LAPORAN PRAKTIKUM SISTEM OPERASI
MODUL 1 SAMPAI MODUL 10

Nama : Angieta Putri Wahendra

NIM : L200170096

Kelas : E

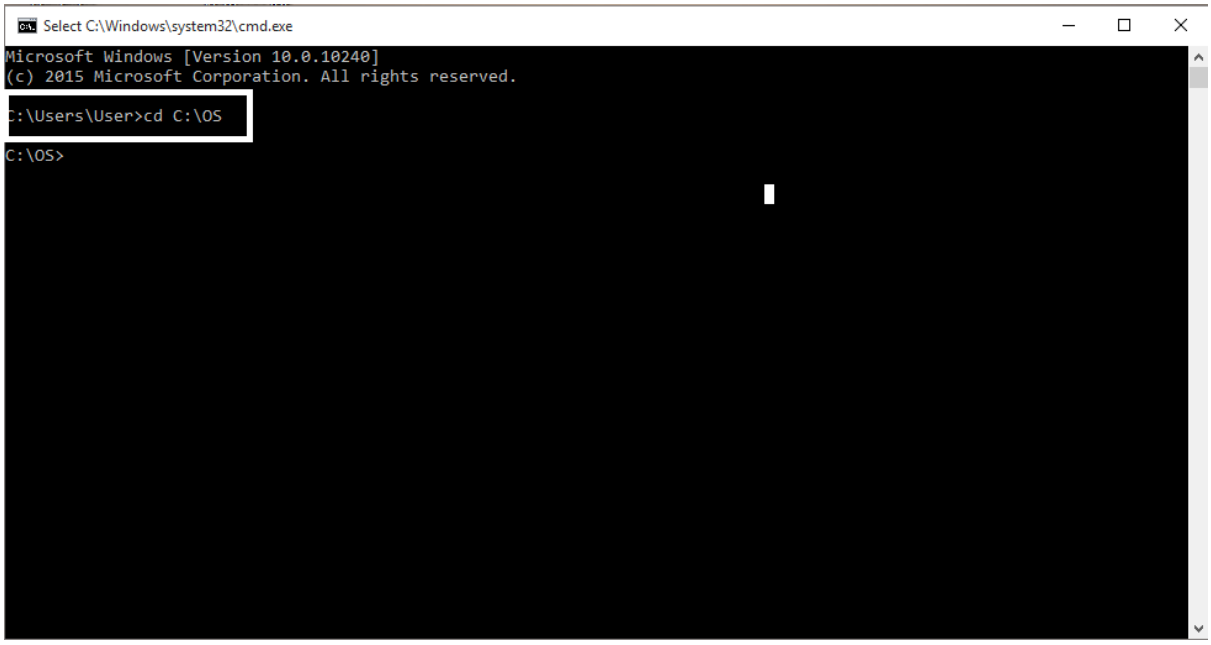
Program Studi Informatika

Fakultas Komunikasi dan Informatika

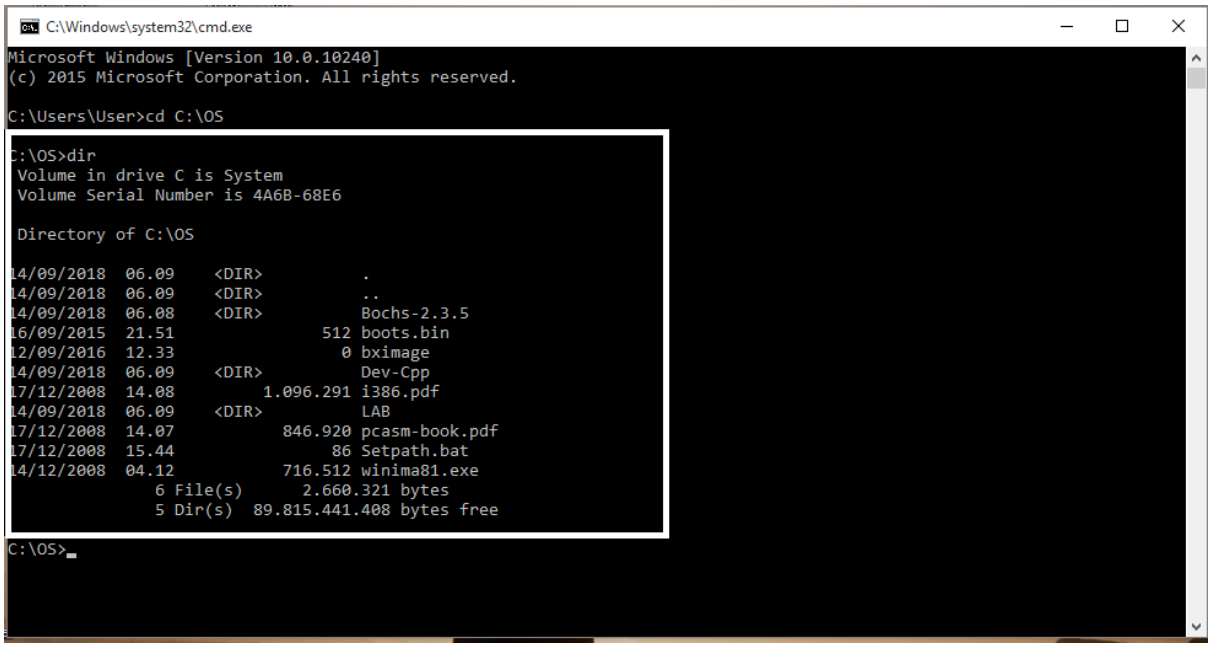
Universitas Muhammadiyah Surakarta

MODUL 1

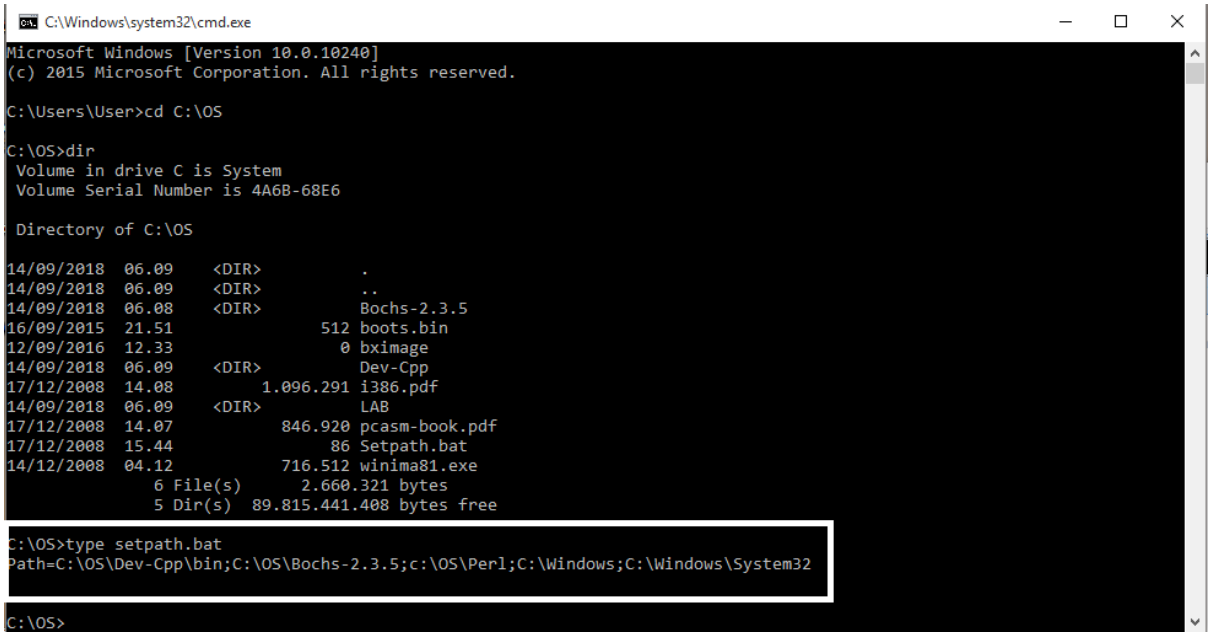
1. Memanggil direktori OS



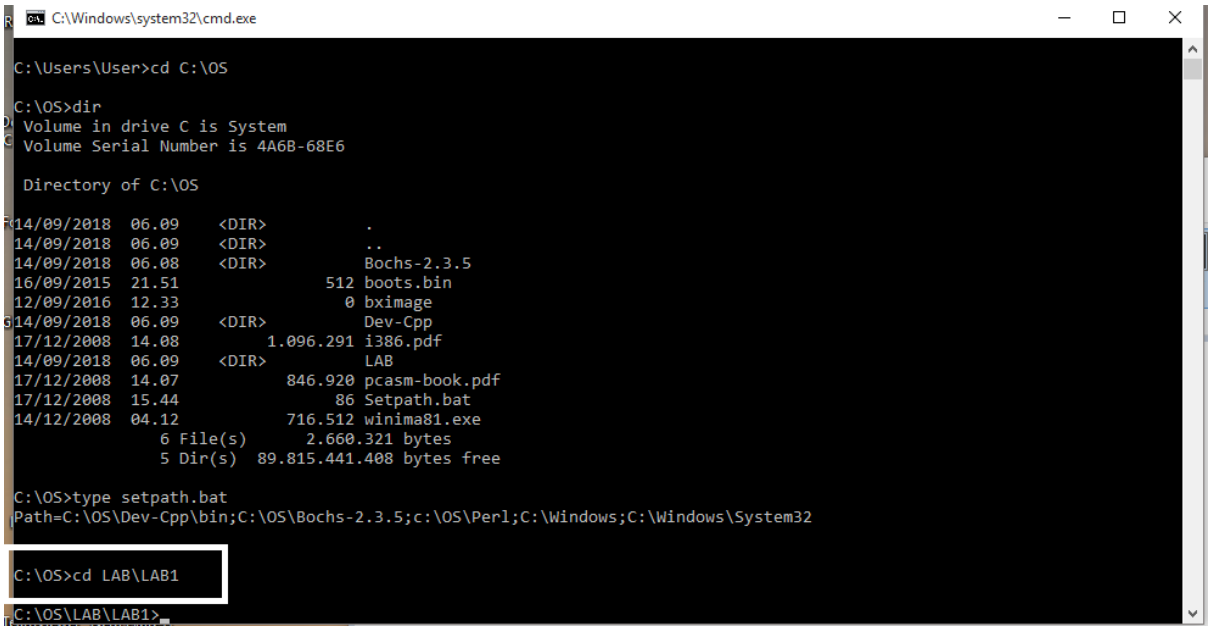
2. Melihat isi direktori



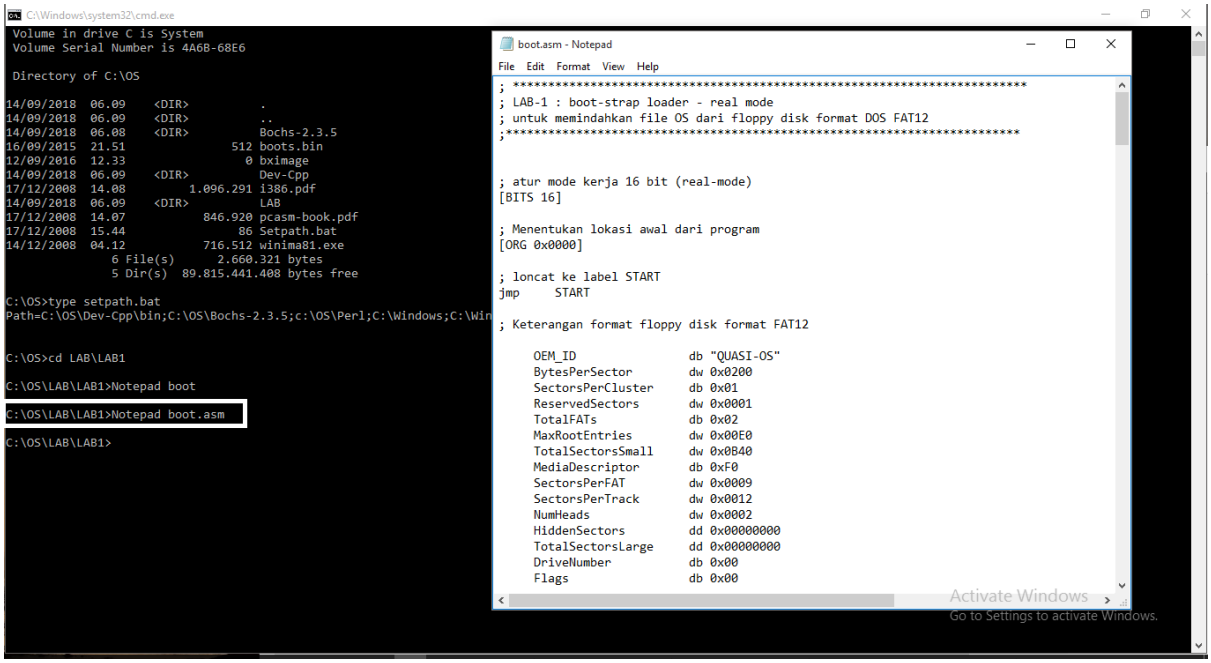
3. Mengatur setpath



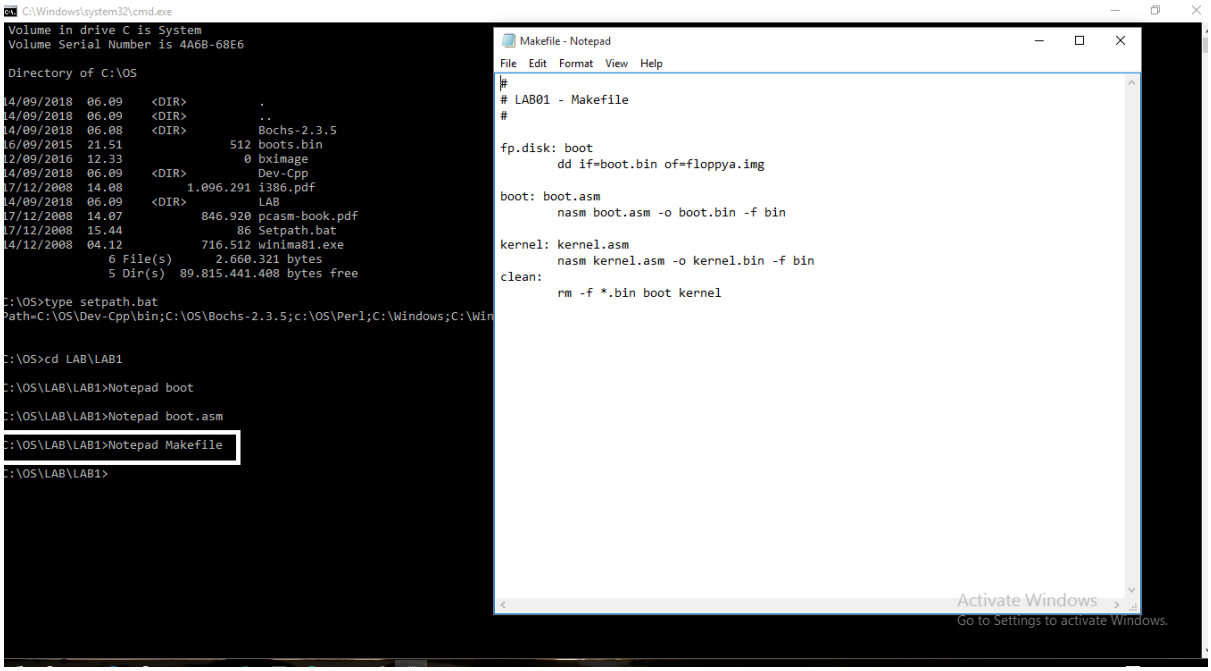
4. Masuk pada direktori Lab/Lab1

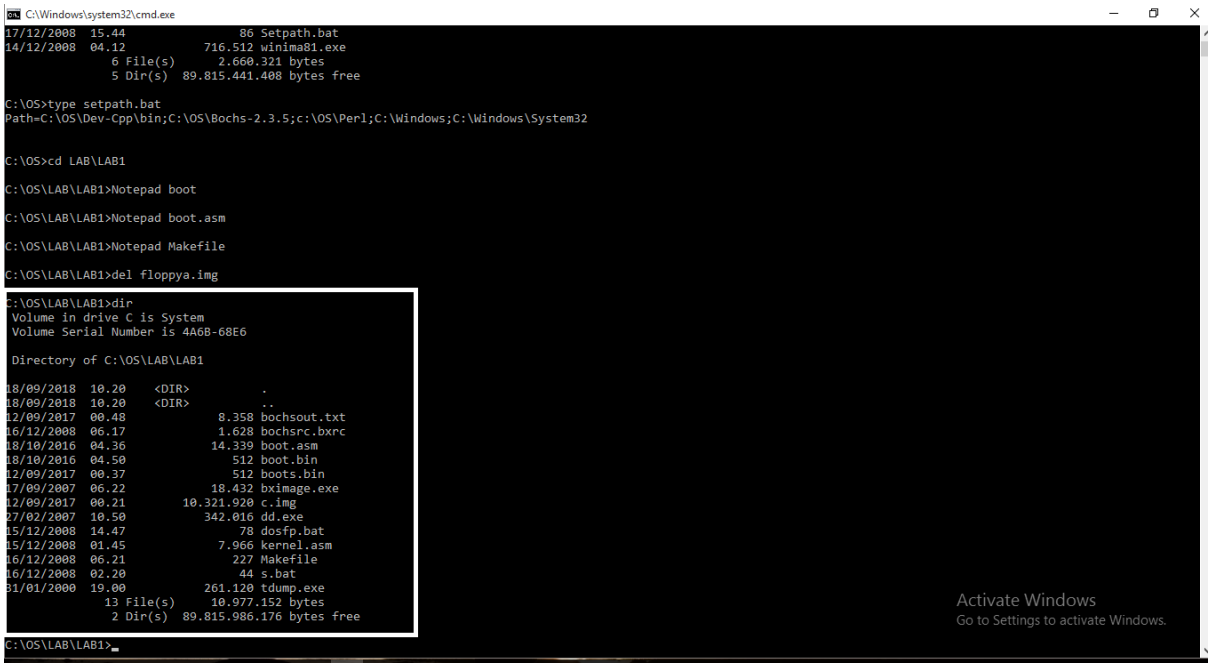


5. Melihat isi dari file boot.asm dengan menggunakan notepad

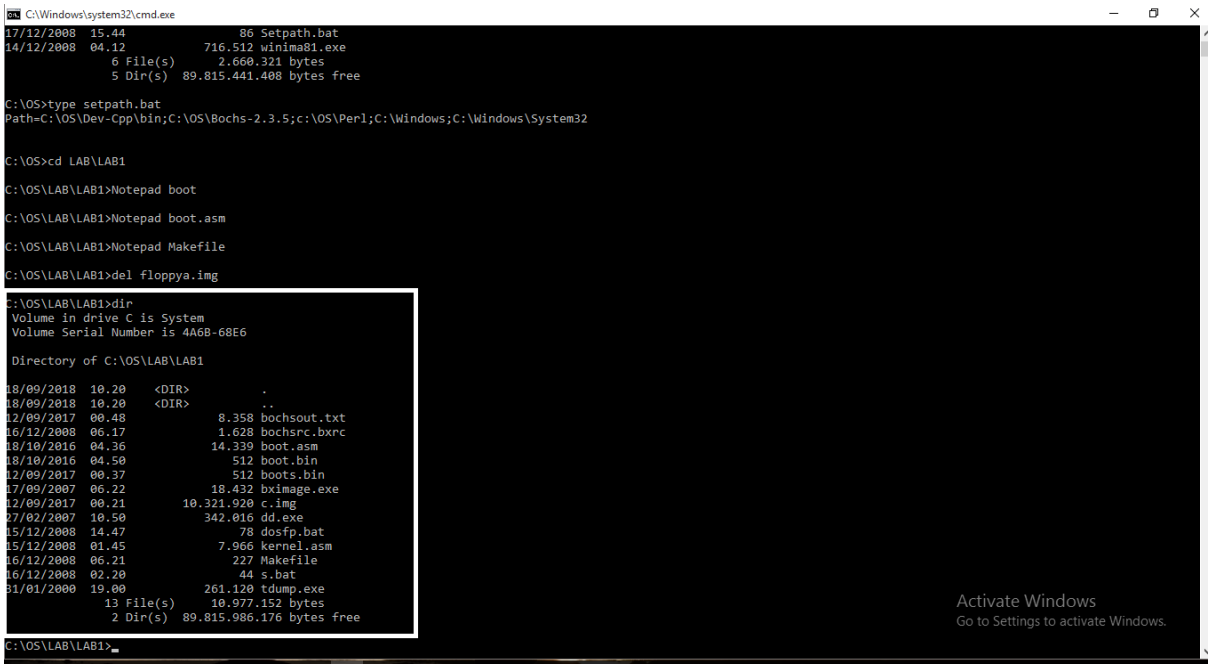


6. Membuka file teks makefile dengan menggunakan makefile, yang di mana berisi kumpulan perintah CMD.



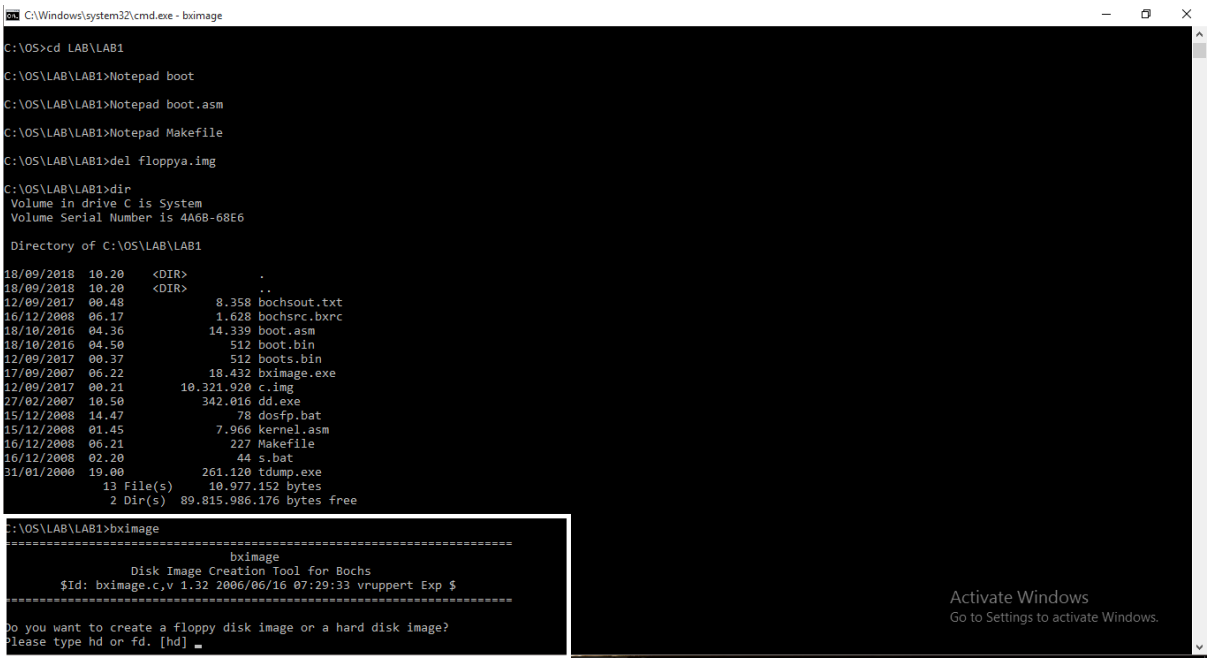


7. Menghapus suatu bootdisk yang bernama floppya.img dan cek pada direktori

