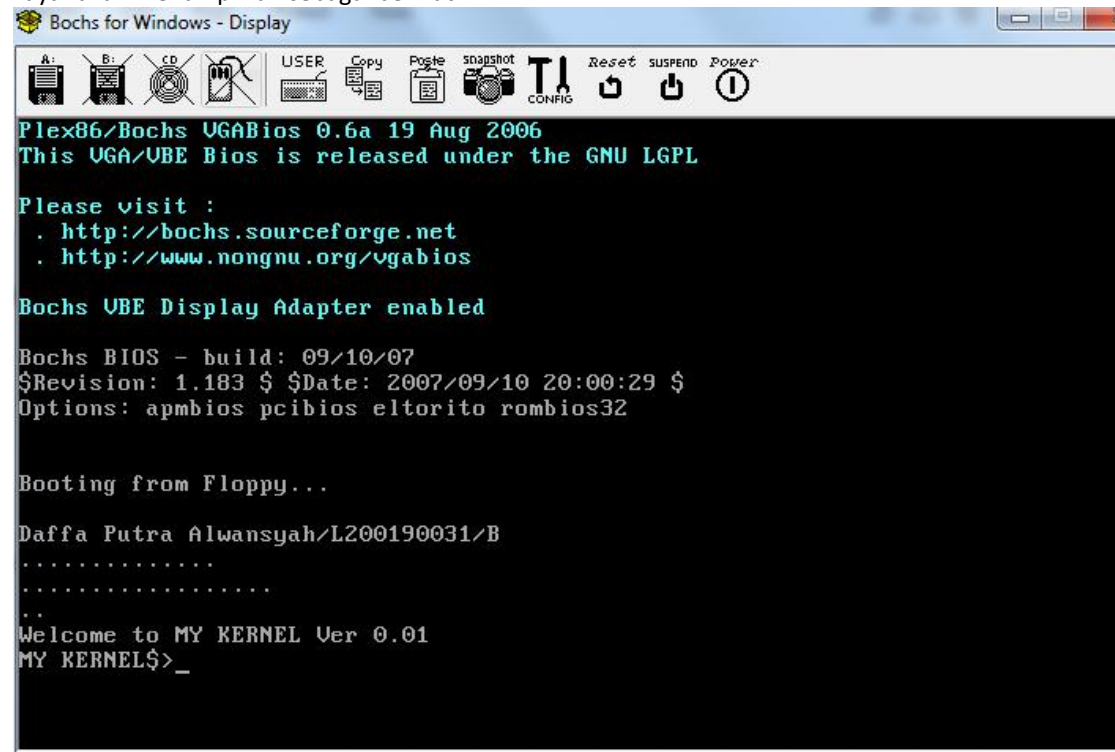
#### Langkah 11

Meninstal WinImage lalu buka "floppya.img" didalam Lab2. Setelah itu masukan Kernel.bin kedalam "floppya.img" lalu save & exit.



## Langkah 12

Layar akan menampilkan sebagai berikut :



## Langkah 13

Langkah selanjutnya dengan memodifikasi kernel dengan membuka kernel.asm, dengan mengubah "Welcome to My Kernel" menjad Nama Nim saya.

