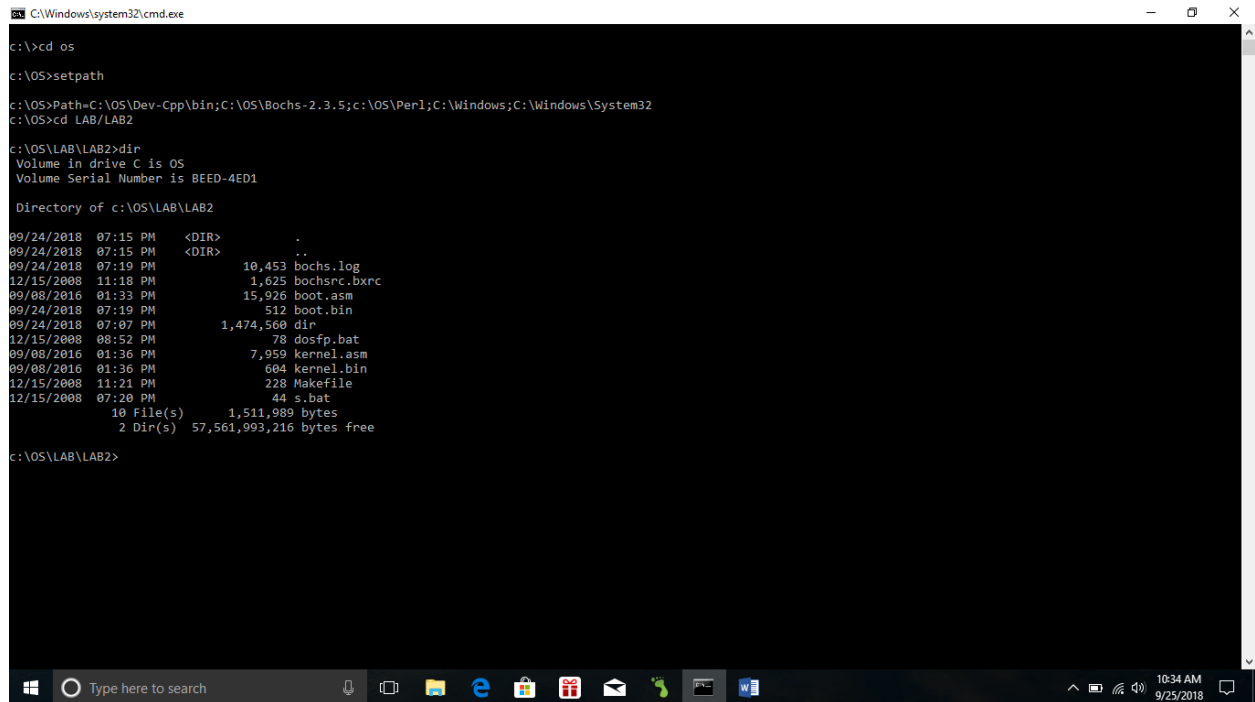


NAMA :Hafid ihsan majid

Nim :L200170112

Langkah 1

Membuka command prompt dan menjalankan “cd os”serta perintah “setpath” dan juga “dir”



```
C:\Windows\system32\cmd.exe
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 OS
Volume Serial Number is BEED-4ED1

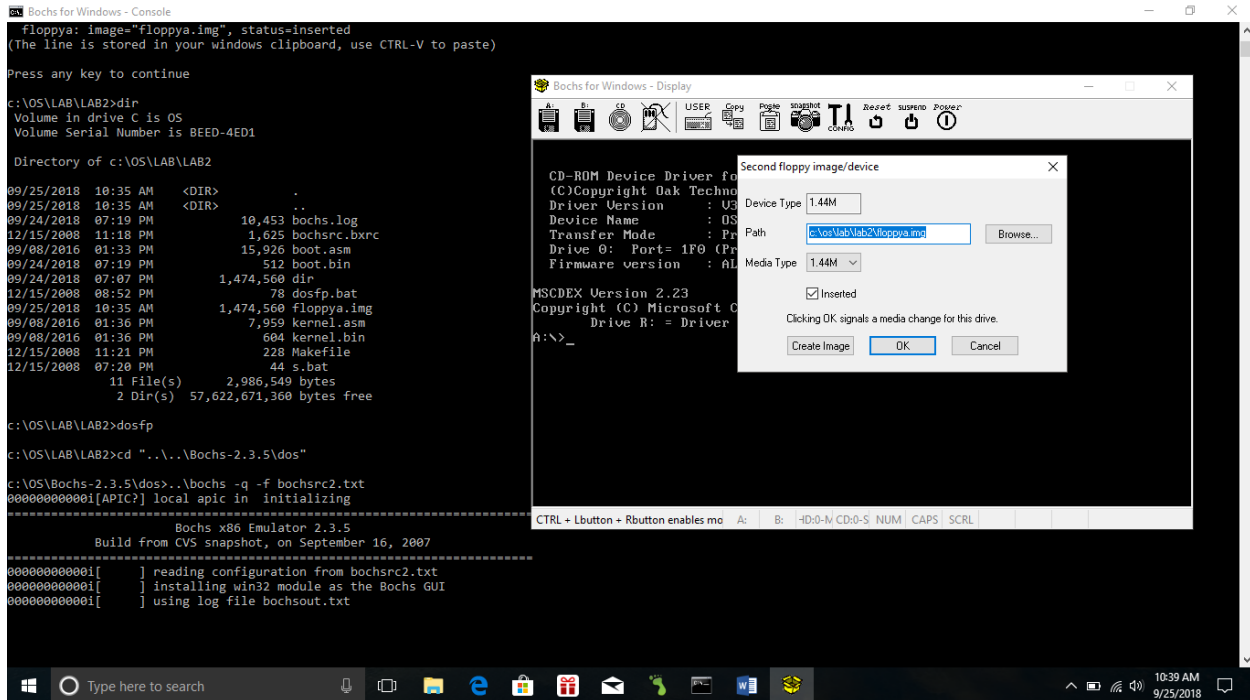
Directory of c:\OS\LAB\LAB2

09/24/2018  07:15 PM  <DIR>          .
09/24/2018  07:15 PM  <DIR>          ..
09/24/2018  07:19 PM                10,453 bochs.log
12/15/2008  11:18 PM                1,625 bochsrc.bxrc
09/08/2016  01:33 PM                15,926 boot.asm
09/24/2018  07:19 PM                 512 boot.bin
09/24/2018  07:07 PM            1,474,560 din
12/15/2008  08:52 PM                 78 dosfp.bat
09/08/2016  01:36 PM                7,959 kernel.asm
09/08/2016  01:36 PM                 604 kernel.bin
12/15/2008  11:21 PM                 228 Makefile
12/15/2008  07:20 PM                 44 s.bat
               10 File(s)            1,511,989 bytes
               2 Dir(s)  57,561,993,216 bytes free

c:\OS\LAB\LAB2>
```