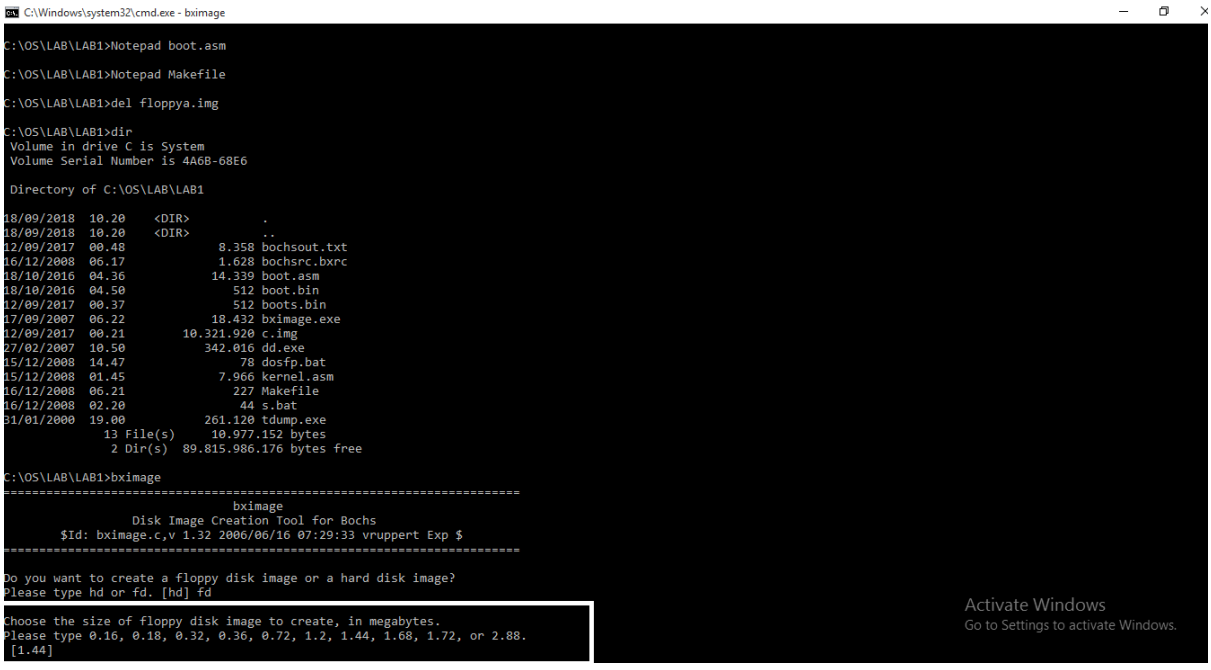


8. Membuat suatu bootdisk baru dengan menggunakan aplikasi bximage.exe

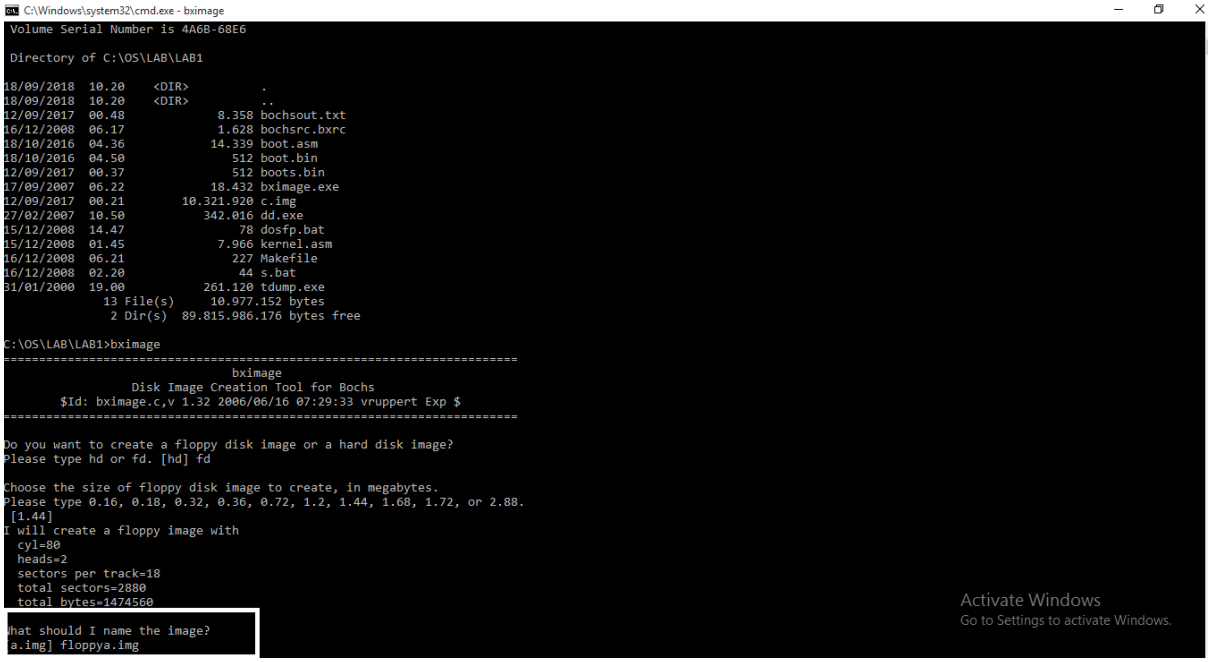
Yang pertama pilih fd

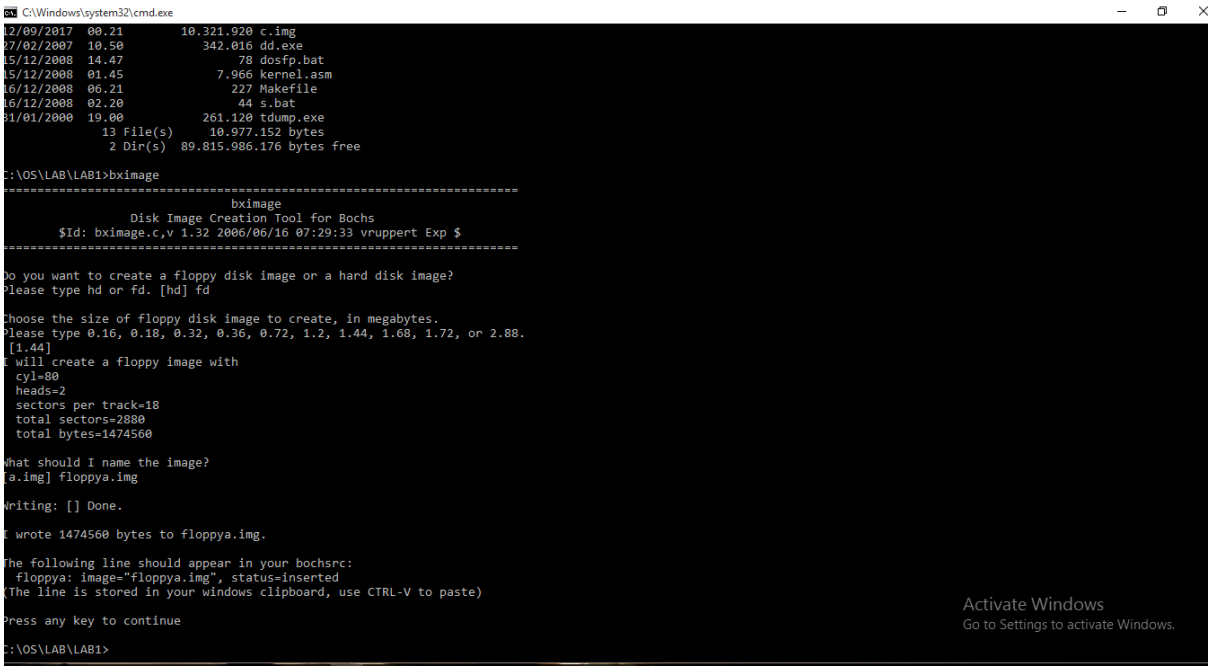


Kemudian untuk ukuran tekan enter untuk memilih default

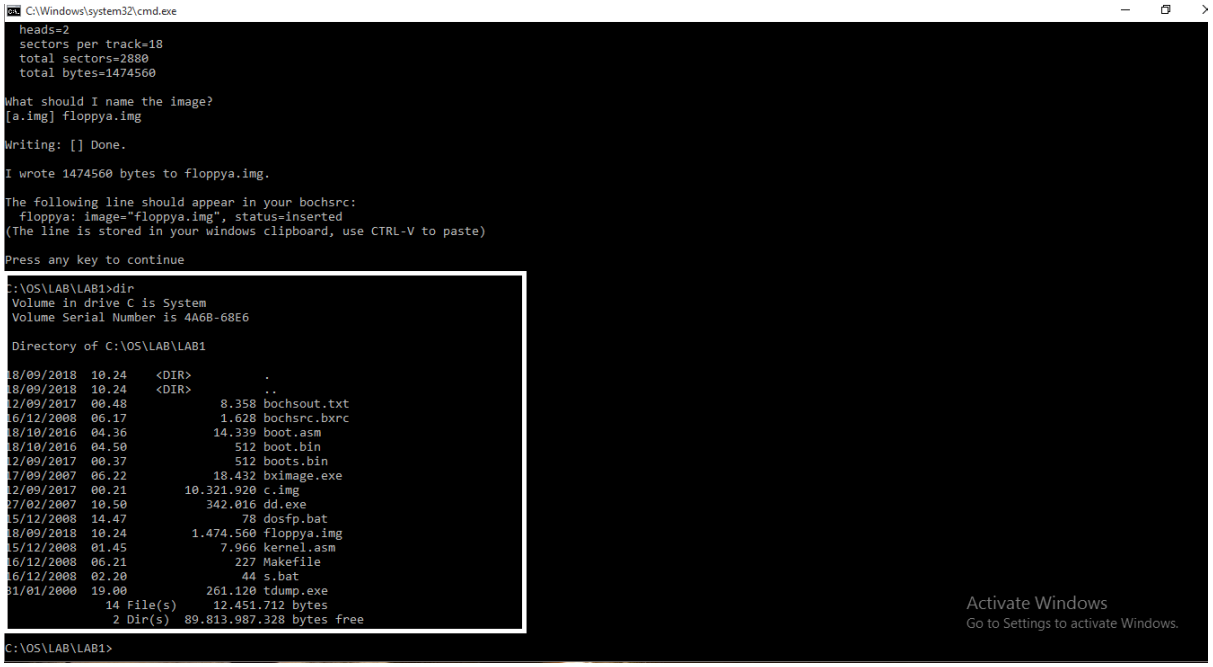


Lalu beri nama. Di mana di sini diberi nama floppya.img

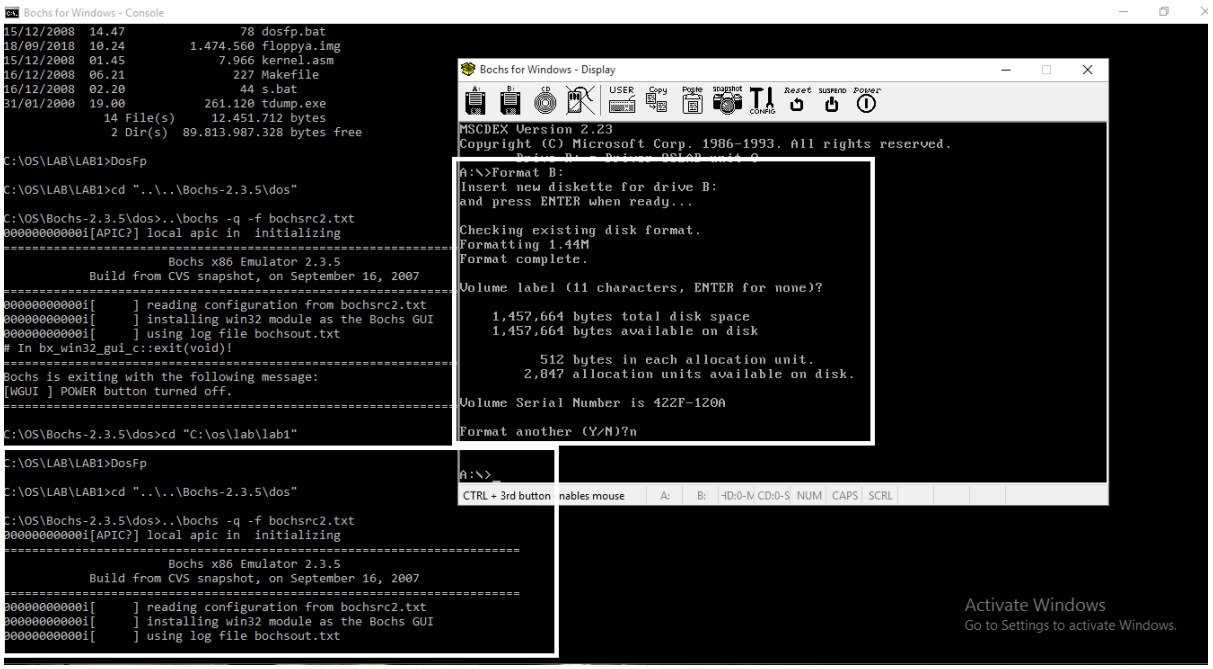




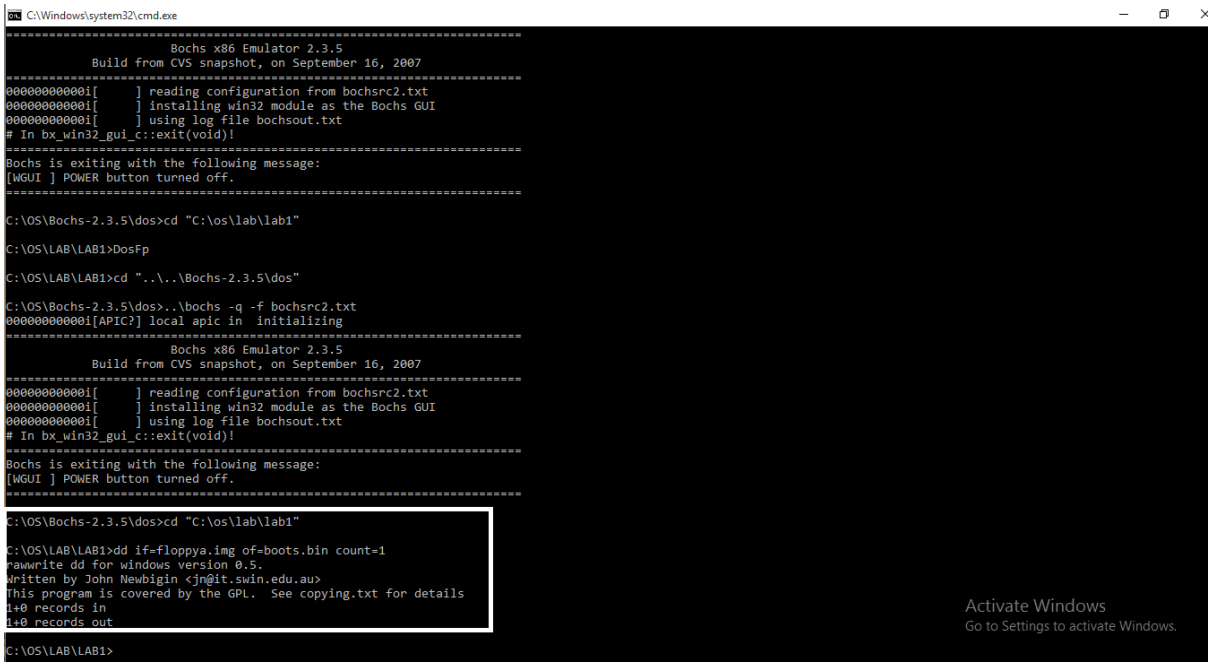
9. Cek isi direktori kembali apakah floppya.img telah dibuat.



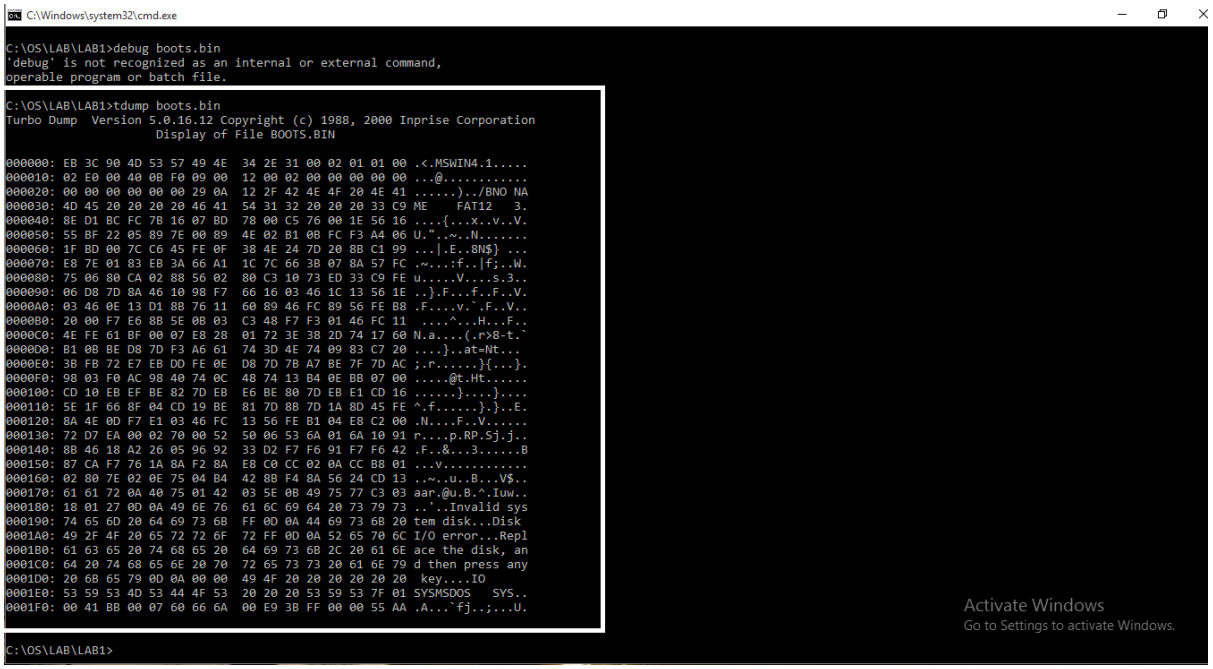
10. Kemudian format floppya.img agar menjadi bootdisk.



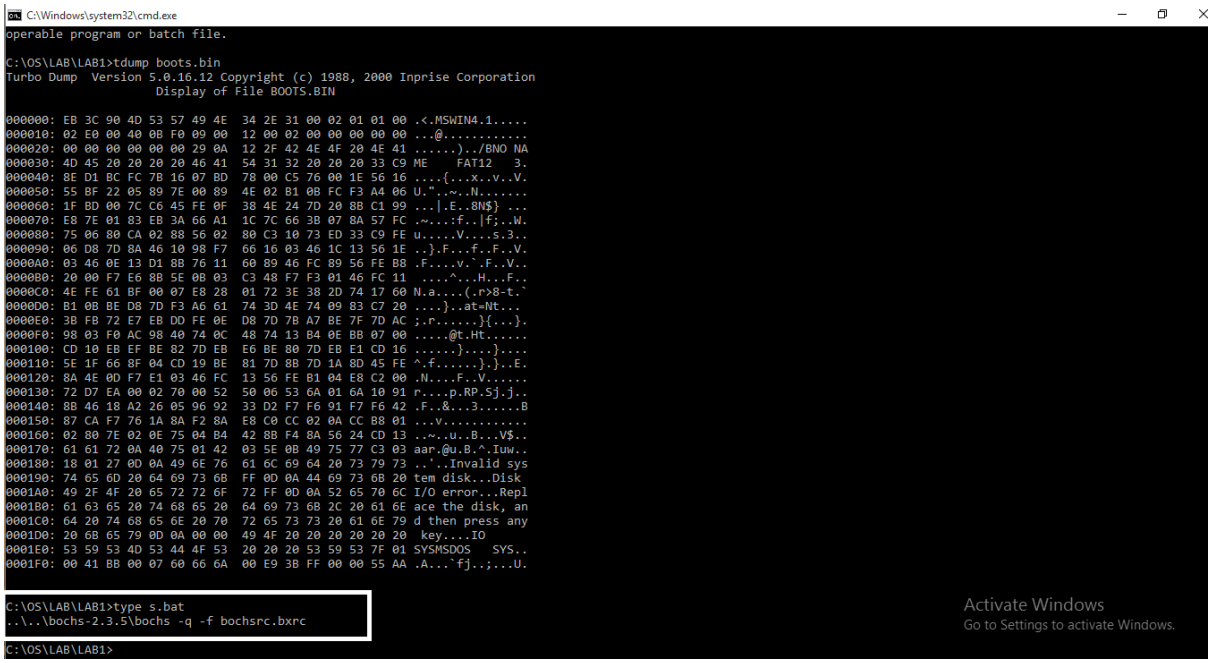
11. Kemudian salin byte dari floppya.img ke boots.bin yang digunakan untuk bootloader



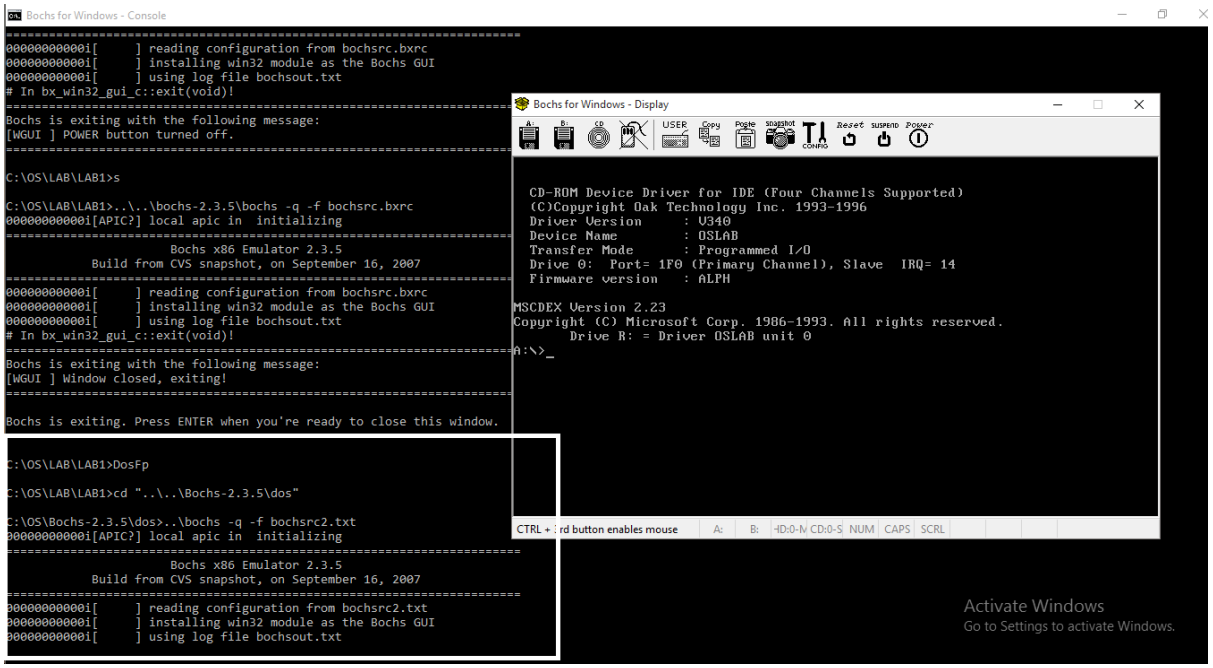
12. Melihat isi memori dari boots.bin



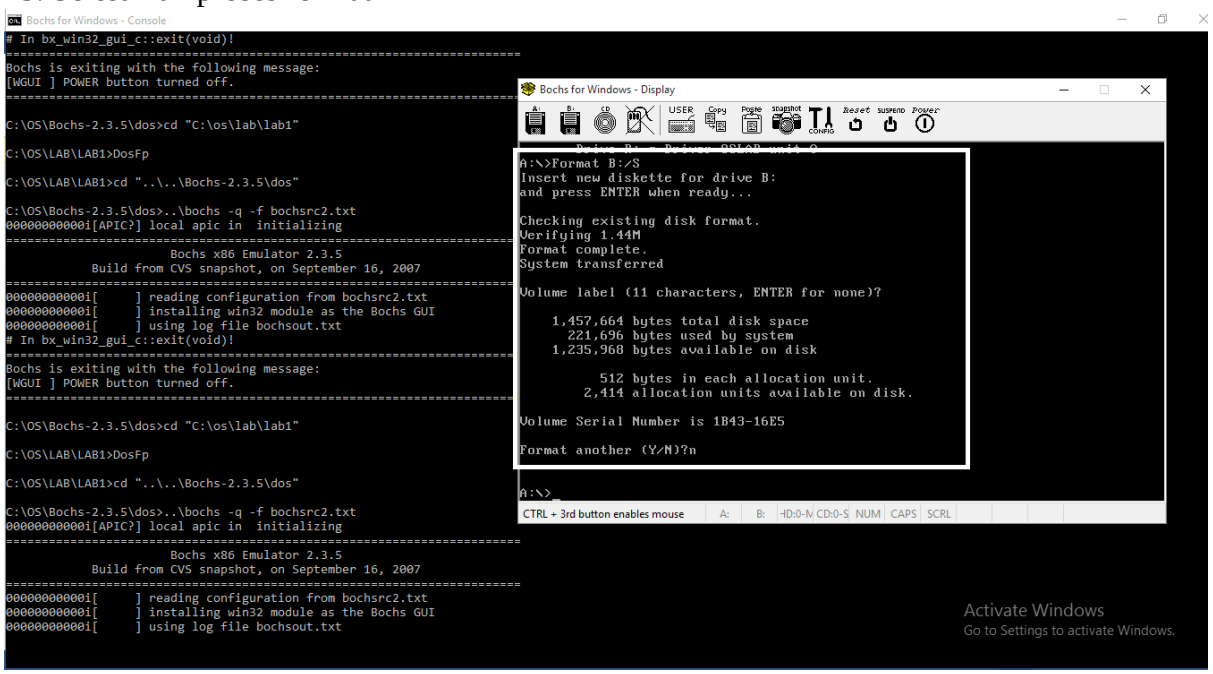
13. Memanggil Bosch.