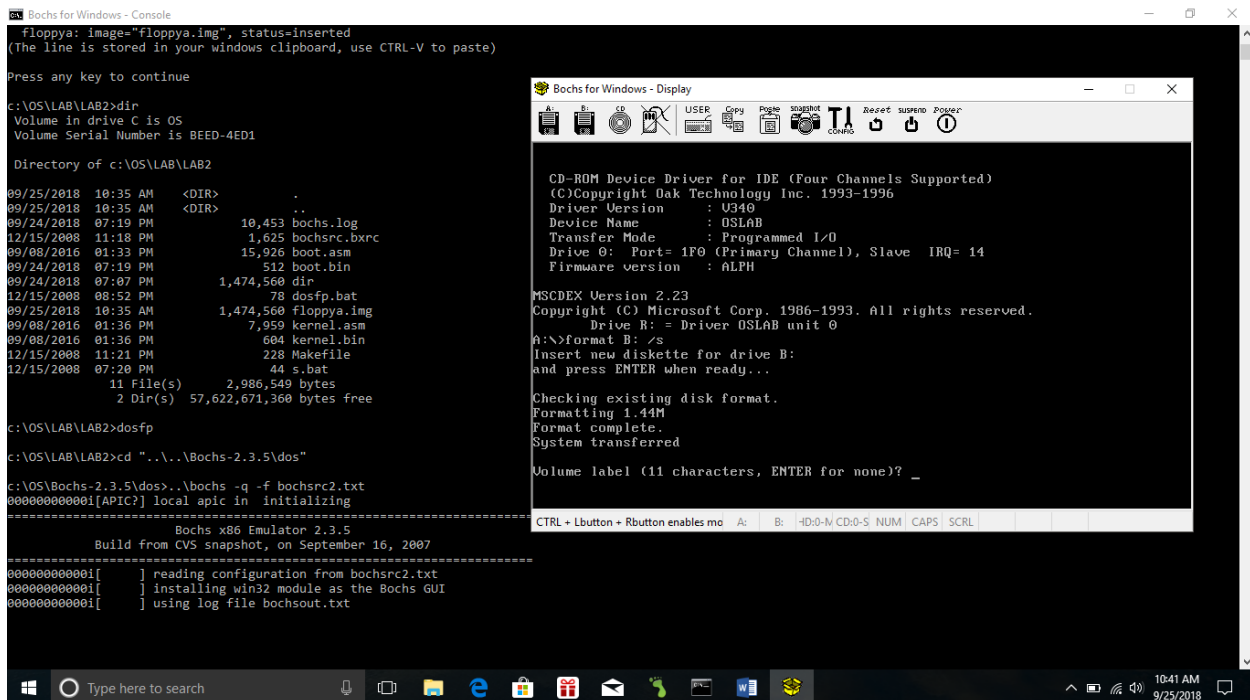
Langkah 2

Menyiapkan file”floppy.img”dan menjalankan bximage serta menjawab pertanyaan yang muncul.



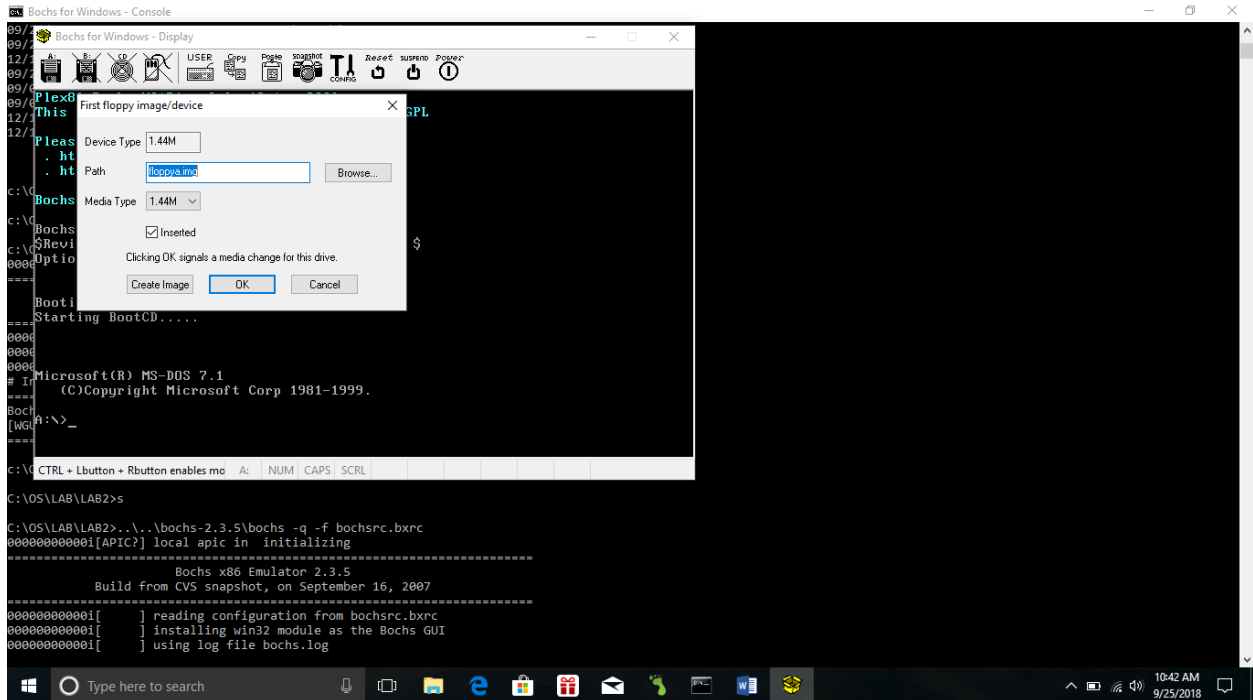
Langkah 5.

BOOT PC- Simulator dengan file floppy.img pindah ke direktori kerja pada windows cmd dan jalankan perintah S, sekarang floppy.img terletak pada "drive A"



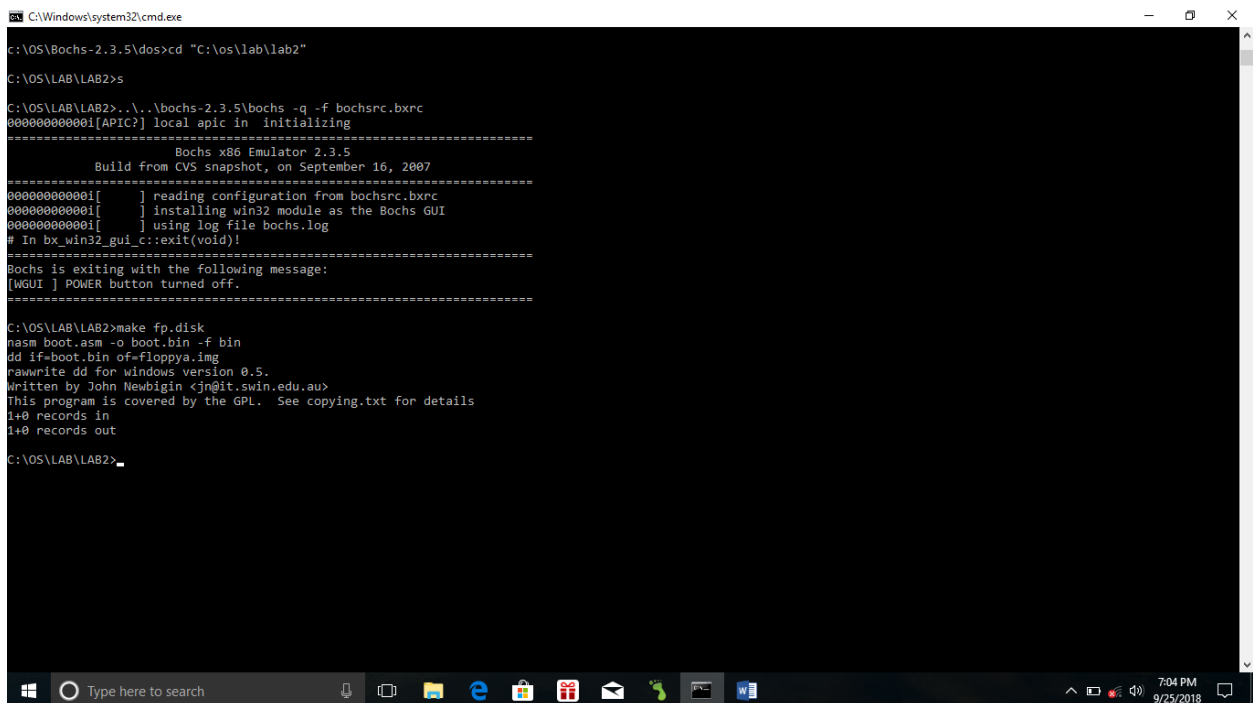
Langkah 6.

Selanjutnya ketik make fp.disk enter dan jalankan perintah S



Langkah 7.

Mengkomplikasi source code :boot.asm dan memindah hasilnya ke bootsector floppy.img



Langkah 8.

Boot pc simulator dengan program bootstraploader yang baru.

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

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 -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:
[VGUI ] POWER button turned off.
=====

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

Langkah 9.

Menyunting file boot.asm dan ketikan notepad boot.asm lalu cari teks loading kernel

```
Bochs for Windows - Console
=====
Bochs x86 Emulator 2.3.5
Build from CVS snapshot, on September 16, 2007
=====
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 is exiting with the following message:
[VGUI ] POWER button turned off.
=====

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

```
bootasm - 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
; Diawali dan diakhiri dengan tanda :
; -- 0x0D akhir baris
; -- 0x0A baris baru
; -- 0x00 Karakter 'NULL' pembatas dengan data di bawahnya
=====
msgLoading db 0x0D, 0x0A, "Hafid ihسان majid", 0x0D, 0x0A, 0x00
msgCRLF db 0x0D, 0x0A, 0x00
msgProgress db ".", 0x00
```

Langkah 10.

Menyiapkan file kernel.bin prototype source code program kernel disimpan ke file kernel.asm

```
C:\Windows\system32\cmd.exe
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>make kernel
nasm kernel.asm -o kernel.bin -f bin