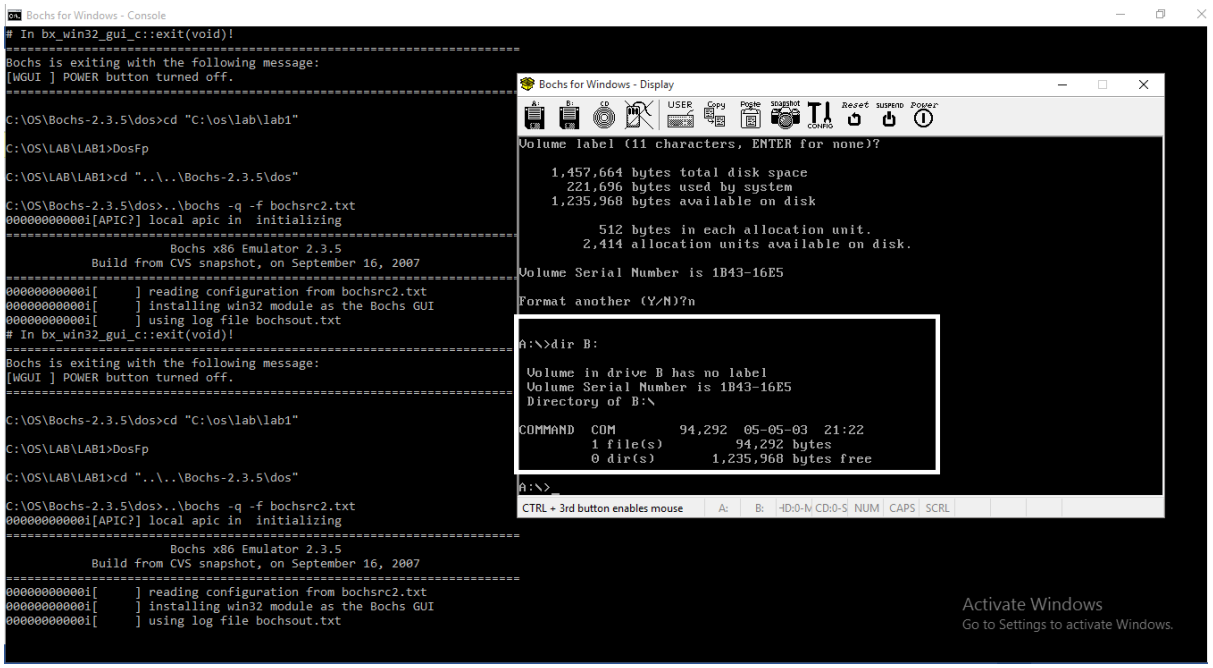
14. Format floppya.img, dan menambahkan sistem file ke dalamnya, dengan bantuan bosch.



15. Selesaikan proses format



16. Lihat isi direktori



Tugas

1. Kode ASCII adalah merupakan kode standar yang digunakan dalam pertukaran informasi pada Komputer. Kode ASCII ini seperti Hex dan Unicode tetapi ASCII lebih bersifat universal.

ASCII Table

Dec	Hex	Oct	Char	Dec	Hex	Oct	Char	Dec	Hex	Oct	Char	Dec	Hex	Oct	Char
0	0	0		32	20	40	[space]	64	40	100	@	96	60	140	`
1	1	1		33	21	41	!	65	41	101	A	97	61	141	a
2	2	2		34	22	42	"	66	42	102	B	98	62	142	b
3	3	3		35	23	43	#	67	43	103	C	99	63	143	c
4	4	4		36	24	44	$	68	44	104	D	100	64	144	d
5	5	5		37	25	45	%	69	45	105	E	101	65	145	e
6	6	6		38	26	46	&	70	46	106	F	102	66	146	f
7	7	7		39	27	47	'	71	47	107	G	103	67	147	g
8	8	10		40	28	50	(	72	48	110	H	104	68	150	h
9	9	11		41	29	51	)	73	49	111	I	105	69	151	i
10	A	12		42	2A	52	*	74	4A	112	J	106	6A	152	j
11	B	13		43	2B	53	+	75	4B	113	K	107	6B	153	k
12	C	14		44	2C	54	,	76	4C	114	L	108	6C	154	l
13	D	15		45	2D	55	-	77	4D	115	M	109	6D	155	m
14	E	16		46	2E	56	.	78	4E	116	N	110	6E	156	n
15	F	17		47	2F	57	/	79	4F	117	O	111	6F	157	o
16	10	20		48	30	60	0	80	50	120	P	112	70	160	p
17	11	21		49	31	61	1	81	51	121	Q	113	71	161	q
18	12	22		50	32	62	2	82	52	122	R	114	72	162	r
19	13	23		51	33	63	3	83	53	123	S	115	73	163	s
20	14	24		52	34	64	4	84	54	124	T	116	74	164	t
21	15	25		53	35	65	5	85	55	125	U	117	75	165	u
22	16	26		54	36	66	6	86	56	126	V	118	76	166	v
23	17	27		55	37	67	7	87	57	127	W	119	77	167	w
24	18	30		56	38	70	8	88	58	130	X	120	78	170	x
25	19	31		57	39	71	9	89	59	131	Y	121	79	171	y
26	1A	32		58	3A	72	:	90	5A	132	Z	122	7A	172	z
27	1B	33		59	3B	73	;	91	5B	133	[	123	7B	173	{
28	1C	34		60	3C	74	<	92	5C	134	\	124	7C	174	|
29	1D	35		61	3D	75	=	93	5D	135	]	125	7D	175	}
30	1E	36		62	3E	76	>	94	5E	136	^	126	7E	176	~
31	1F	37		63	3F	77	?	95	5F	137	_	127	7F	177	

2. Perintah Bahasa assembly untuk keluarga intel x86
   - Komentar: Komentar diawali dengan tanda titik koma (;). ; ini adalah komentar
   - Label : Label diakhiri dengan tanda titik dua (:). Contoh: main: ,loop: ,proses: ,keluar:
   - Definisi data: **DB** : define bytes. **DW** : define words. **DD** : define double words. **EQU** : equals. Membentuk konstanta.
   - Perpindahan data **MOV** : move. **LEA** : load effective address. Mengisi suatu register dengan alamat offset sebuah data. **CHG** : exchange. Menukar dua buah register langsung.
   - Operasi logika: **AND** : melakukan bitwise and. sintaks: **OR** : melakukan bitwise or. **NOT** : melakukan bitwise not (*one's complement*). **XOR** : melakukan bitwise eksklusif or. **SHL** : shift left. Menggeser bit ke kiri. Bit paling kanan diisi nol. **HR** : shift right. Menggeser bit ke kanan. Bit paling kiri diisi nol. **ROL** : rotate left. Memutar bit ke kiri. Bit paling kiri jadi paling kanan kali ini. **ROR** : rotate right. Memutar bit ke kanan. Bit paling kanan jadi paling kiri.
   - Operasi matematika: **ADD** : add. Menjumlahkan dua buah register. **ADC** : add with carry. Menjumlahkan dua register dan carry flag (CF). **INC** : increment. Menjumlah isi sebuah register dengan 1. **BB** : substract with borrow. Mengurangkan dua register dan carry flag (CF). **DEC** : decrement. Mengurang isi sebuah register dengan 1. **MUL** : multiply. Mengalikan register dengan AX atau AH. **UL** : signed multiply. **DIV** : divide. Membagi AX atau DX:AX dengan sebuah register. **IDIV** : signed divide. Sama dengan DIV, hanya saja IDIV menganggap bit-bit yang ada di register sumber sudah dalam bentuk *two's complement*. **NEG** : negate. Membuat isi register menjadi negatif (*two's complement*).
   - Pengulangan: **LOOP** : loop. Mengulang sebuah proses. Pertama register CX dikurangi satu. Bila CX sama dengan nol, maka looping berhenti. Bila tidak nol, maka

lompat ke label tujuan. **LOOPE** : loop while equal. Melakukan pengulangan selama CX ≠ 0 dan ZF = 1. CX tetap dikurangi 1 sebelum diperiksa. sintaks: **LOOPZ** : loop while zero. Identik dengan LOOPE. **LOOPNE** : loop while not equal. Melakukan pengulangan selama CX ≠ 0 dan ZF = 0. CX tetap dikurangi 1 sebelum diperiksa. **LOOPNZ** : loop while not zero. Identik dengan LOOPNE. **REP** : repeat. Mengulang perintah sebanyak CX kali.

MODUL 2

1. ketik perintah ‘cd os’ untuk masuk ke OS nya.

```
Microsoft Windows [Version 10.0.15063]
(c) 2017 Microsoft Corporation. All rights reserved.

C:\Users\LENOVO A9>cd c:/

c:\>cd os
```

2. jalankan ‘setpath’, setelah itu pindah ke LAB 2 dengan mengetikan ‘cd lab/lab2’.

```
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
```

3. lalu ketikan ‘dir’ untuk melihat isi direktori kerja, dan akan tampak seperti gambar berikut.

```
c:\OS\LAB\LAB2>dir
 Volume in drive C is rio
 Volume Serial Number is C8BC-A4E1

 Directory of c:\OS\LAB\LAB2

20/09/2018  19:01    <DIR>          .
20/09/2018  19:01    <DIR>          ..
20/09/2018  19:01         1.474.560 a.img
19/09/2018  12:00            10.130 bochs.log
16/12/2008  00:18             1.625 bochsrc.bxrc
19/09/2018  12:08            15.922 boot.asm
16/09/2007  23:22            18.432 bximage.exe
27/02/2007  04:50           342.016 dd.exe
15/12/2008  21:52                78 dosfp.bat
19/09/2018  11:45         1.474.560 floppya.img
19/09/2018  12:09             7.966 kernel.asm
16/12/2008  00:21               228 Makefile
15/12/2008  20:20                44 s.bat
              11 File(s)      3.345.561 bytes
               2 Dir(s)  133.107.732.480 bytes free
```

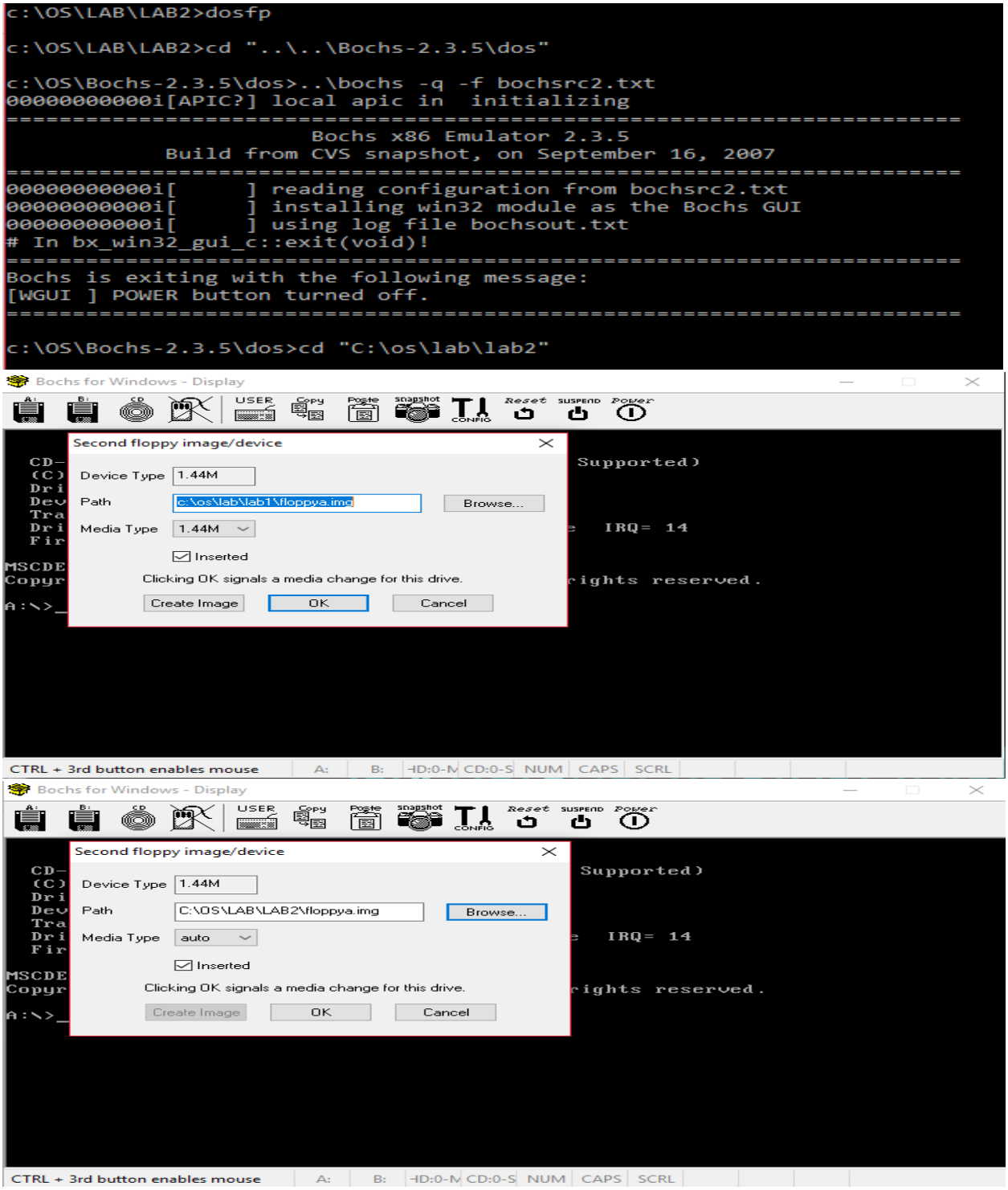
4. selanjutnya jalankan ‘bximage’, dan diteruskan dengan menjawab pertanyaan-pertanyaan yang akan muncul setelah menjalankan bximage.

```
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]
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

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

Writing: [] Done.

I wrote 1474560 bytes to floppya.img.
```

5. pastikan hasil file ‘floppya.img’ dengan memasukan perintah ‘dir’, hasilnya seperti gambar dibawah.

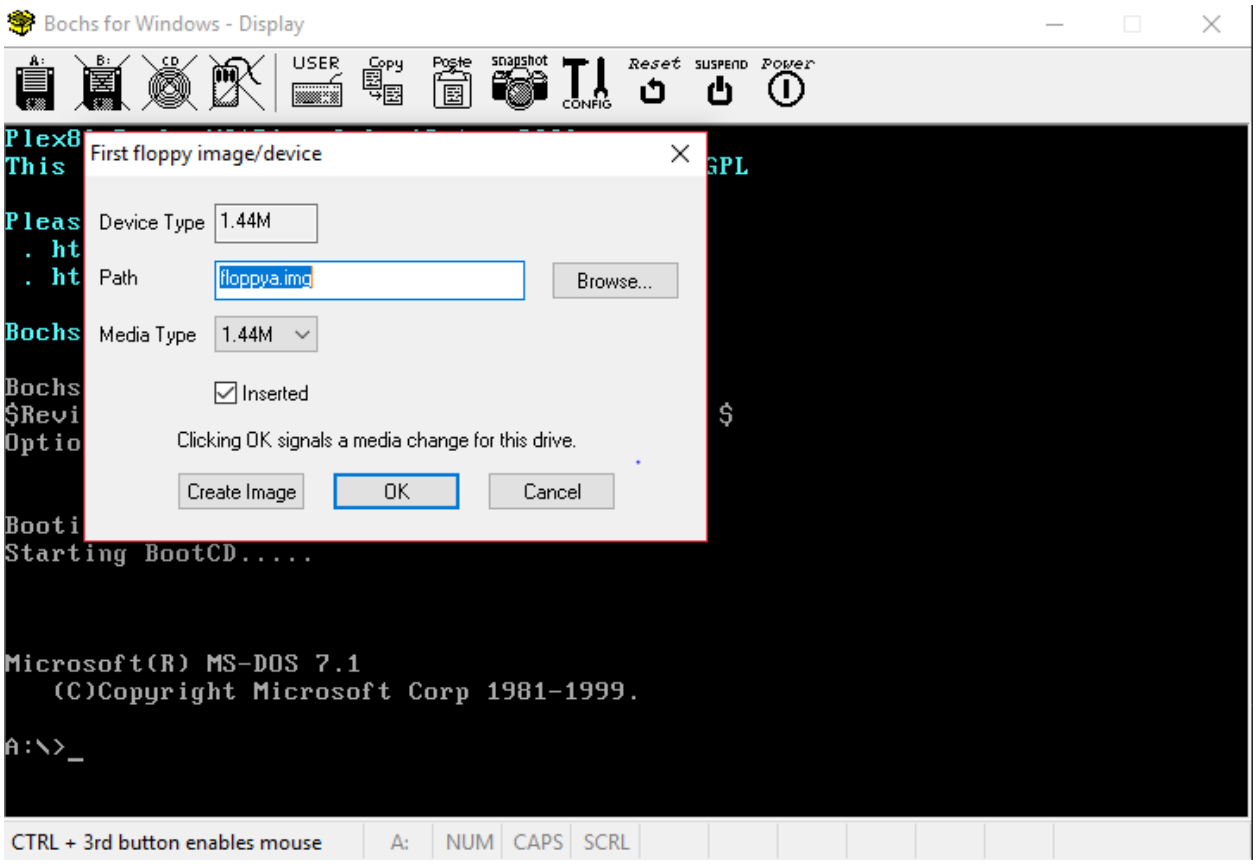
```
c:\OS\LAB\LAB2>dir
 Volume in drive C is rio
 Volume Serial Number is C8BC-A4E1

 Directory of c:\OS\LAB\LAB2

20/09/2018  19:01    <DIR>          .
20/09/2018  19:01    <DIR>          ..
20/09/2018  19:01         1.474.560 a.img
19/09/2018  12:00            10.130 bochs.log
16/12/2008  00:18             1.625 bochsrc.bxrc
19/09/2018  12:08            15.922 boot.asm
16/09/2007  23:22            18.432 bximage.exe
27/02/2007  04:50           342.016 dd.exe
15/12/2008  21:52                78 dosfp.bat
20/09/2018  19:02         1.474.560 floppya.img
19/09/2018  12:09             7.966 kernel.asm
16/12/2008  00:21               228 Makefile
15/12/2008  20:20                44 s.bat
              11 File(s)      3.345.561 bytes
               2 Dir(s)  133.107.744.768 bytes free
```

6. jalankan perintah ‘dosfp’, lalu pindah ke windows ‘Bochs’ untuk mengatur lokasi file image, tampak seperti gambar dibawah. Dari prompt A:> ketikan perintah ‘format b: /s’ dan selesaikan prosesnya lalu tutup ‘Bochs’ dengan menu power.



7. jalankan perintah ‘s’ dan akan menuju ke PC simulator dan pastikan posisi ‘floppya.img’.

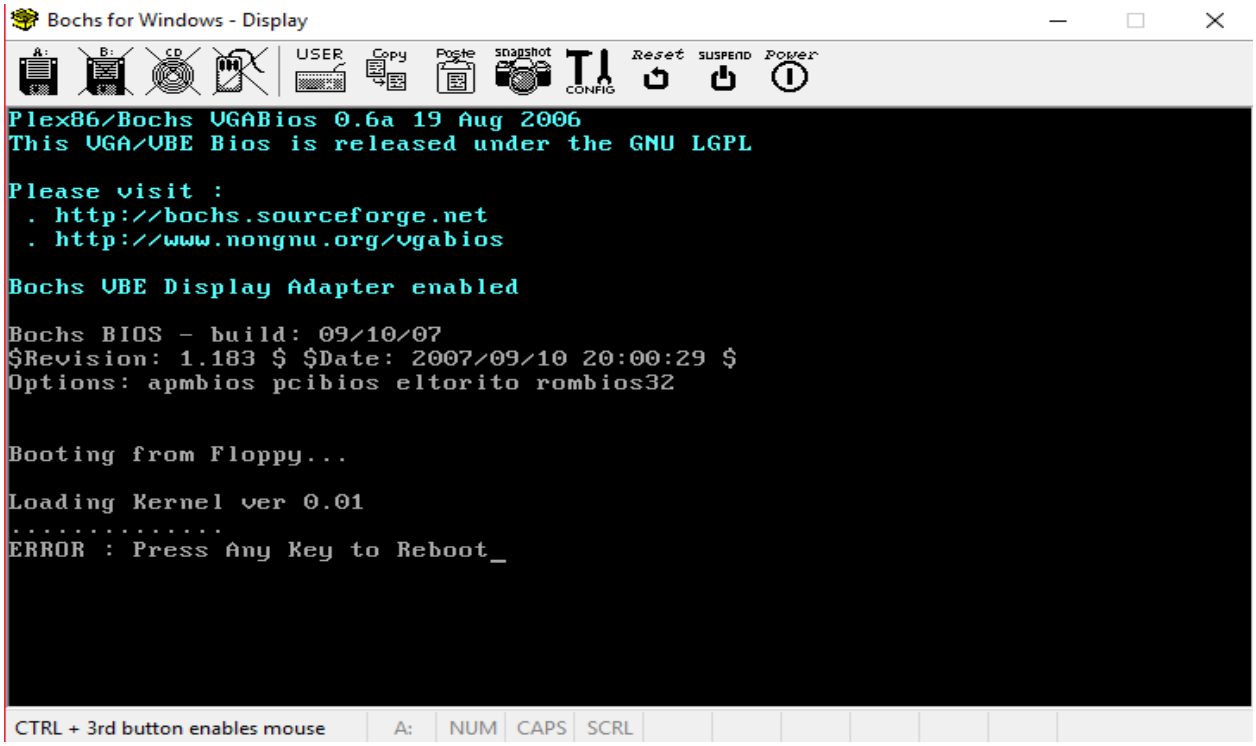
```
C:\OS\LAB\LAB2>s

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:
[WGUI ] POWER button turned off.
========================================================================

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



8. ketikan perintah ‘cls’ untuk membersihkan layar, dan selanjutnya jalankan perintah ‘make fp.disk’ dan Jika berhasil akan muncul seperti gambar dibawah.

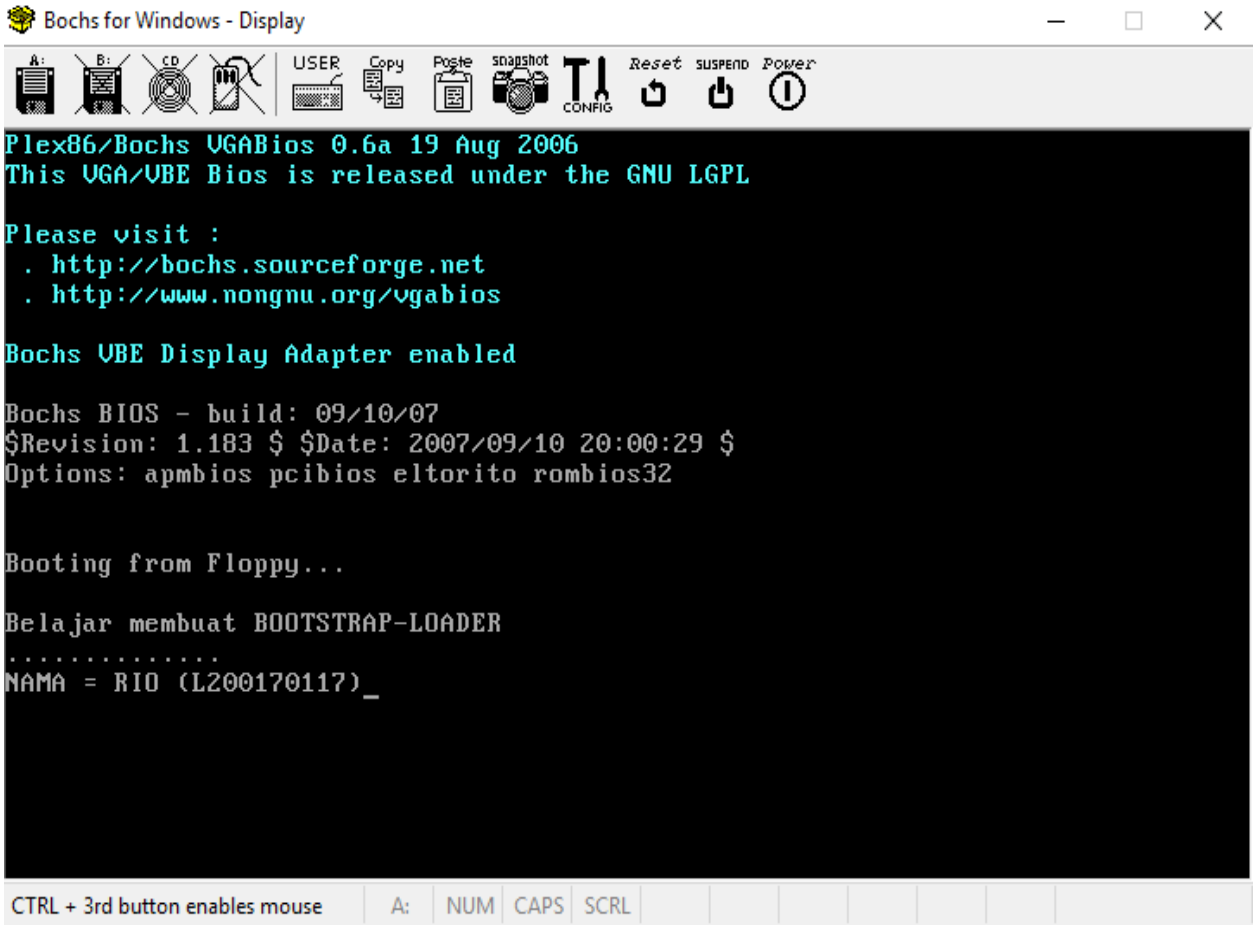
```
C:\OS\LAB\LAB2>make fp.disk
nasm boot.asm -o boot.bin -f bin
dd if=boot.bin of=floppya.img
rawwrite dd for windows version 0.5.
Written by John Newbigin <jn@it.swin.edu.au>
This program is covered by the GPL.  See copying.txt for details
1+0 records in
1+0 records out

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:
[WGUI ] POWER button turned off.
========================================================================
```

9. ketikan perintah ‘s’ untuk menjalankan PC simulator dan akan muncul seperti gambar dibawah.



10. ketikan ‘notepad boot.asm’ dan menyunting file boot.asm, cari teks ‘loading kernel’ pada notepad lalu sunting teks tersebut. Selanjutnya save dan lanjutkan ke cmd dengan menjalankan perintah ‘make fp.disk’, setelah itu ketikan ‘s’ dan teks pada boot.asm akan berubah seperti gambar dibawah ini.

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



11. ketikan ‘make kernel untuk membuat kernel’.

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

12. selanjutnya ketikan ‘dir’ untuk melihat bahwa kernel telah ditambahkan.