C:\OS\LAB\LAB2>dir
Volume in drive C is OS
Volume Serial Number is BEED-4ED1

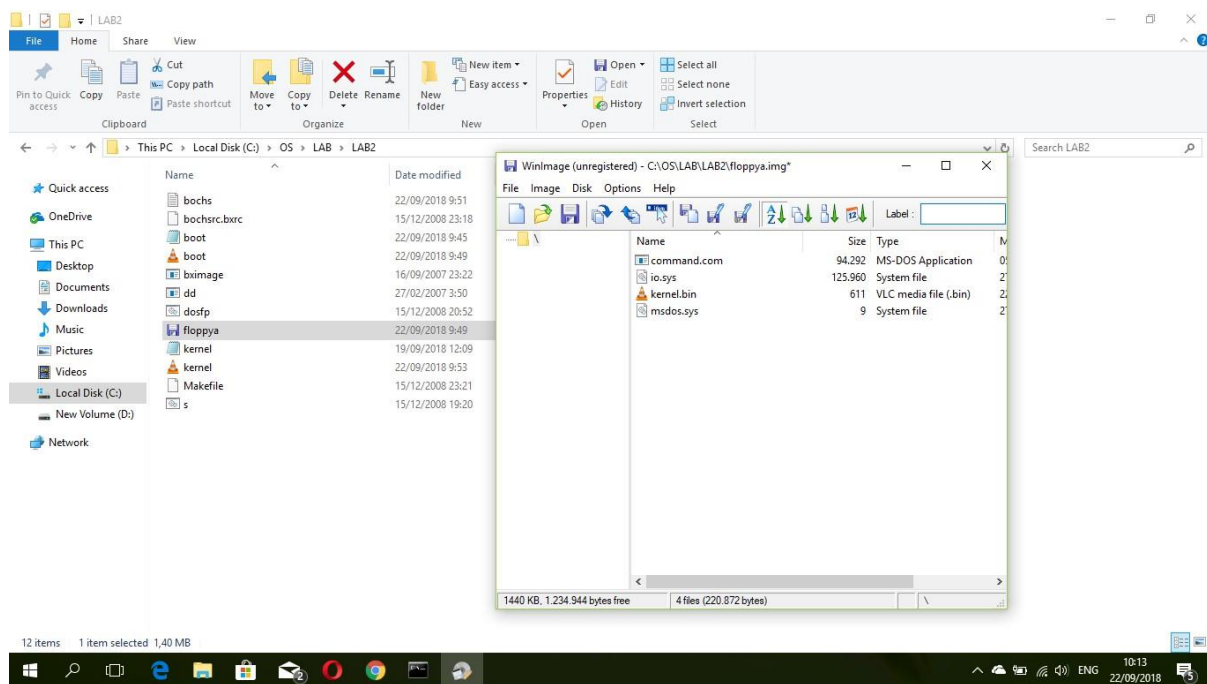
Directory of C:\OS\LAB\LAB2

09/25/2018  07:00 PM  <DIR>          .
09/25/2018  07:00 PM  <DIR>          ..
09/25/2018  07:00 PM                1,474,560  a.img
09/25/2018  07:15 PM                10,130  bochs.log
12/15/2008  11:18 PM                1,625  bochsrc.bxrc
09/25/2018  07:13 PM                15,895  boot.asm
09/25/2018  07:14 PM                 512  boot.bin
09/16/2007  11:22 PM                18,432  bximage.exe
09/25/2018  10:51 AM            10,321,920  c.img
02/27/2007  03:50 AM                342,016  dd.exe
09/24/2018  07:07 PM            1,474,560  din
12/15/2008  08:52 PM                 78  dosfp.bat
09/25/2018  07:14 PM            1,474,560  floppy.img
09/19/2018  12:09 PM                 7,966  kernel.asm
09/25/2018  07:16 PM                 611  kernel.bin
12/15/2008  11:21 PM                 228  Makefile
12/15/2008  07:20 PM                 44  s.bat
               15 File(s)            15,143,137 bytes
               2 Dir(s)              57,520,791,552 bytes free