```
C:\OS\LAB\LAB2>dir
 Volume in drive C is rio
 Volume Serial Number is C8BC-A4E1

 Directory of C:\OS\LAB\LAB2

20/09/2018  19:58    <DIR>          .
20/09/2018  19:58    <DIR>          ..
20/09/2018  19:01         1.474.560 a.img
20/09/2018  19:57            10.130 bochs.log
16/12/2008  00:18             1.625 bochsrc.bxrc
20/09/2018  19:55            15.923 boot.asm
20/09/2018  19:55               512 boot.bin
16/09/2007  23:22            18.432 bximage.exe
27/02/2007  04:50           342.016 dd.exe
15/12/2008  21:52                78 dosfp.bat
20/09/2018  19:55         1.474.560 floppya.img
19/09/2018  12:09             7.966 kernel.asm
20/09/2018  19:58               611 kernel.bin
16/12/2008  00:21               228 Makefile
15/12/2008  20:20                44 s.bat
              13 File(s)      3.346.685 bytes
               2 Dir(s)  133.103.751.168 bytes free
```

13.jalankan perintah ‘s’ dan akan muncul booting from floppy

```
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:
[WGUI ] POWER button turned off.
========================================================================
```

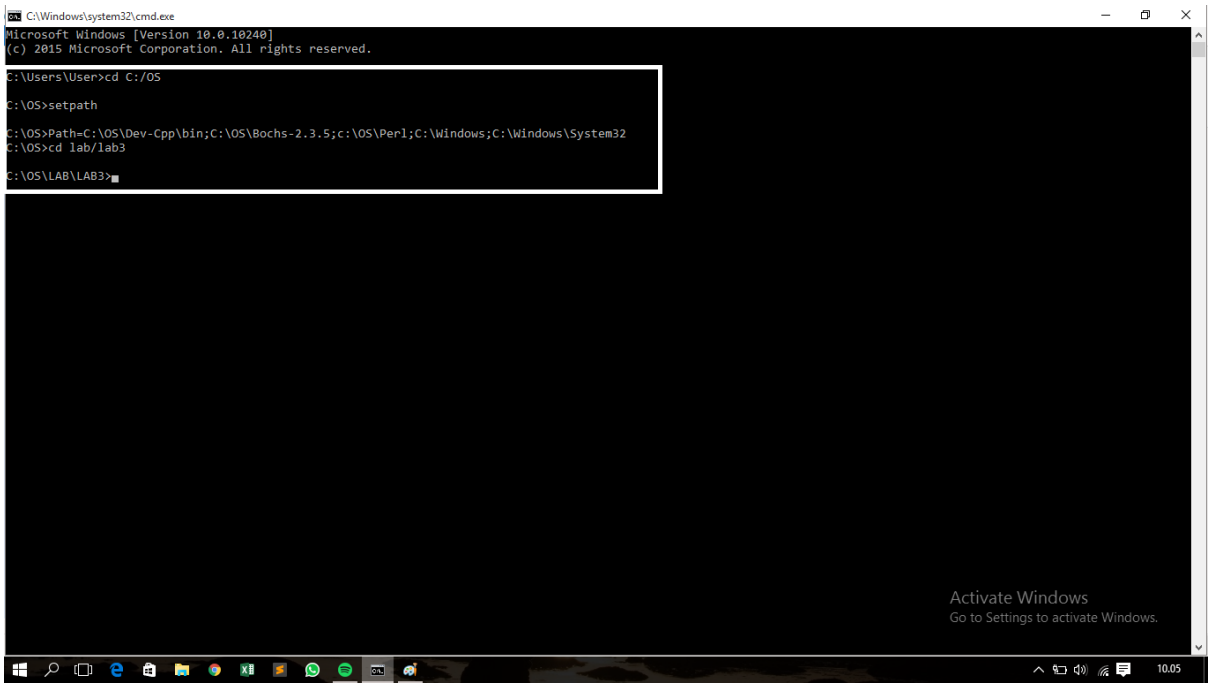
14.jalankan perintah ‘notepad kernel.asm’ lalu cari teks ‘welcome to my kernel’ pada notepad dan edit teks tersebut menjadi ‘belajar membuat kernel’ dan save.

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

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

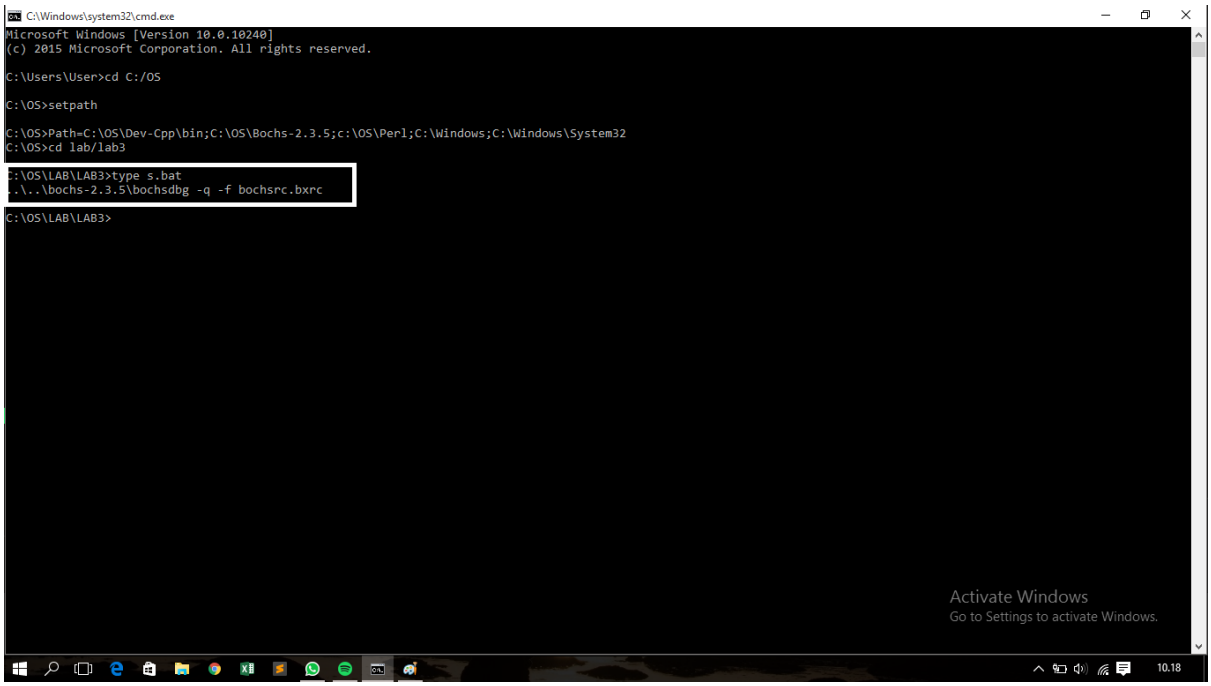
```
C:\OS\LAB\LAB2>s

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:
[WGUI ] POWER button turned off.
========================================================================
```

MODUL 3

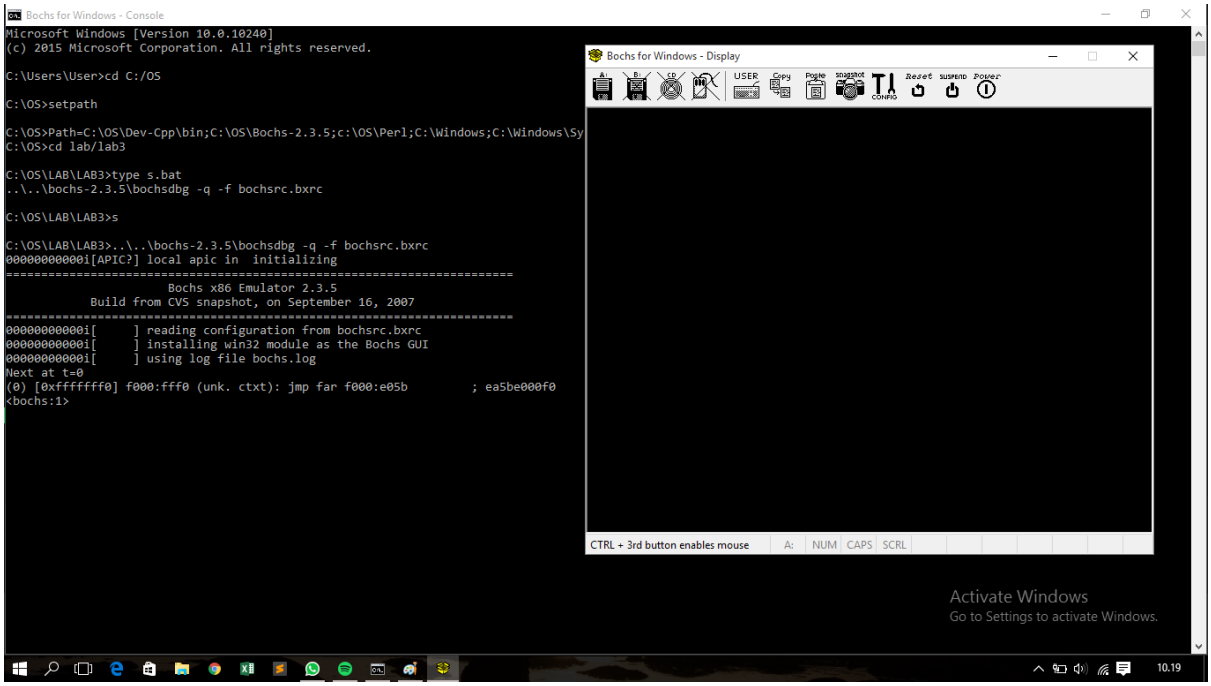
1. Masuk ke direktori C:/OS, lakukan setpath dan masuk ke direktori lab/lab3



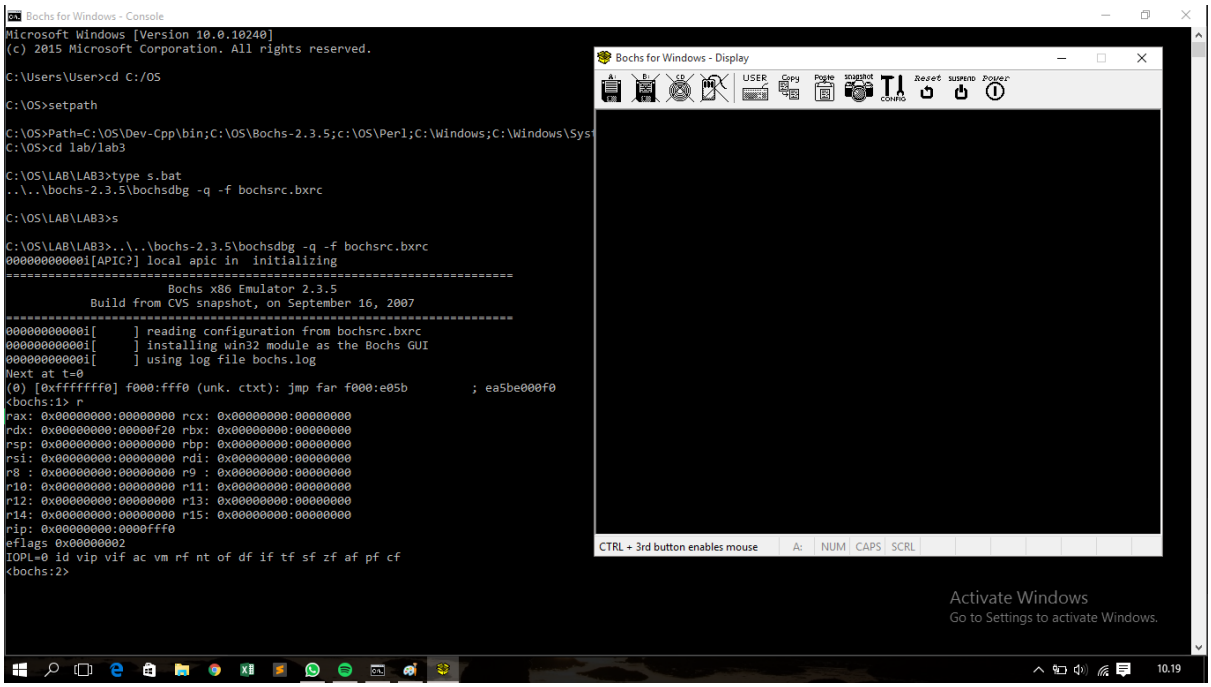
2. ketikkan type s.bat



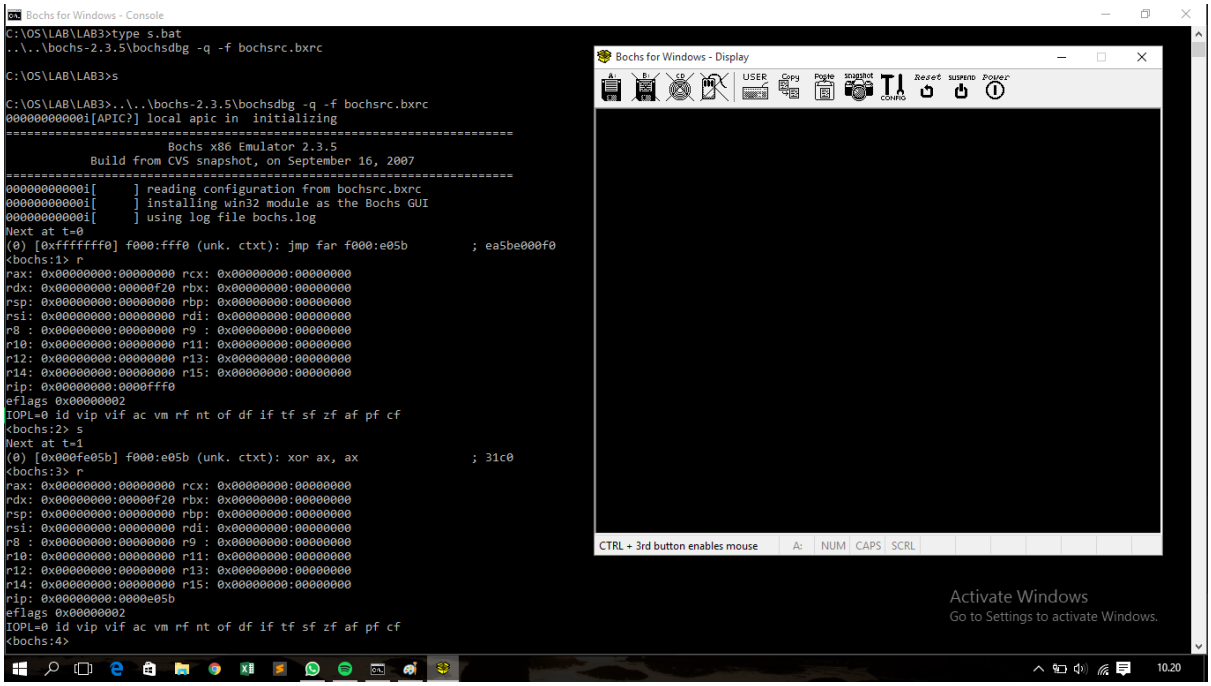
4. Lakukan debugging dengan cara ketik ‘S’



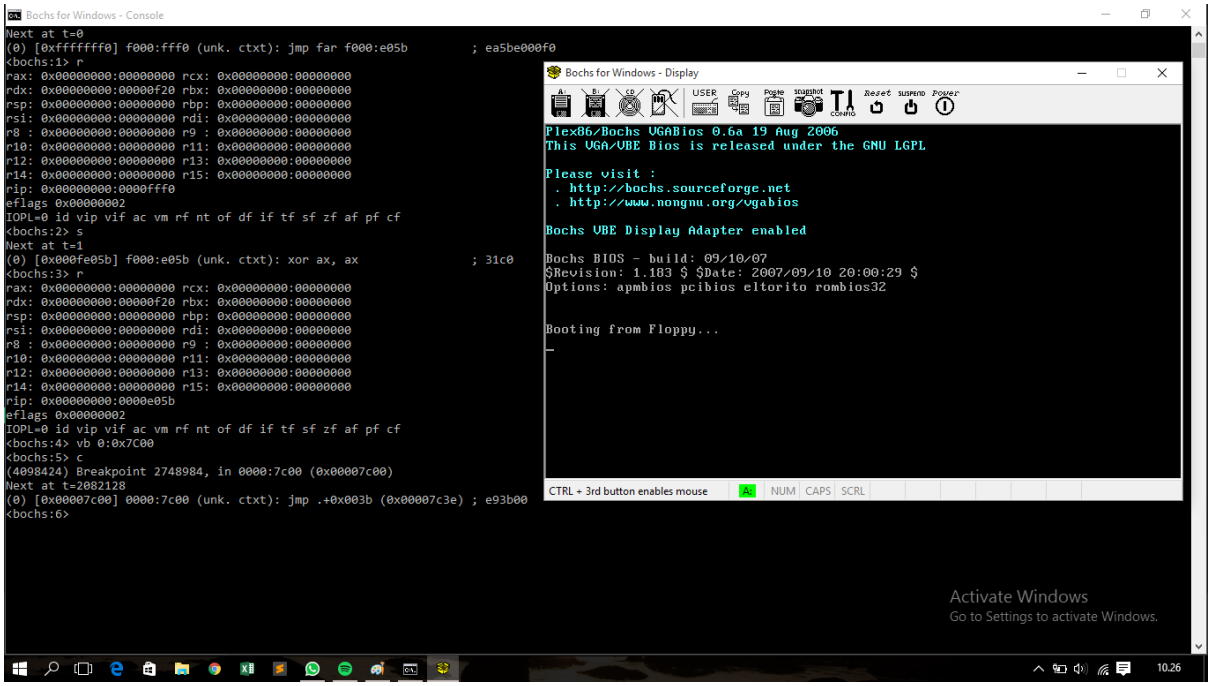
5. Ketikkan ‘r’ untuk melihat isi register CS dan IP.



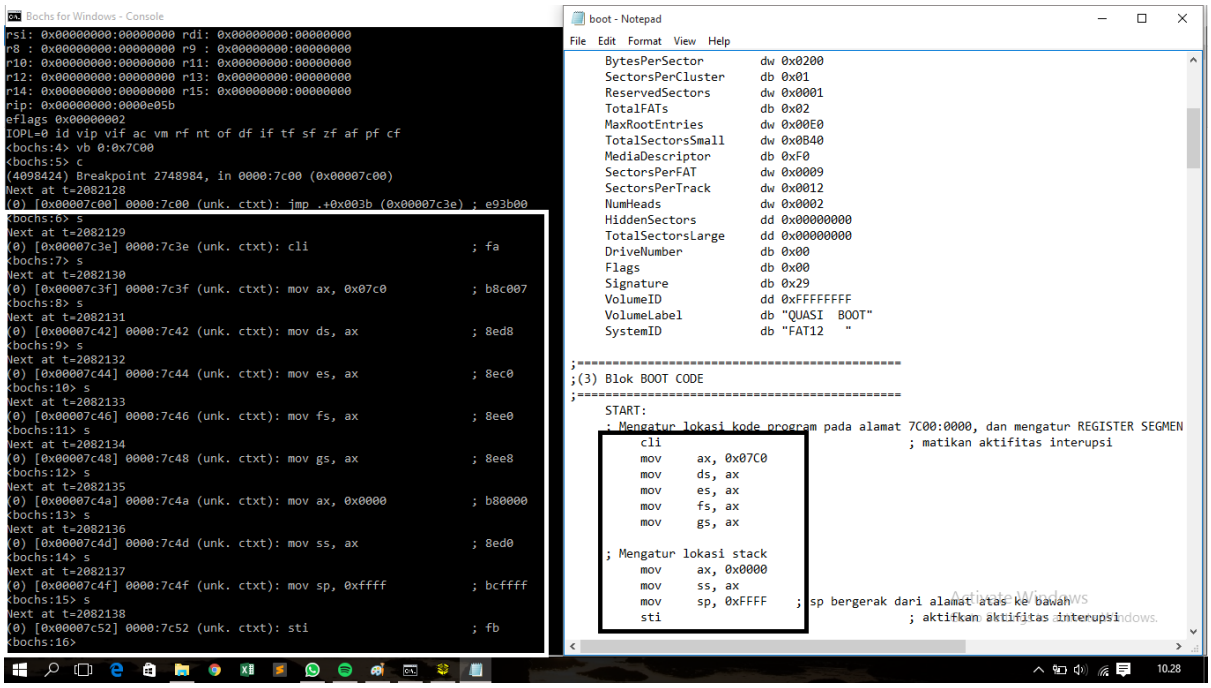
6. Ketikkan ‘s’



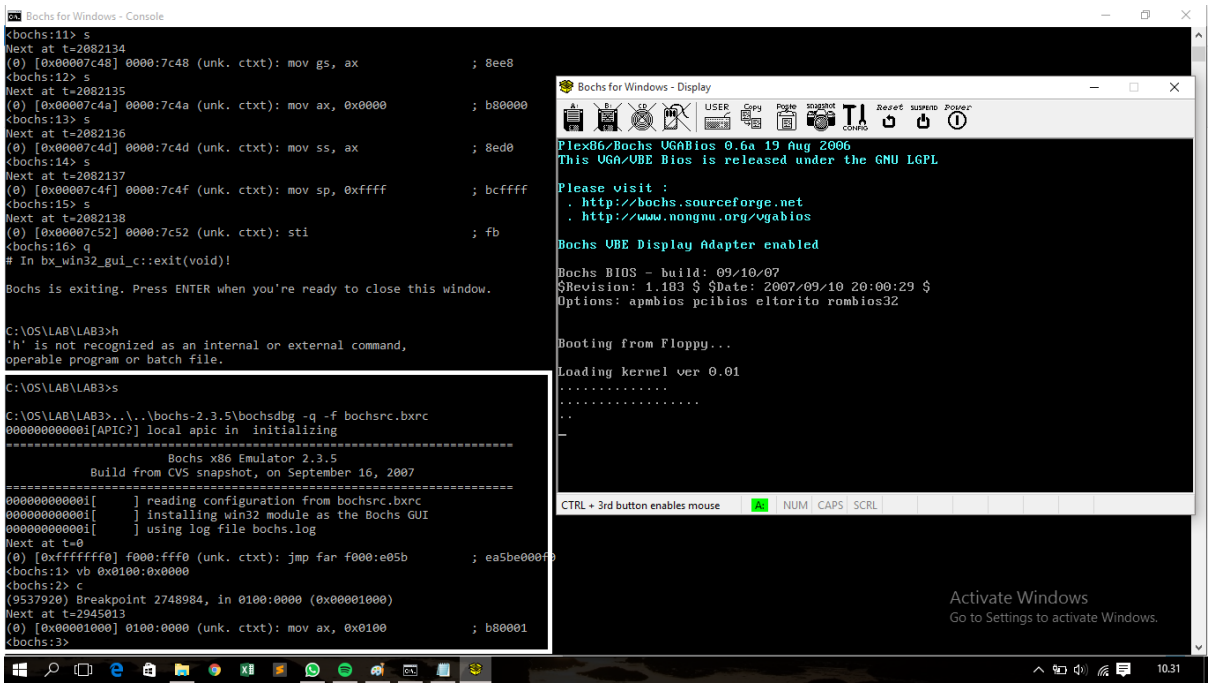
7. Kemudian masukkan perintah ‘vb 0:0x7C00’ untuk membuat pemberhentian di alamat tersebut.



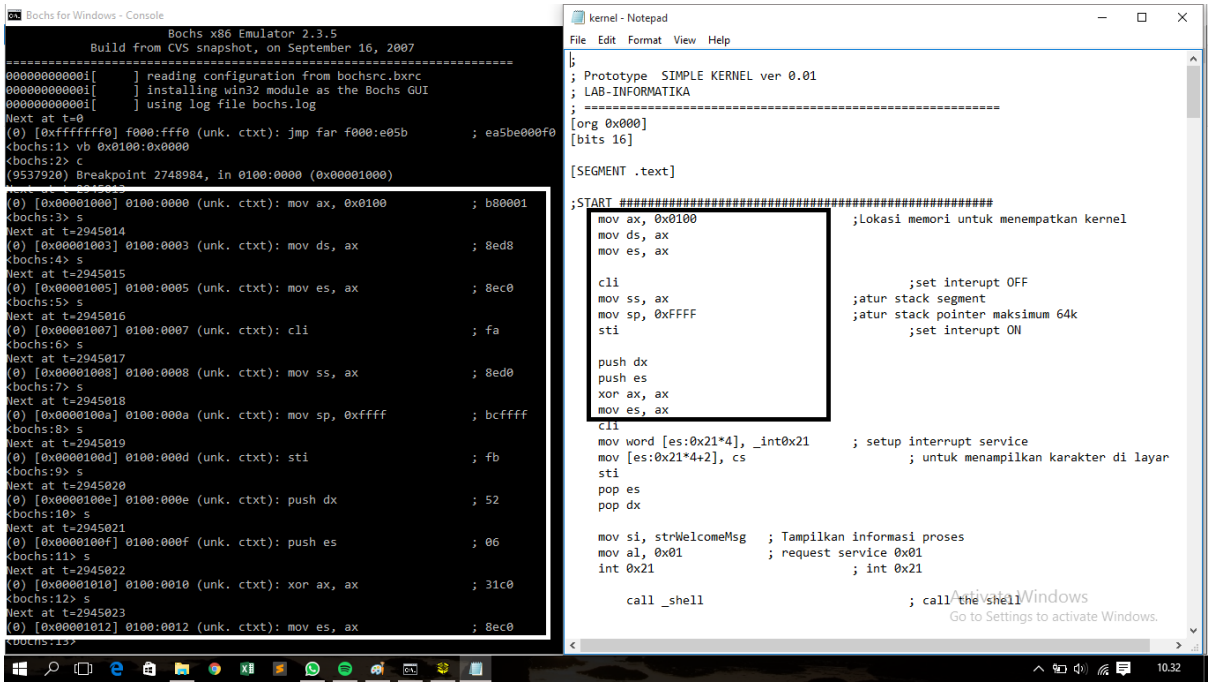
8. Ketikkan ‘c’ untuk continue / melanjutkan. Lalu ketikkan ‘s’ berulang sebayak 10 kali, dan lalukan pengecekan dengan file boot.asm



9. Ketikkan ‘q’ untuk menghentikan debugging. Kemudian lakukan debugging lagi dengan cara ketikkan ‘s’, kemudian ketikkan ‘vb 0x0100:0x0000’ untuk menghentikan langkah saat PC mulai mengeksekusi instruksi dari program ‘kernel.bin’, lalu ketikkan ‘c’



10. Kemudian ketikkan ‘s’ minimal 10x. Lalu bandingkan hasilnya dengan isi file kernel.asm.



TUGAS!

1. Tabel pemetaan memori pada PC

No.	Blok Memori	Alokasi Pemakaian
1	F 0 0 0 0	ROM BIOS, Diagnostic, BASIC
2	E 0 0 0 0	ROM program
3	D 0 0 0 0	ROM program
4	C 0 0 0 0	Perluasan BIOS untukhardisk XT
5	B 0 0 0 0	Monokrom Monitor
6	A 0 0 0 0	Monitor EGA, VGS, dll
7	9 0 0 0 0	Daerah kerja pemakai s/d 640 KB
8	8 0 0 0 0	Daerah kerja pemakai s/d 576 KB
9	7 0 0 0 0	Daerah kerja pemakai s/d 512 KB
10	6 0 0 0 0	Daerah kerja pemakai s/d 448 KB
11	5 0 0 0 0	Daerah kerja pemakai s/d 384 KB
12	4 0 0 0 0	Daerah kerja pemakai s/d 320 KB
13	3 0 0 0 0	Daerah kerja pemakai s/d 256 KB
14	2 0 0 0 0	Daerah kerja pemakai s/d 192 KB
15	1 0 0 0 0	Daerah kerja pemakai s/d 128 KB
16	0 0 0 0 0	Daerah kerja pemakai s/d 64 KB

2. Perbedaan mode kerja “Real Mode” dan “Protected Mode”