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

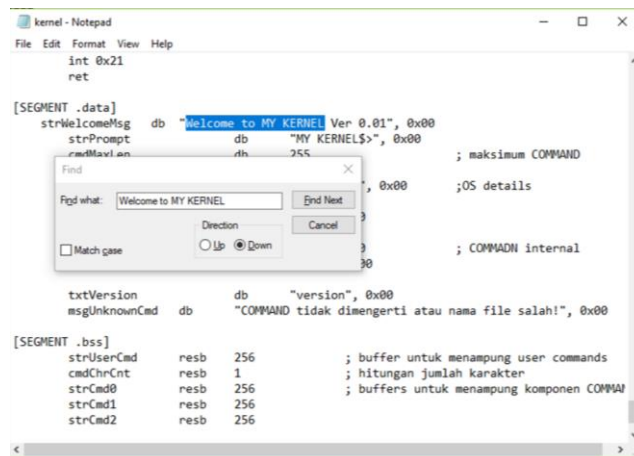
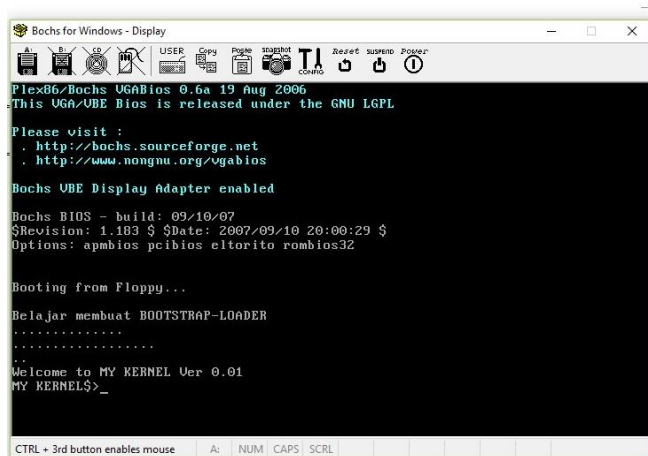
Langkah 11.

Memindahkan file kernel.bin ke dalam file image floppy.img



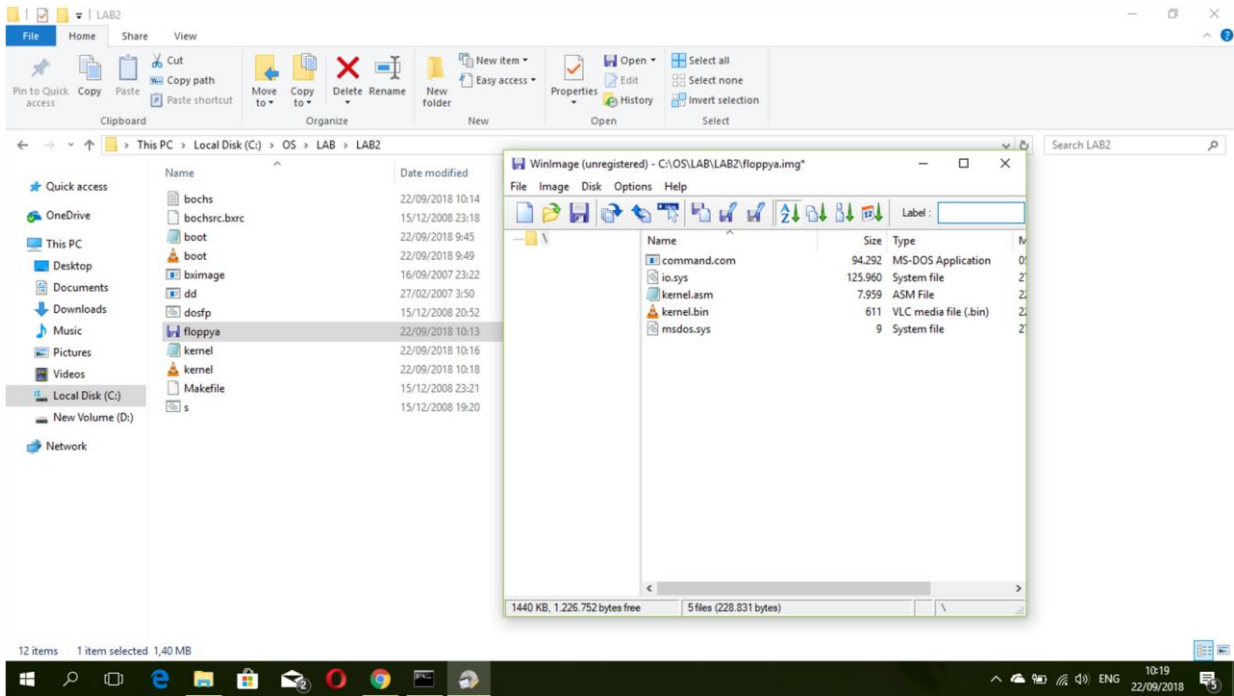
Langkah 12.

Melakukan proses boot pada pc simulator dengan menggunakan floppy,sertamamodifikasi file kernel.asm



Langkah 13.

Ulangi proses kompilasi, jalankan perintah 'make kernel'selanjutnya ulangi proses seperti memindah file kernel.bin ke dalam file floppy.img dengan WinImage.



Langkah 14.

Tampilan dari bochs ketika di ketikan s