a) **Real Mode**: Real-Mode adalah sebuah modus di mana prosesor Intel x86 berjalan seolah-olah dirinya adalah sebuah prosesor Intel 8085 atau Intel 8088, meski ia merupakan prosesor Intel 80286 atau lebih tinggi. Karenanya, modus ini juga disebut sebagai modus 8086 (8086 Mode). Dalam modus ini, prosesor hanya dapat mengeksekusi instruksi 16-bit saja dengan menggunakan register internal yang berukuran 16-bit, serta hanya dapat mengakses hanya 1024 KB dari memori karena hanya menggunakan 20-bit jalur bus alamat. Semua program DOS berjalan pada modus ini.

Protected Mode: Modus terproteksi (protected mode) adalah sebuah modus di mana terdapat proteksi ruang alamat memori yang ditawarkan oleh mikroprosesor untuk digunakan oleh sistem operasi. Modus ini datang dengan mikroprosesor Intel 80286 atau yang lebih tinggi. Karena memiliki proteksi ruang alamat memori, maka dalam modus ini sistem operasi da

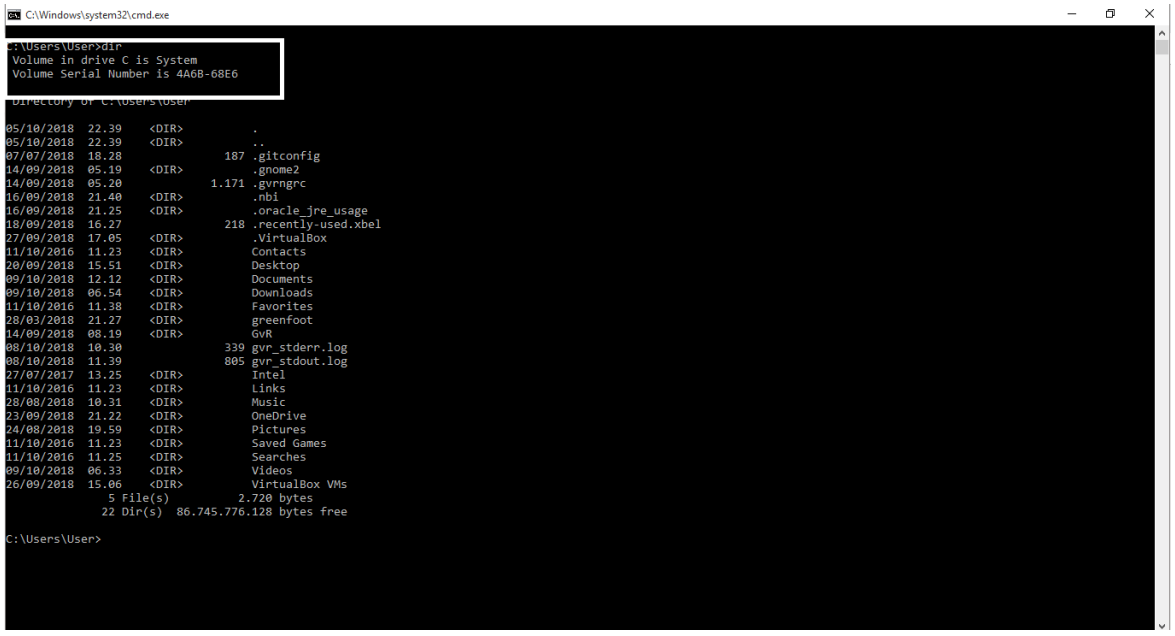
MODUL 4

Percobaan Pertama: Melihat versi MS-DOS

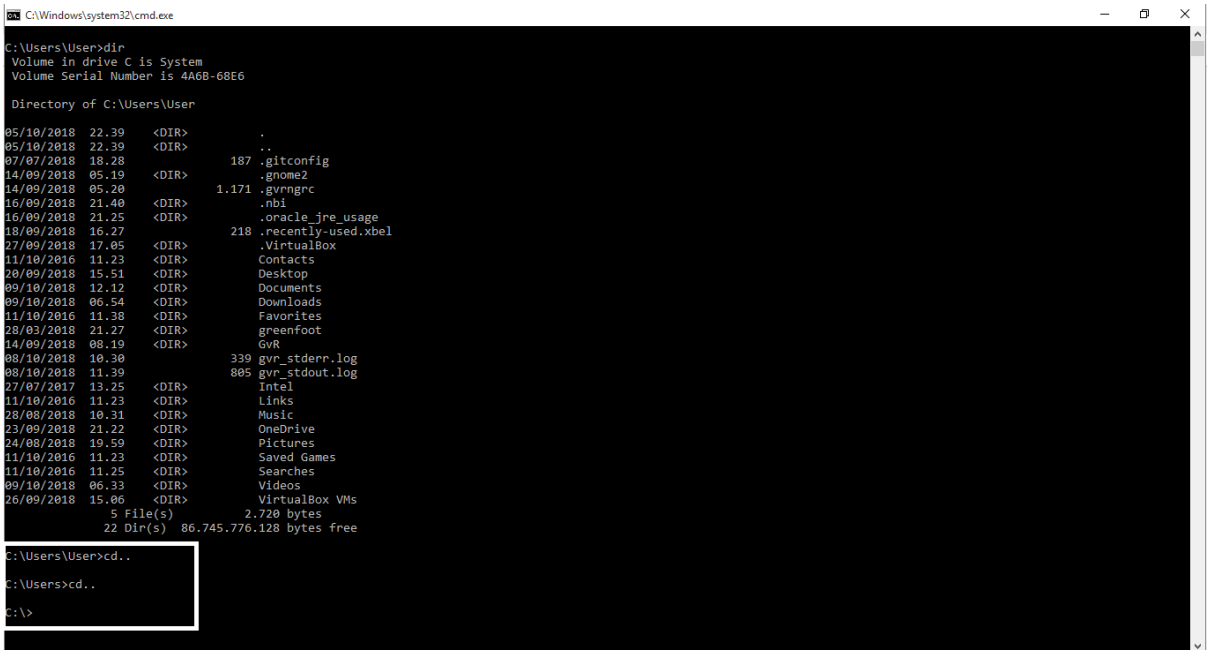
1. Mengetikkan ver.

Percobaan Kedua: Melihat, masuk, keluar dari direktori

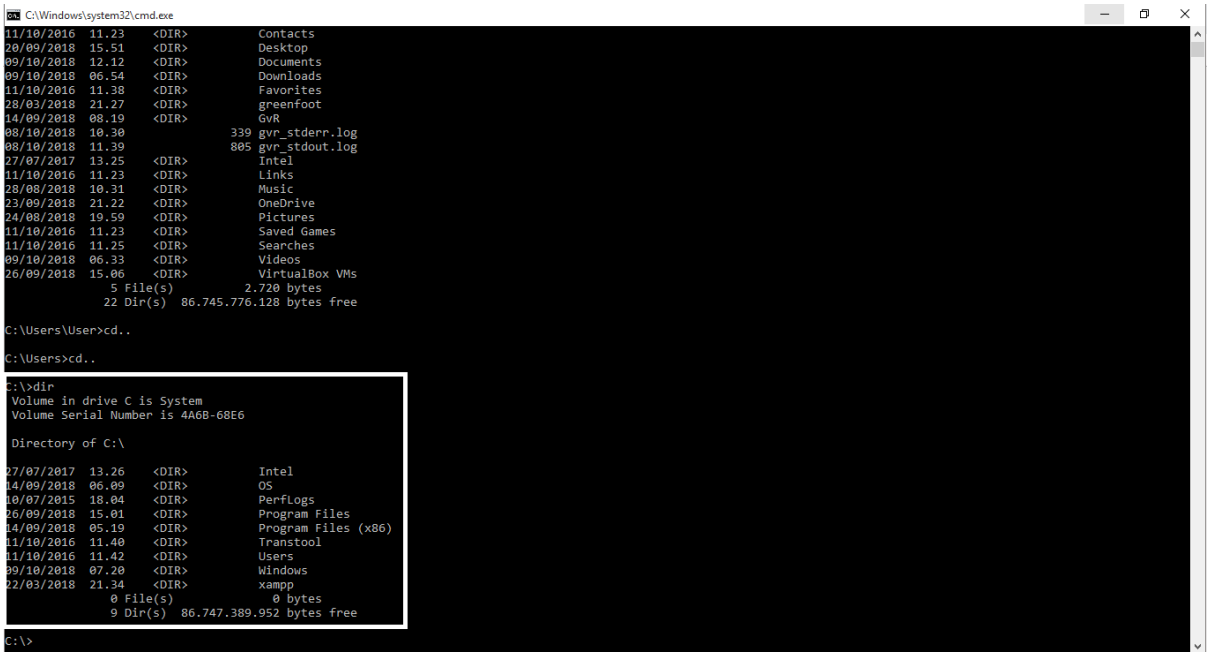
1. Melihat isi direktori dengan mengetikkan dir.



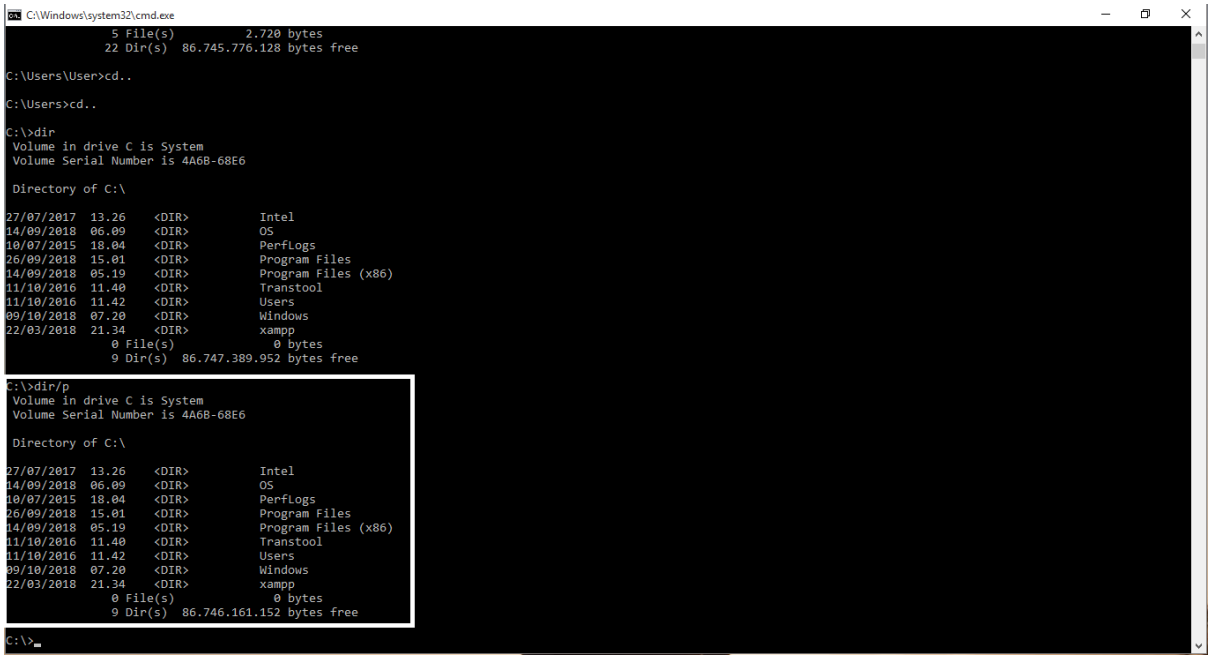
2. Keluar dari direktori dengan mengetikkan cd.. hingga sampai ke direktori C:



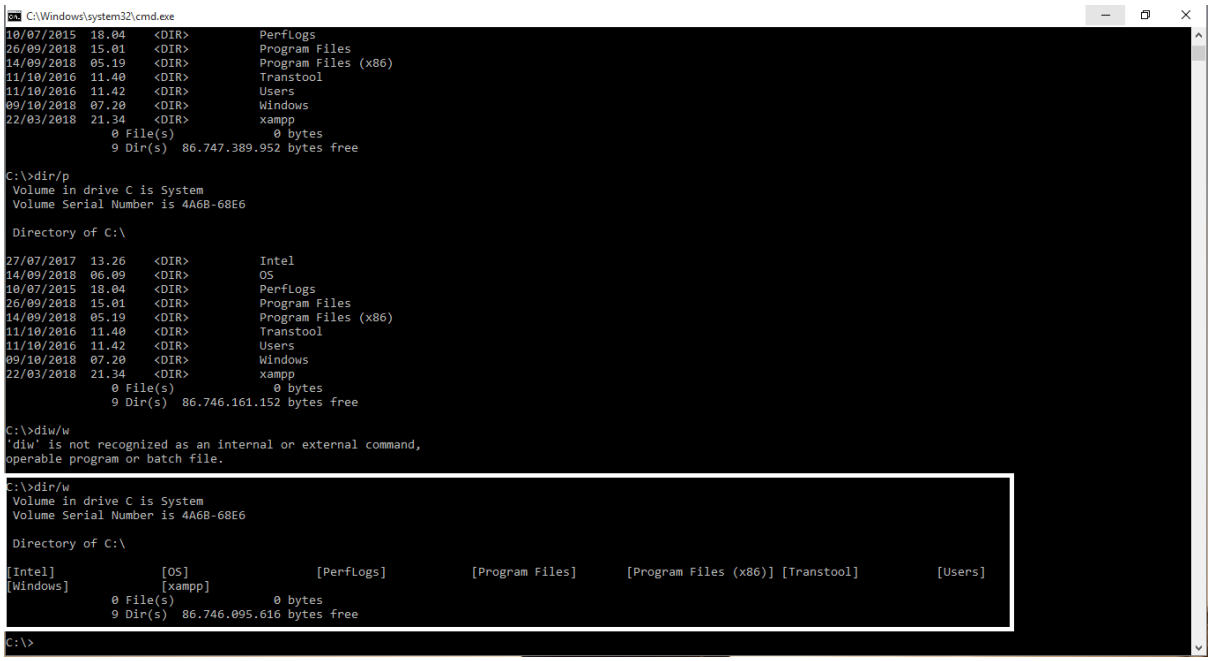
3. Melihat isi direktori C: dengan mengetikkan dir



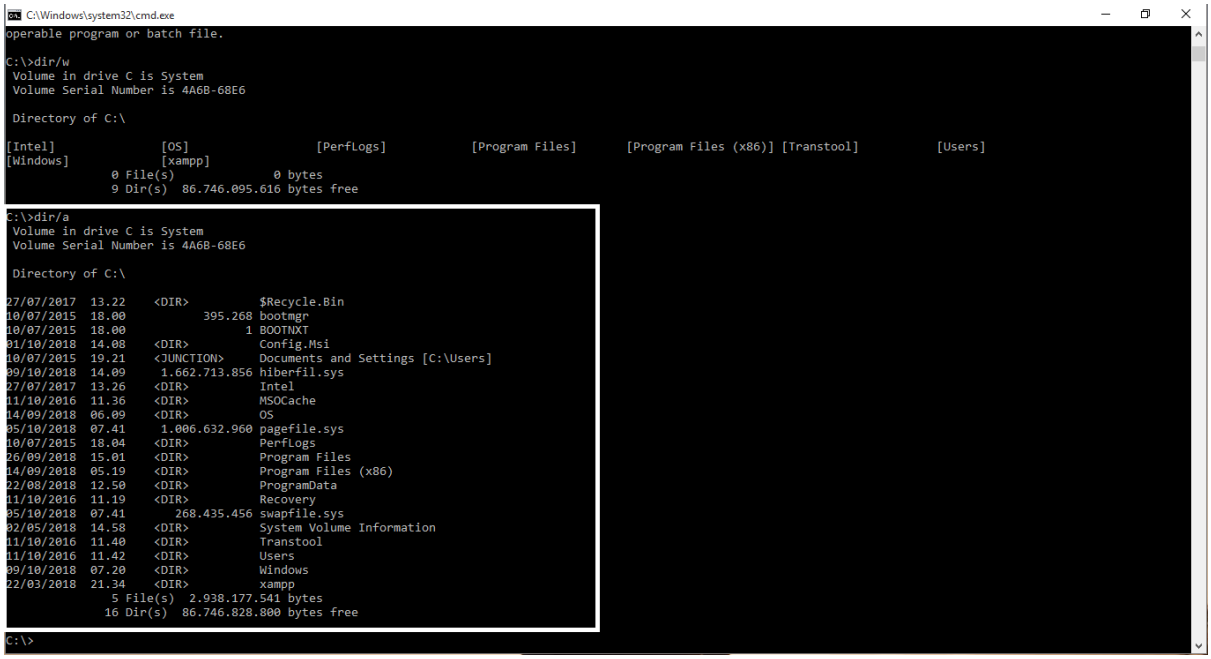
4. Ketikkan dir/p untuk menampilkan nama file perhalaman



5. Ketikkan dir/w untuk menampilkan file secara mendatar.

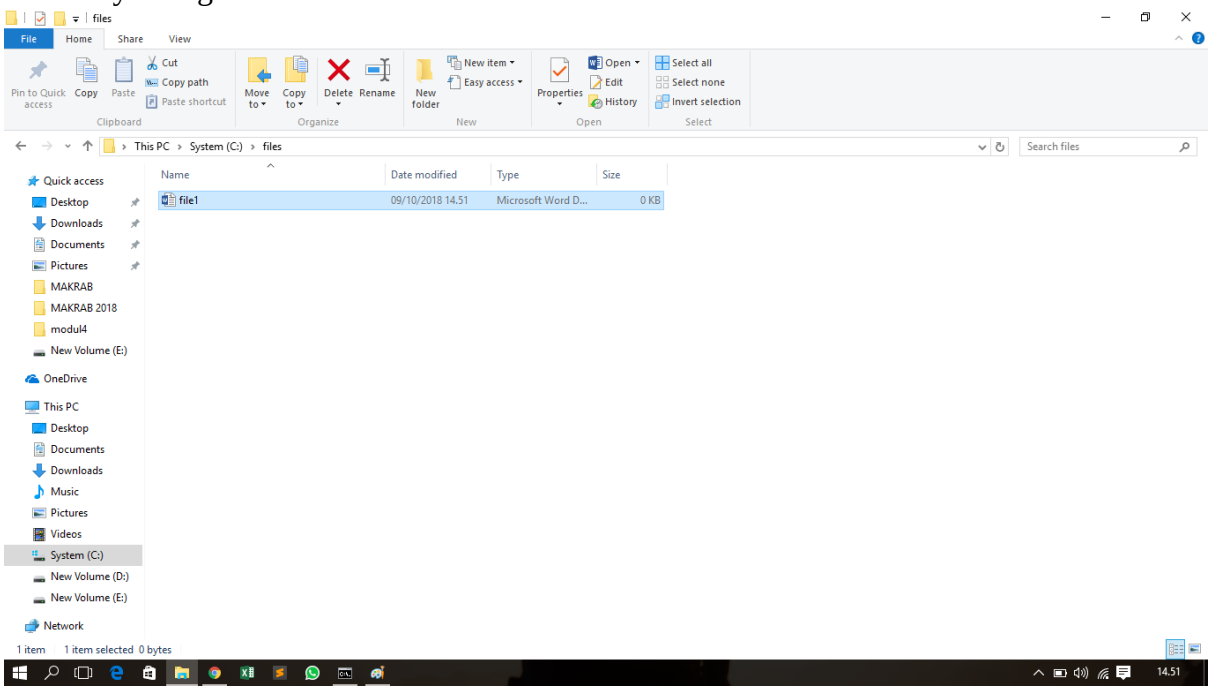


6. dir/a untuk menampilkan semua file, terutama yang terhidden

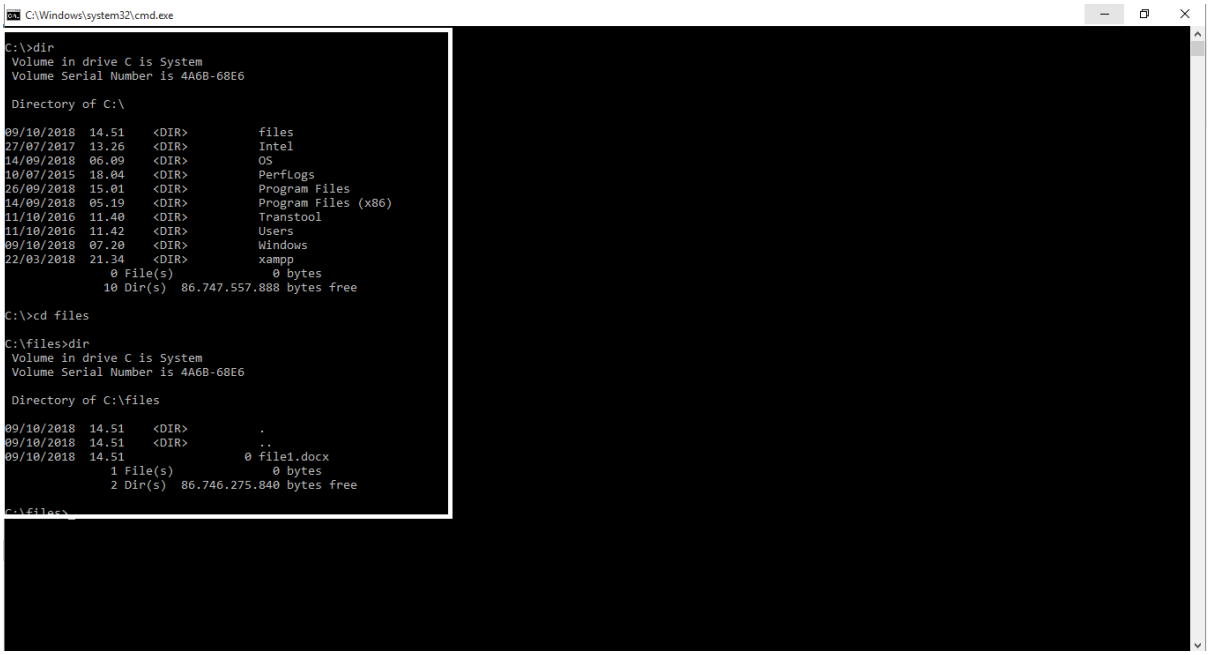


Percobaan Ketiga: Merubah nama file

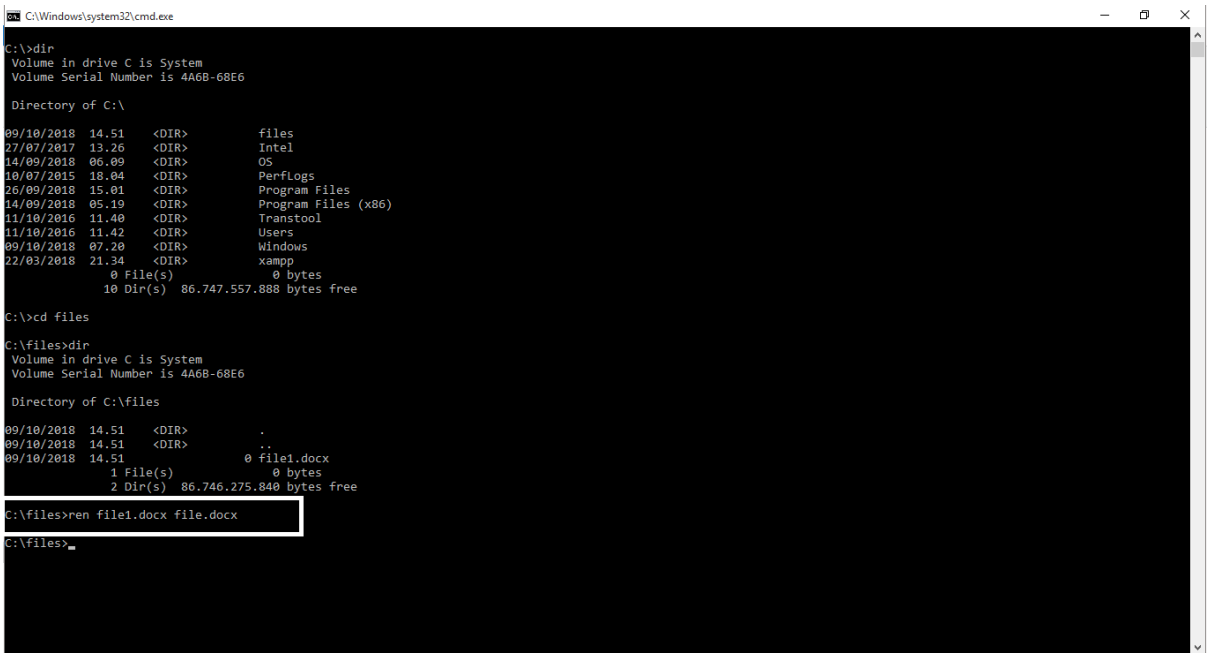
1. Buat semua folder bernama files di direktori C: kemudia buat sebuah file docx di dalamanya dengan ama file1



2. Lihat isi direktori, kemudia masuk ke direktori files.

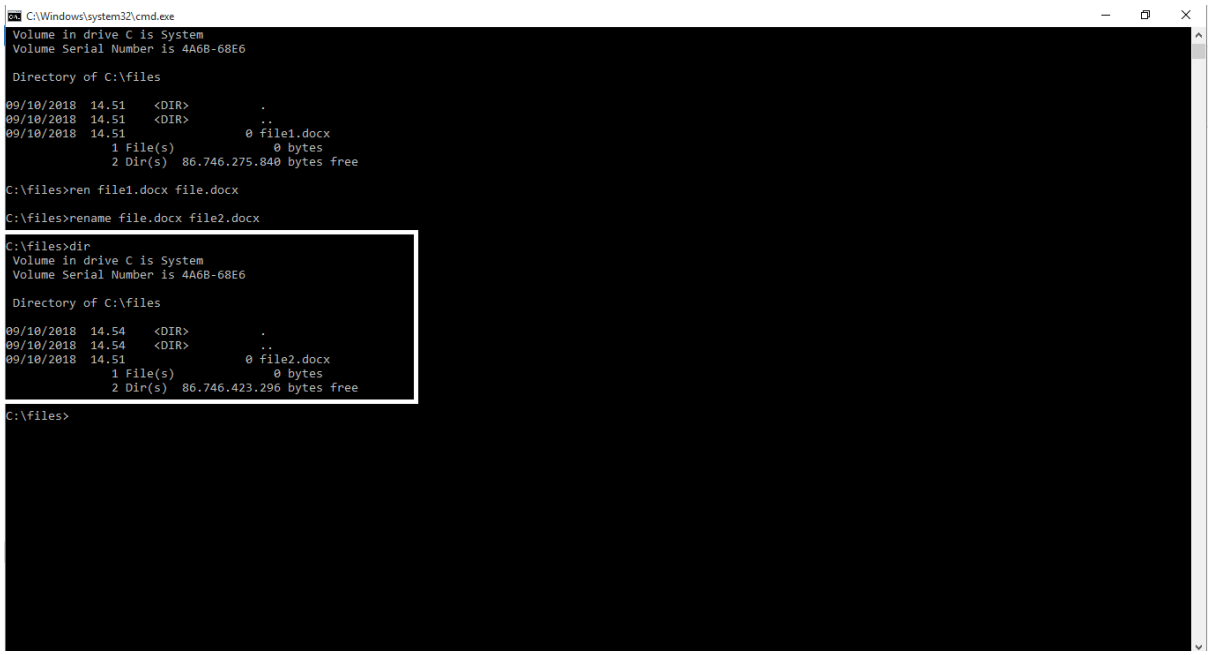


3. Ubah nama dile dengan perintah ren nama_file_awal.ekstensi nama_file_baru.ekstensi

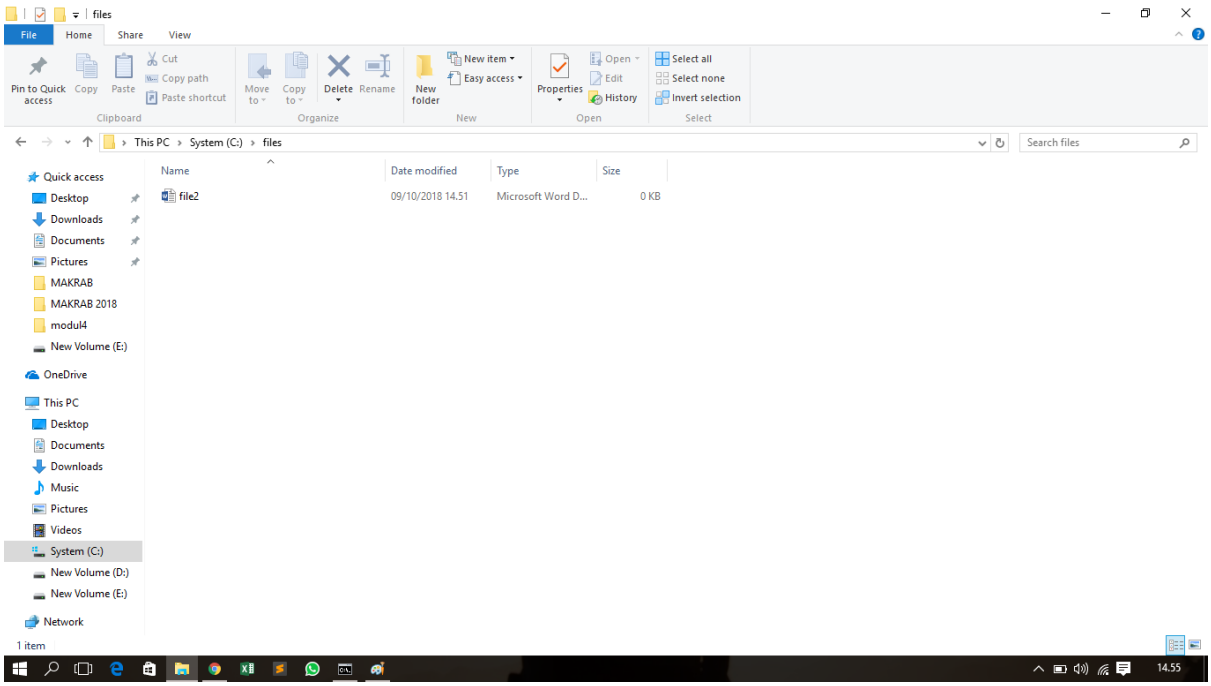


4. Ubah nama dile dengan perintah rename nama_file_awal.ekstensi nama_file_baru.ekstensi

5. Kemudian apakah sudah terganti dengan melihat isi derektori dengan mengetikkan dir.



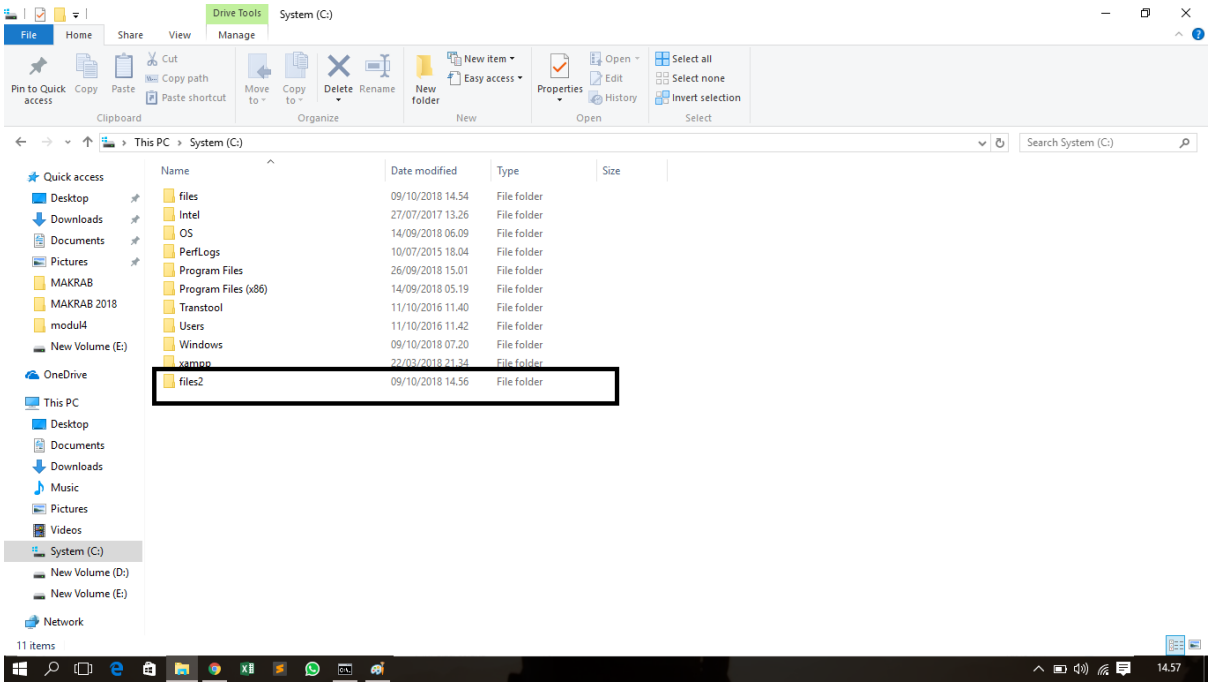
6. Kemudian pastikan apakah sudah terganti dengan melihatnya pada windows explorer.



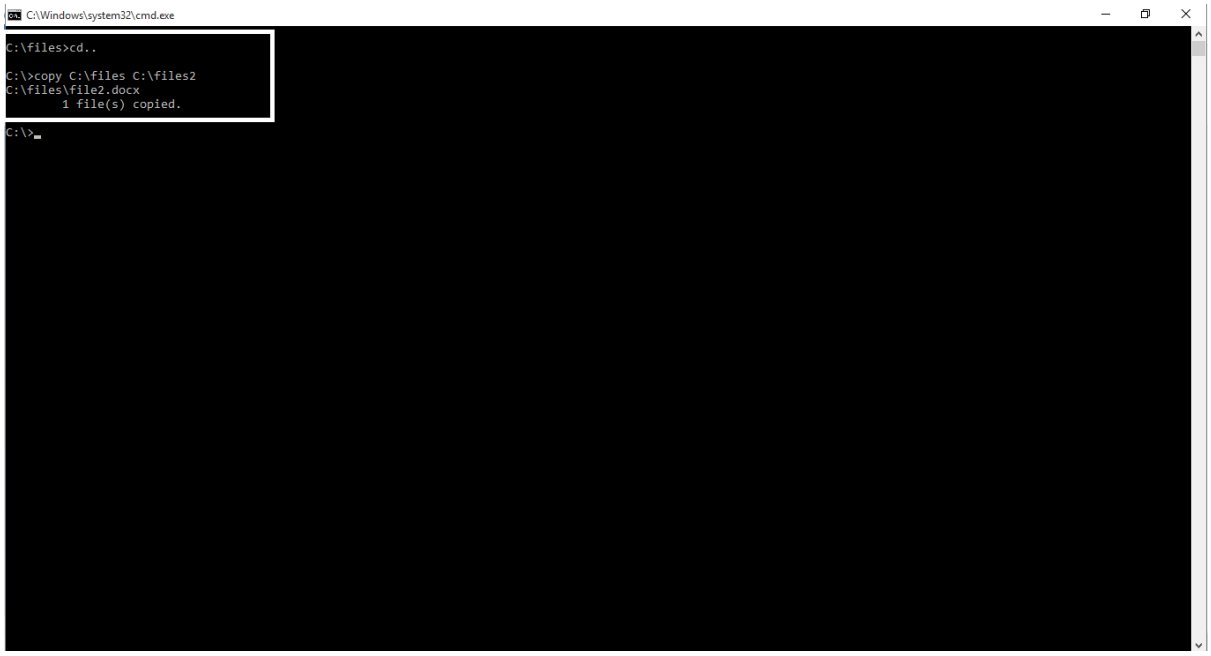
Percobaan keempat: Copy file dan menghapus file

1. Keluar dari direktori files dengan mengetikkan cd..

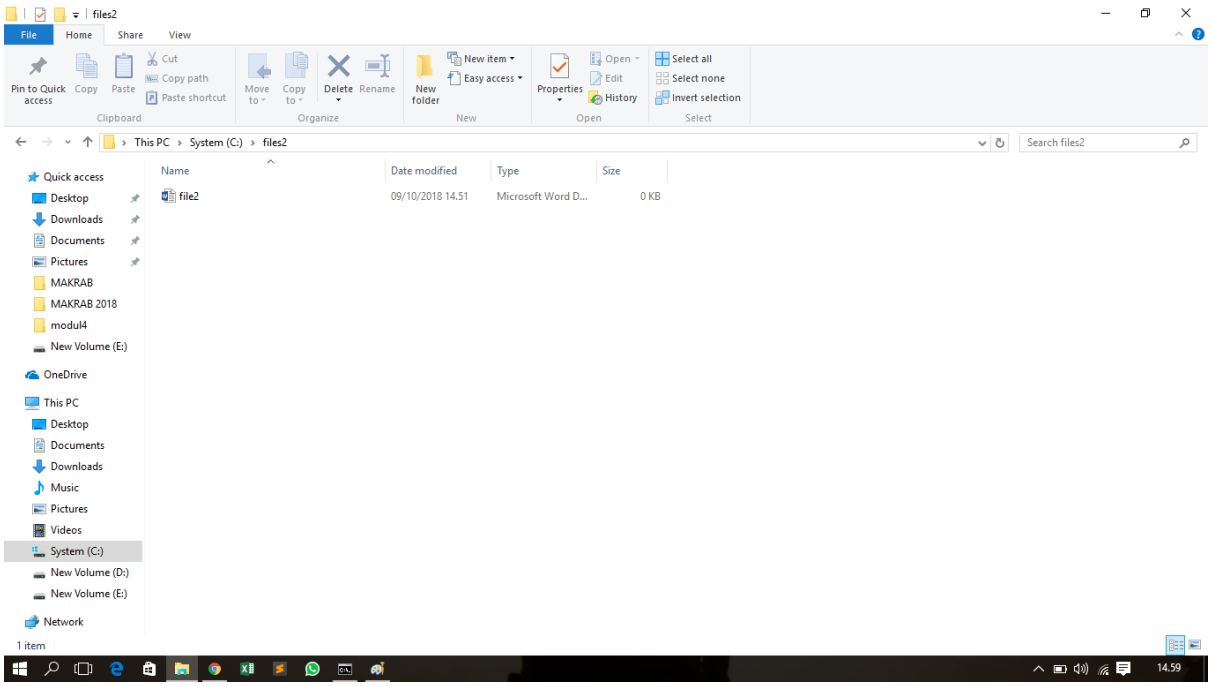
2. Buatlah sebuah folder baru bernama files2 di direktori C:



3. Menyalin semua isi file di suatu folder dengan cara mengetikkan copy direktori\nama_folder_awal direktori\ nama_folder_tujuan

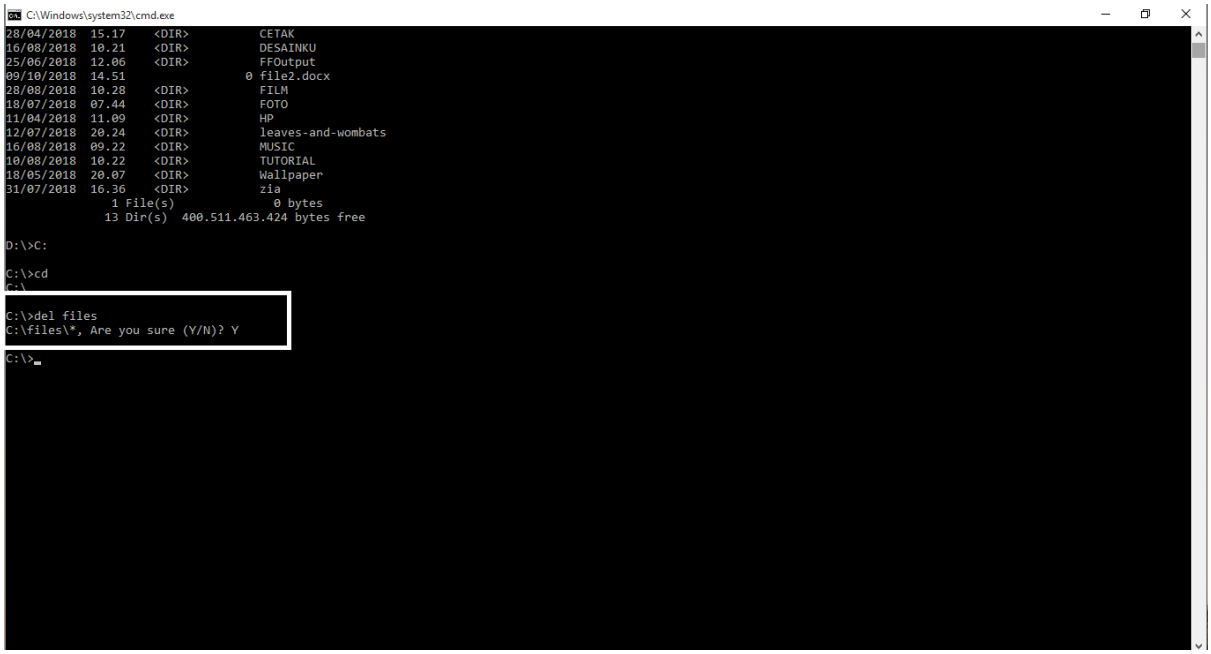


4. Cek pada windows explorer.

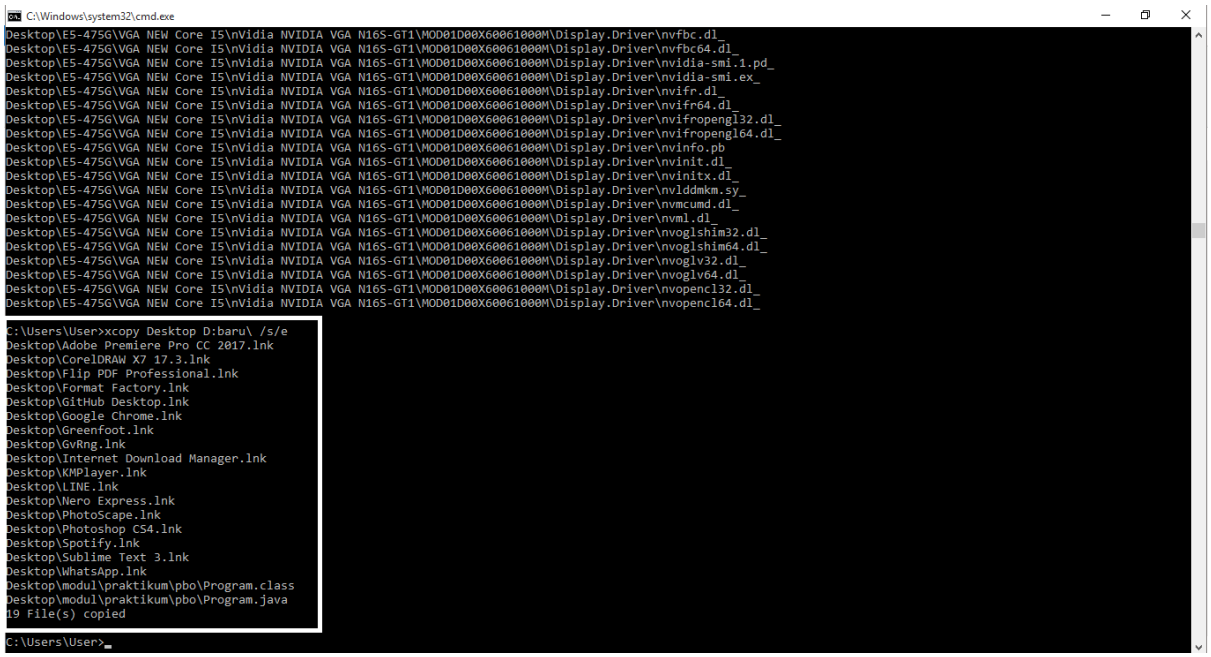


5. Untuk mengkopi lain direktori juga berlaku sama. Jika ingin mengecek melalui cmd dapet menggunakan dir.

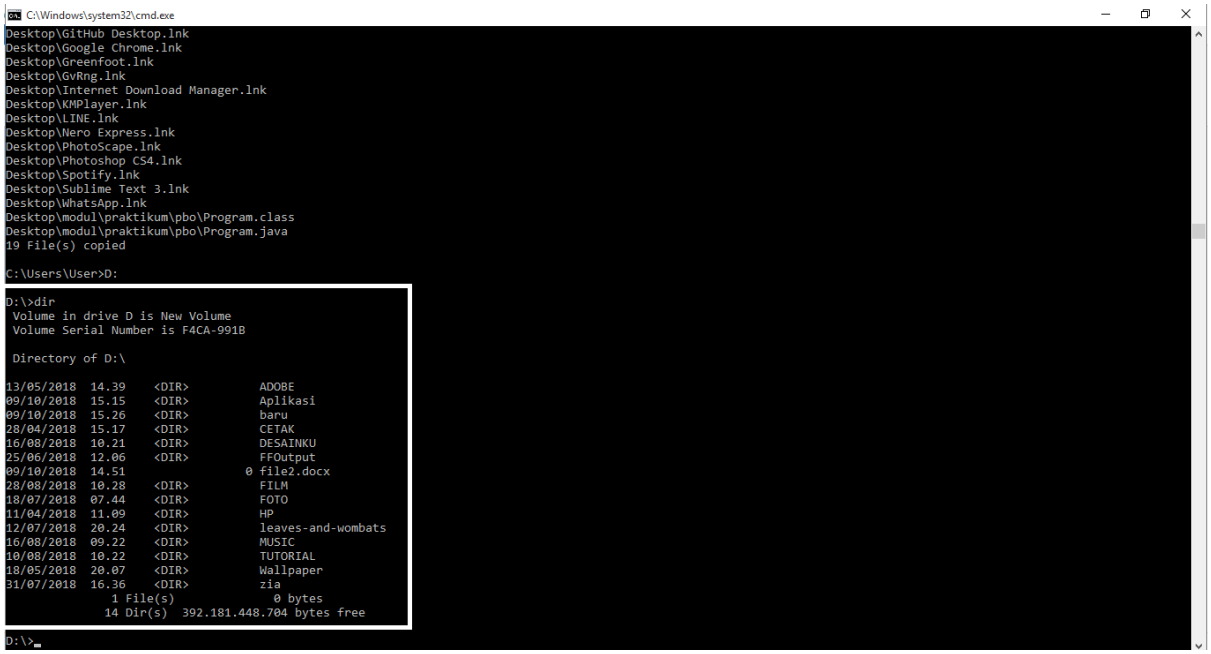
6. Untuk mengapus ketikkan del nama_folder



7. Kemudia kembali menuju direktori yang terdapat folder dekstop. Kemudia copy semua isi folder dan pindah pada suatu folder di mana folder baru dibuat saat mengcopy. Dengan cara mengetikkan xcopy Dekstop D:nama_folder\ /s/e



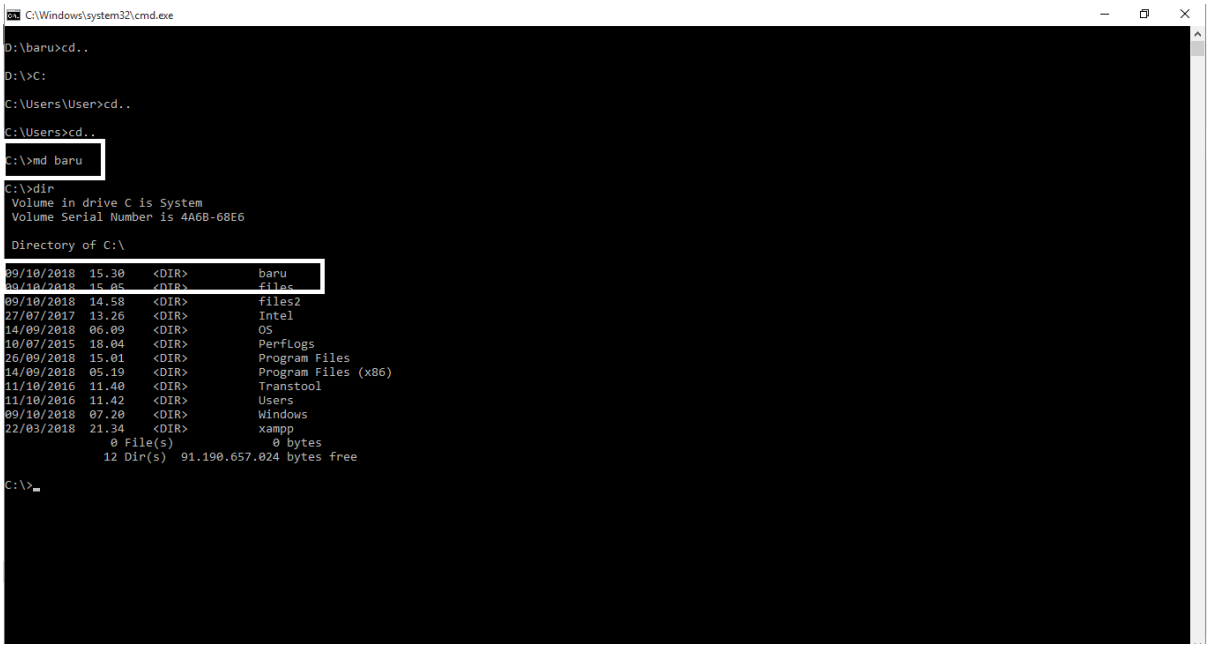
8. Kemudian cek pada folder D.



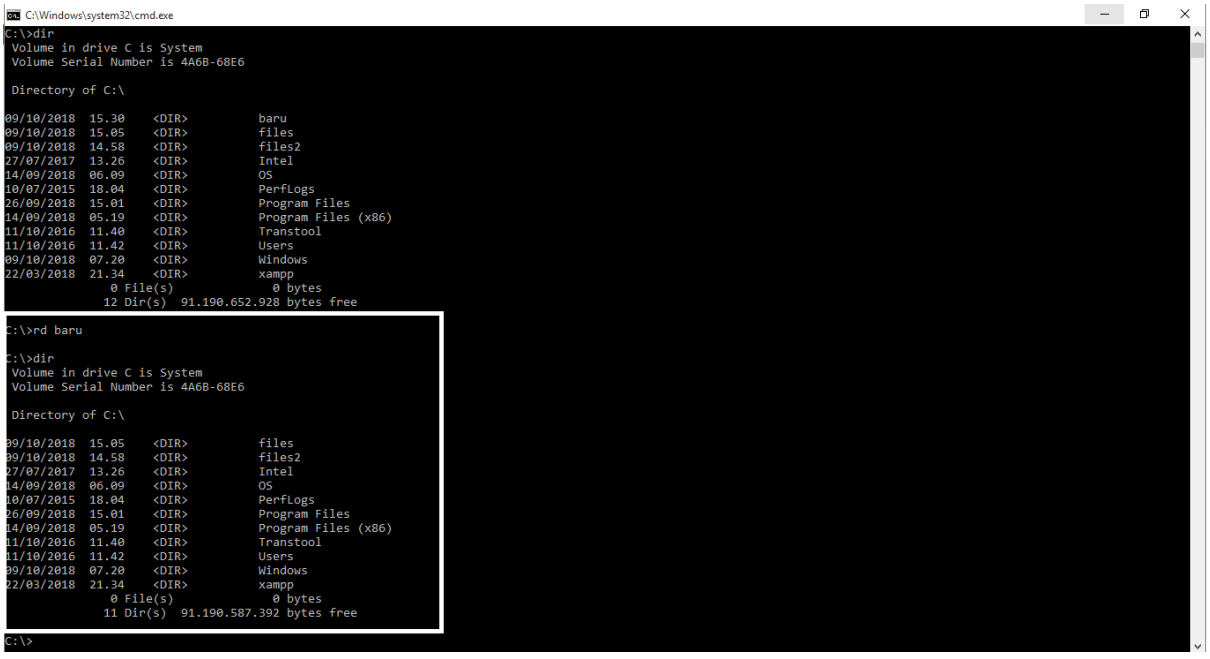
Percobaan Kelima: Membuat dan menghapus direktori

1. Masuk ke direktori C:

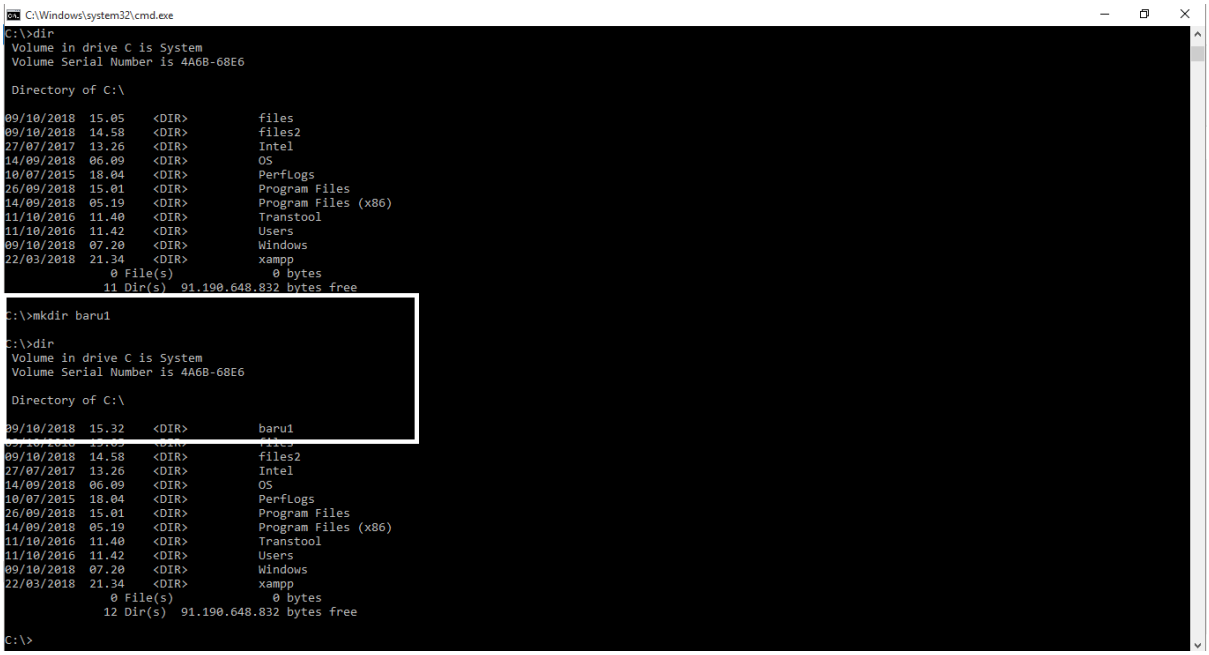
2. Buat sebuah folder baru dengan nama baru dengan cara mengetikkan md baru, kemudia lihat apakah sudah terbuat dengan melihat isi direktori C:



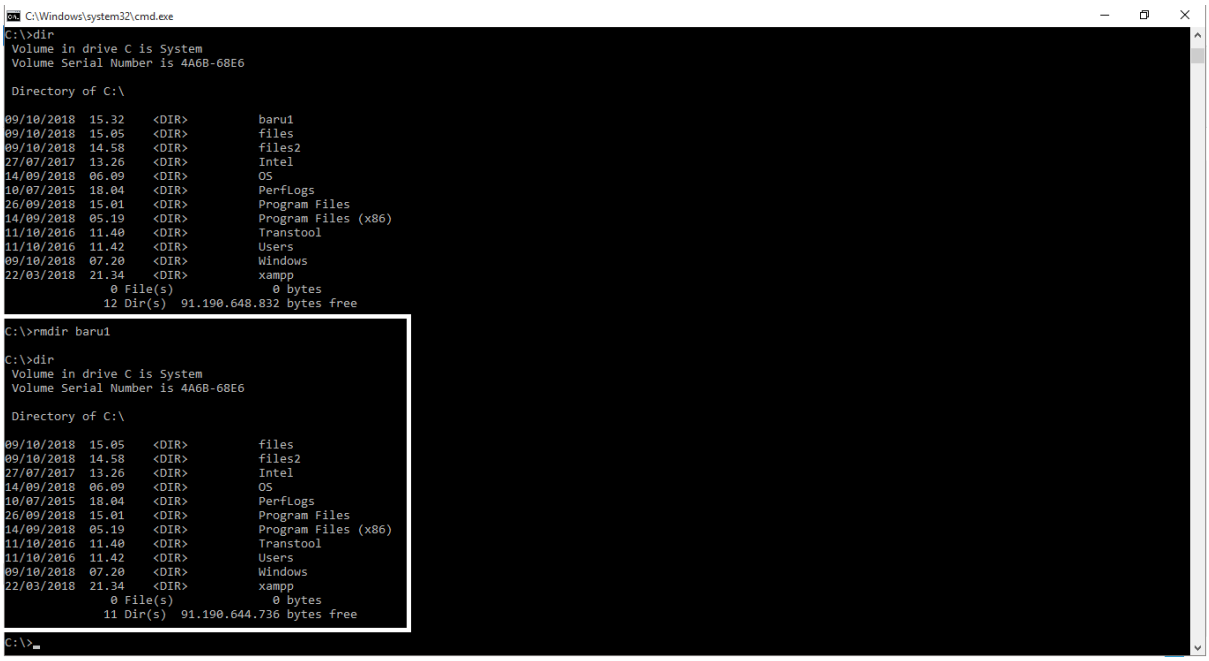
3. Kemudian hapus direktori dengan rd baru, dan lihat pakah sudah terhapus.



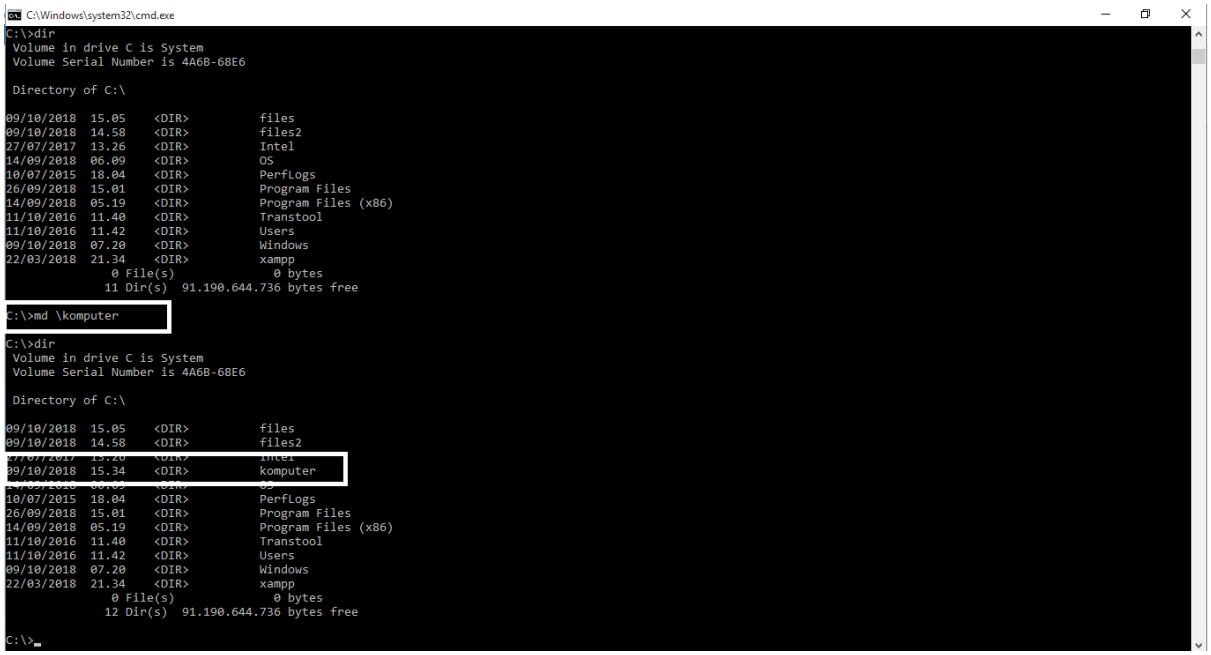
4. Kemudia buat kembali suatu folder dengan nama baru1 dengan perintah mkdir nama_file_baru. Kemudian lihat apakah sudah terbuat atau belum.



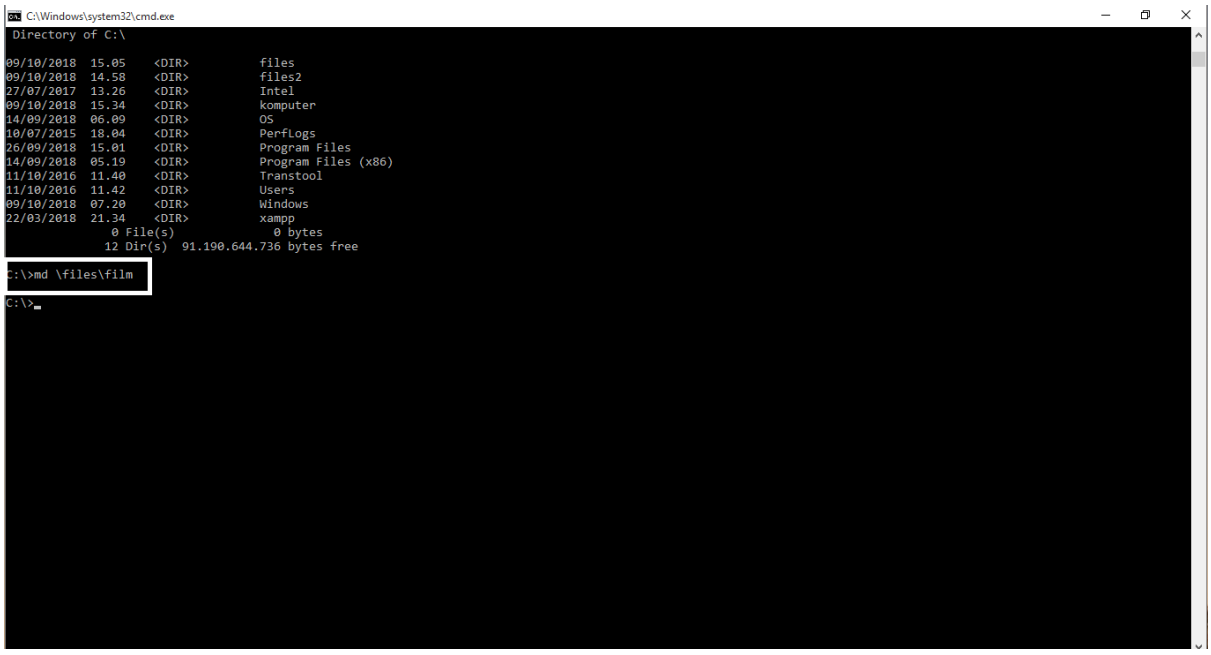
5. Kemudia hapus dengan perintah rmdir nama_folder. Dan lihat apakah sudah terhapus.



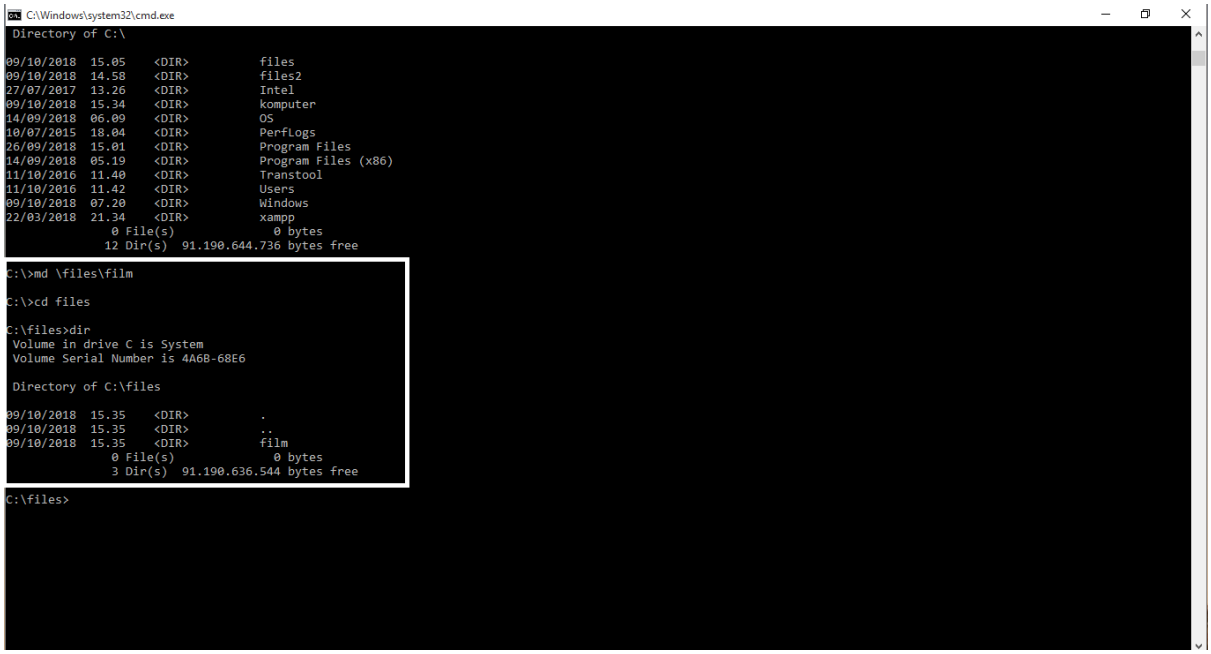
6. Kemudian buat suatu folder dengan perintah md \nama_folder. Dan cek.



7. Lalu buat kembali suatu folder pada suatu folder dengan cara md \folder_awal\folder_yang akan_dibuat



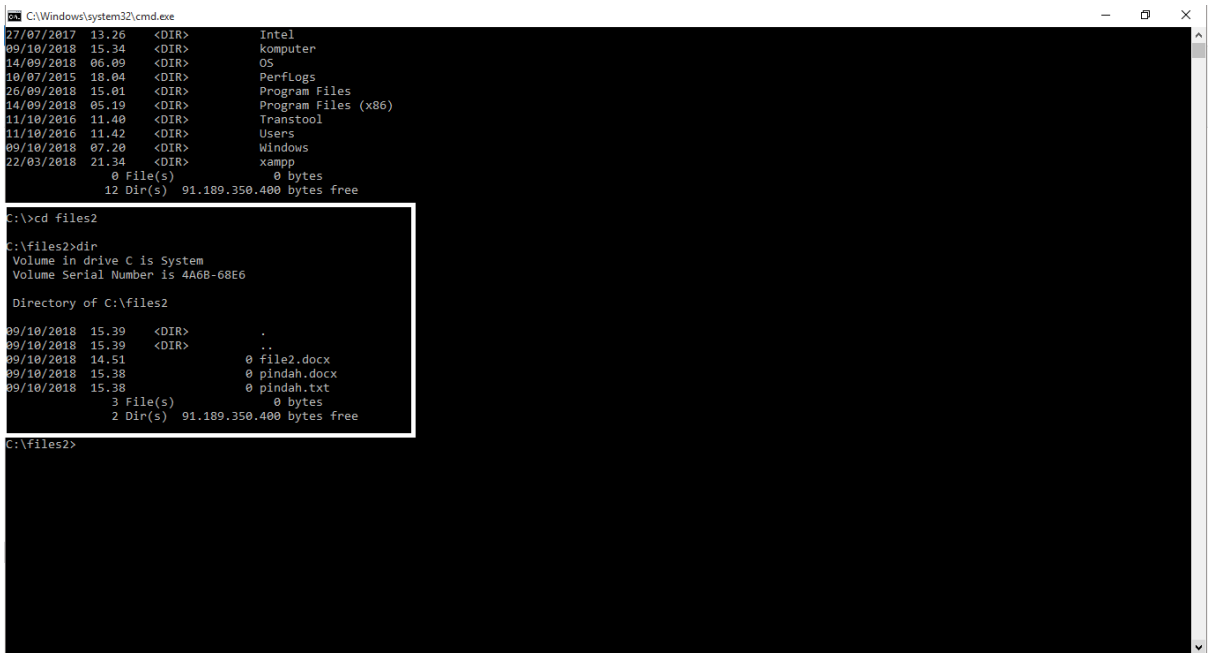
8. Kemudian cek dengan masuk dan melihat isi direktori.



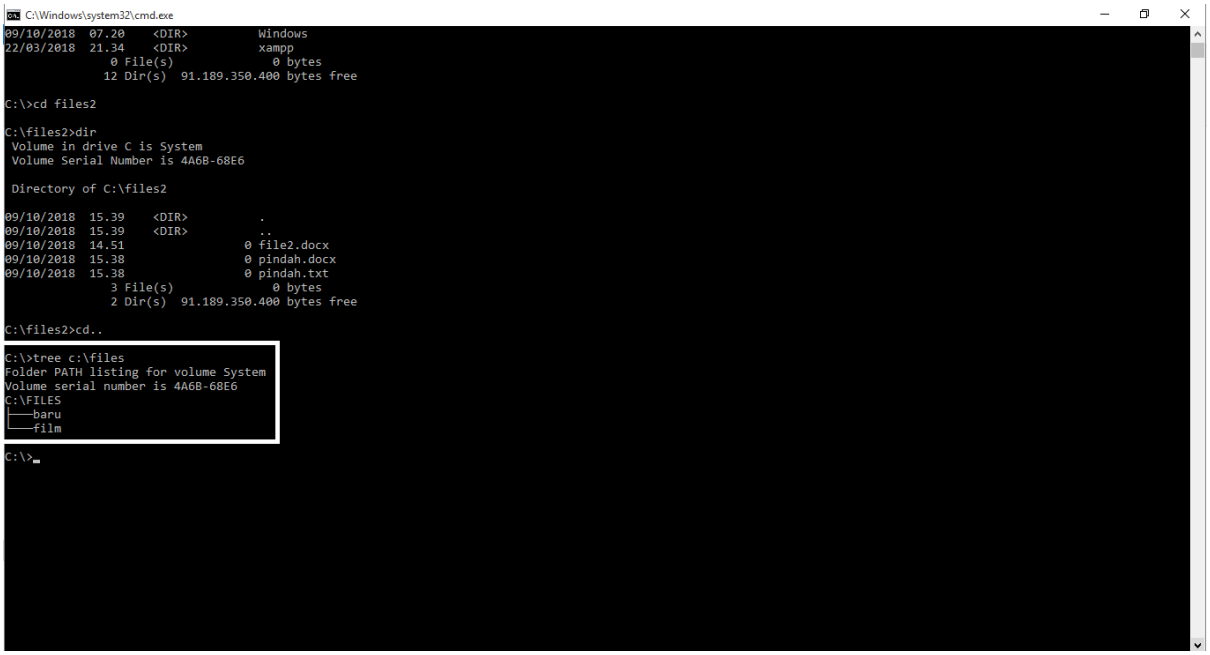
Percobaan Keenam: Memindahkan file dan menampilkan isi folder secara terstruktur.

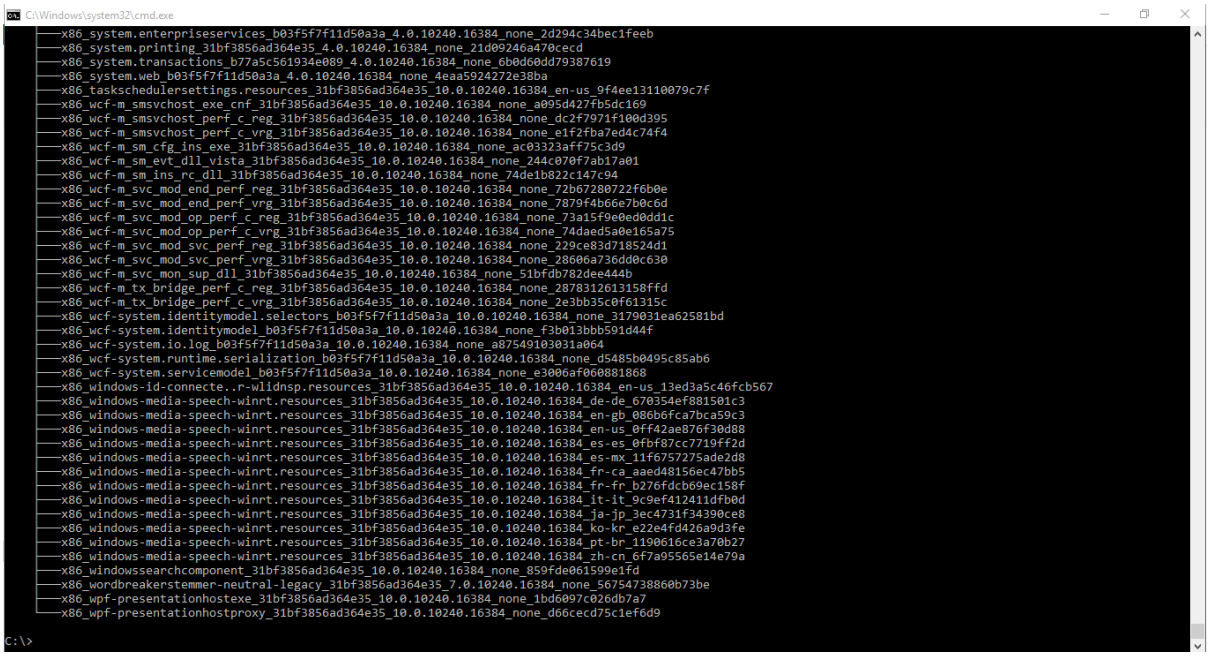
1. Buat suatu file pada folder C:\files\baru. Kemudia pindahkan file ke folder C:\files 2.

2. Kemudian cek pada direktori files2.



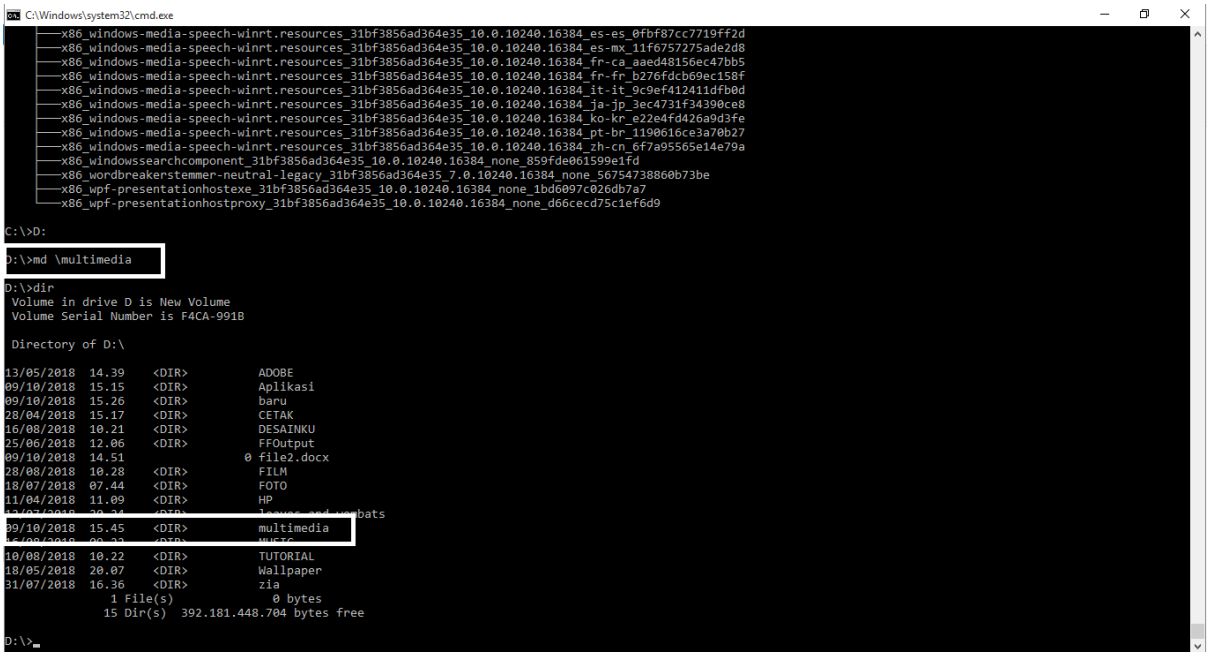
3. Kemudian lihat hiararki pad suatu folder, seperti folder files dan windows.



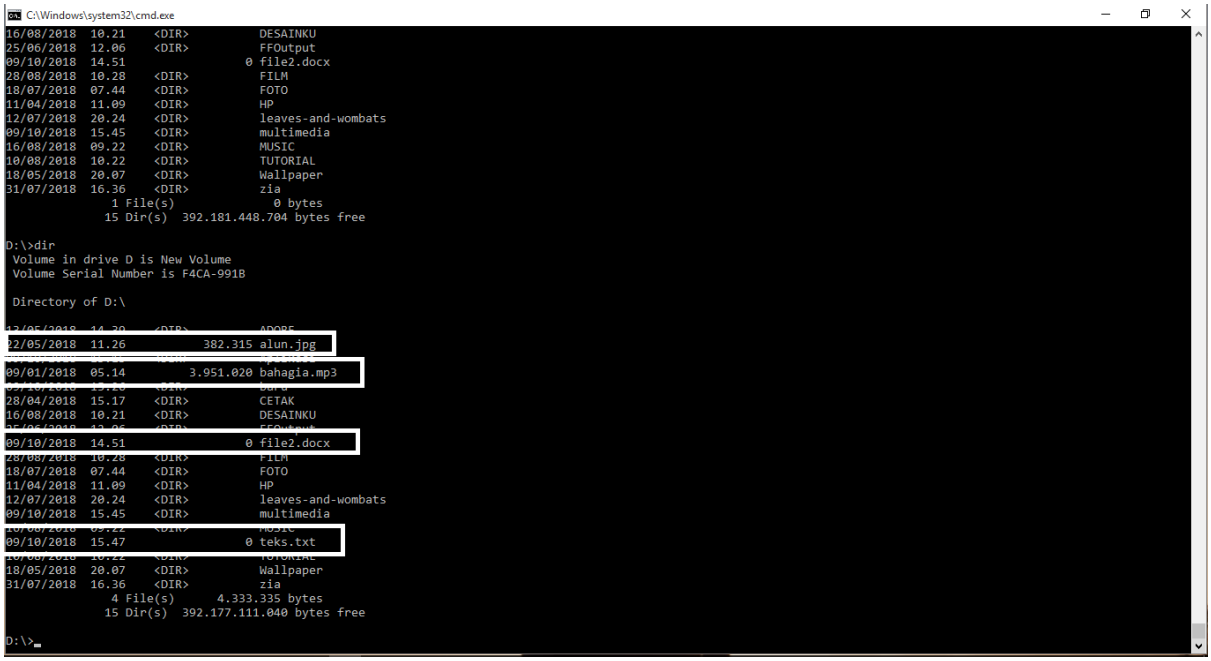


TUGAS

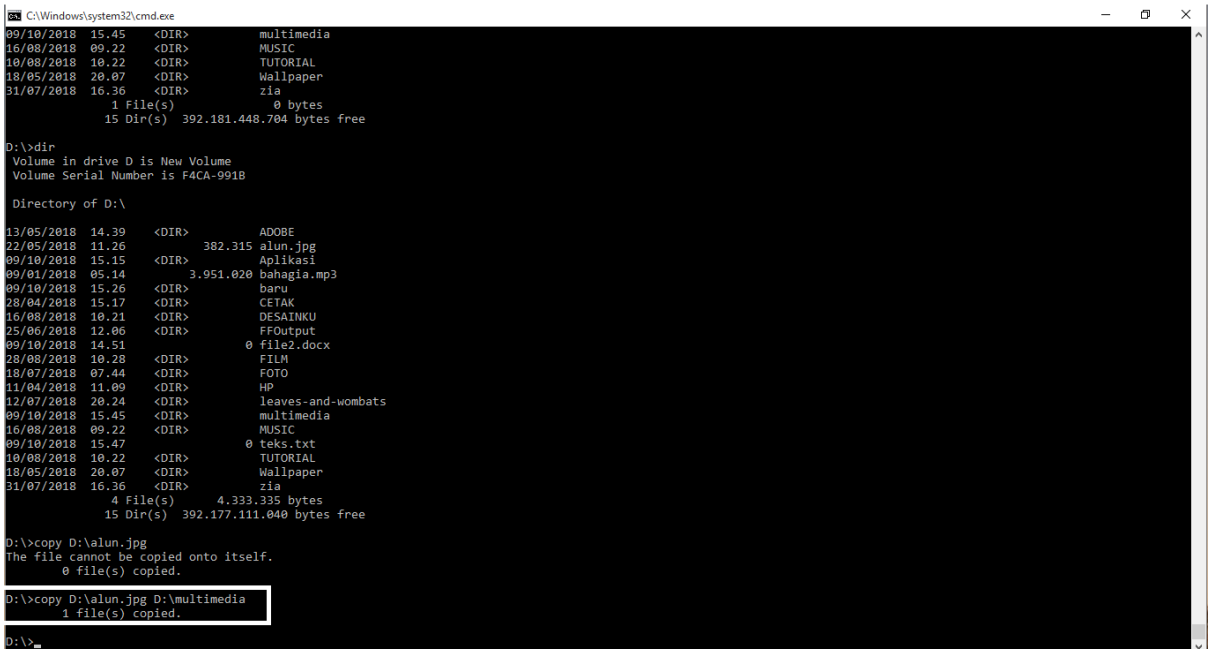
1. Buat file multimedia pada drive D:

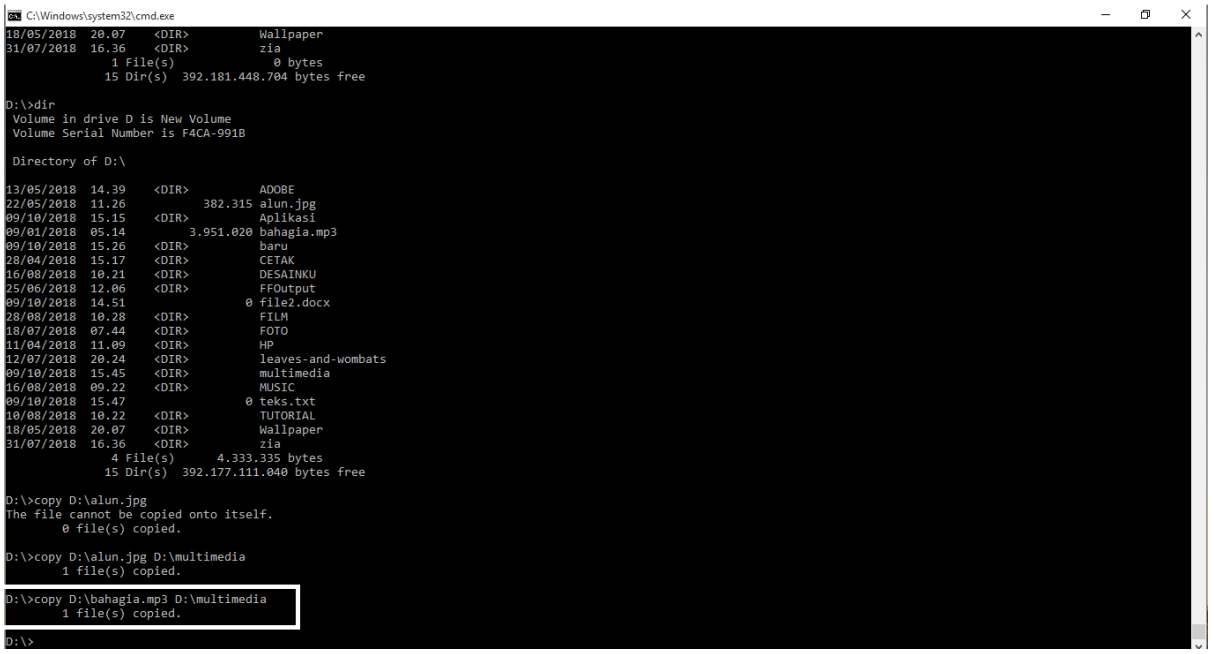


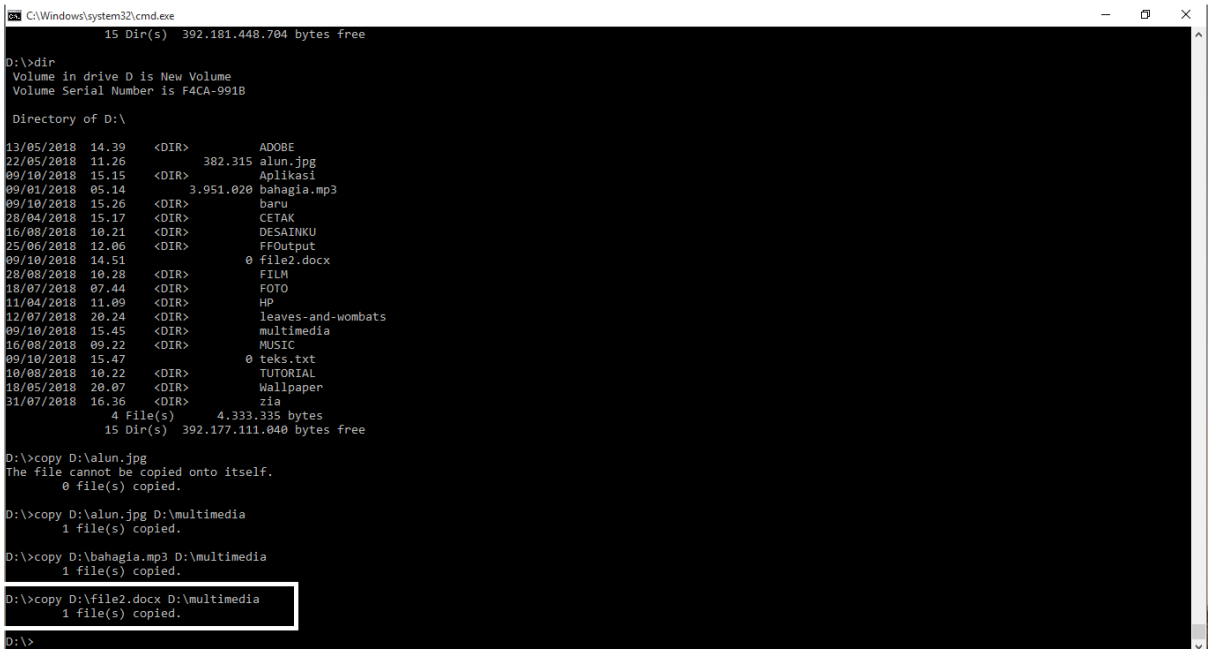
2. Kemudia lihat isi direktori D: apakah sudah ada file atau belum.

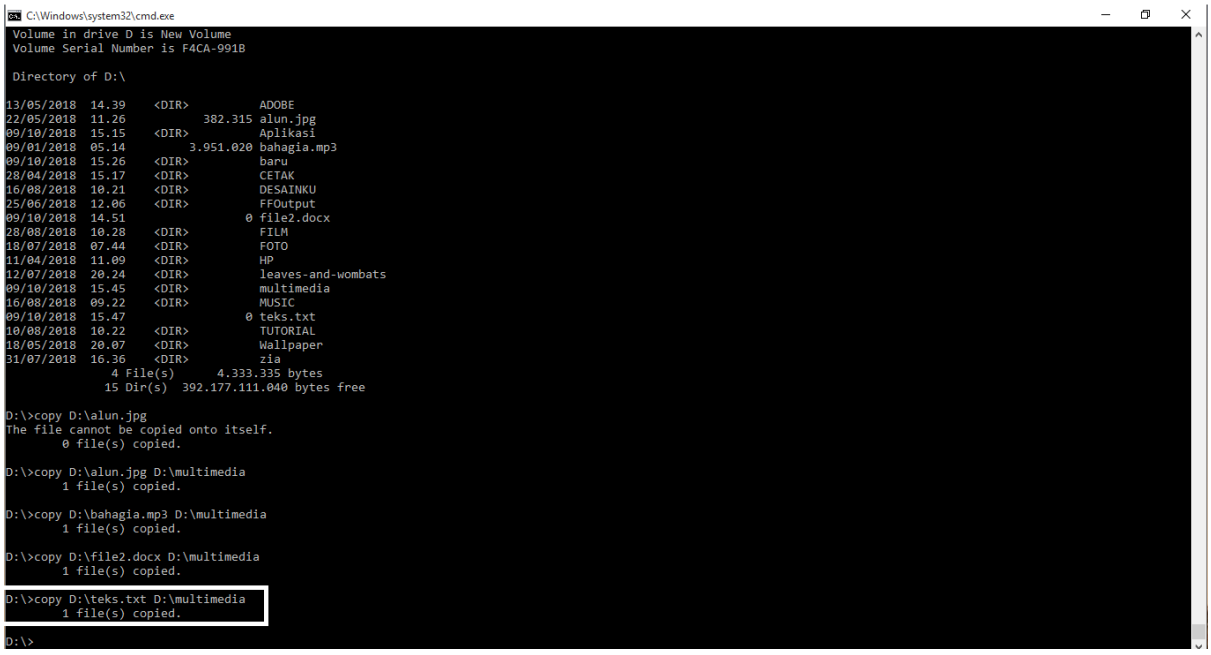


3. Kemudian copy file ke folder multimedia.

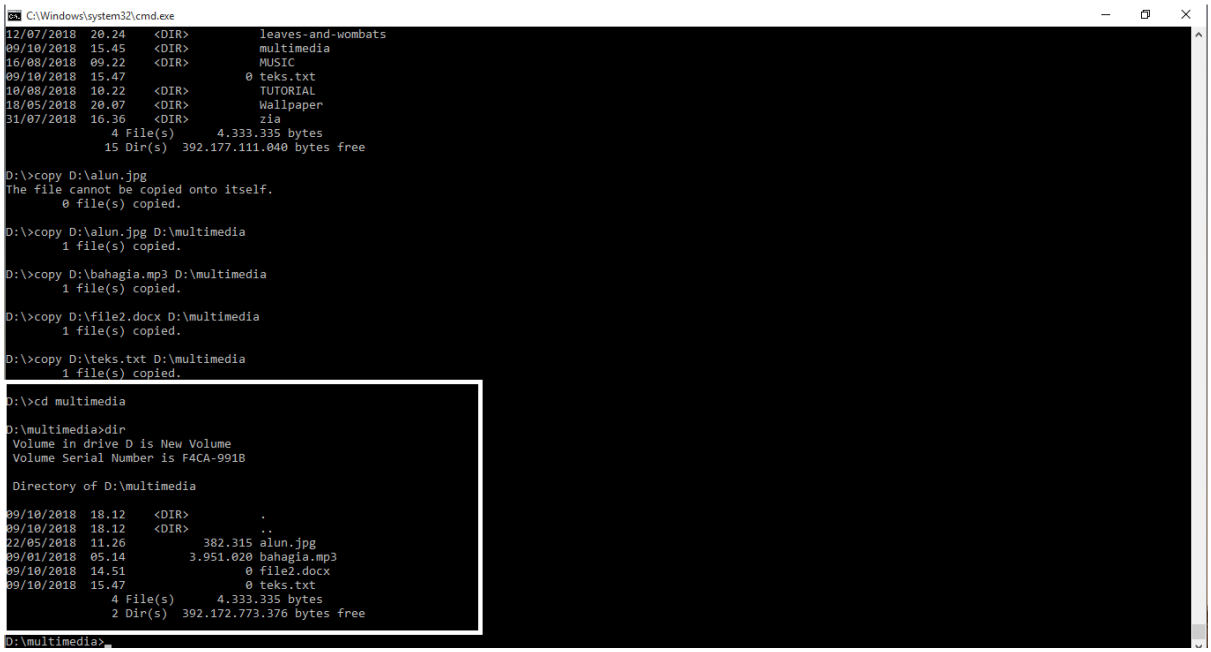





C:\Windows\system32\cmd.exe
15 Dir(s) 392.181.448.704 bytes free
D:\>dir
Volume in drive D is New Volume
Volume Serial Number is F4CA-991B
Directory of D:\
13/05/2018 14.39 <DIR> ADOBE
22/05/2018 11.26 382.315 alun.jpg
09/10/2018 15.15 <DIR> Aplikasi
09/01/2018 05.14 3.951.020 bahagia.mp3
09/10/2018 15.26 <DIR> baru
28/04/2018 15.17 <DIR> CETAK
16/08/2018 10.21 <DIR> DESAINKU
25/06/2018 12.06 <DIR> FFOutput
09/10/2018 14.51 0 file2.docx
28/08/2018 10.28 <DIR> FILM
18/07/2018 07.44 <DIR> FOTO
11/04/2018 11.09 <DIR> HP
12/07/2018 20.24 <DIR> leaves-and-wombats
09/10/2018 15.45 <DIR> multimedia
16/08/2018 09.22 <DIR> MUSIC
09/10/2018 15.47 0 teks.txt
10/08/2018 10.22 <DIR> TUTORIAL
18/05/2018 20.07 <DIR> Wallpaper
31/07/2018 16.36 <DIR> zia
4 File(s) 4.333.335 bytes
15 Dir(s) 392.177.111.040 bytes free
D:\>copy D:\alun.jpg
The file cannot be copied onto itself.
0 file(s) copied.
D:\>copy D:\alun.jpg D:\multimedia
1 file(s) copied.
D:\>copy D:\bahagia.mp3 D:\multimedia
1 file(s) copied.
D:\>copy D:\file2.docx D:\multimedia
1 file(s) copied.
D:\>


C:\Windows\system32\cmd.exe
Volume in drive D is New Volume
Volume Serial Number is F4CA-991B
Directory of D:\
13/05/2018 14.39 <DIR> ADOBE
22/05/2018 11.26 382.315 alun.jpg
09/10/2018 15.15 <DIR> Aplikasi
09/01/2018 05.14 3.951.020 bahagia.mp3
09/10/2018 15.26 <DIR> baru
28/04/2018 15.17 <DIR> CETAK
16/08/2018 10.21 <DIR> DESAINKU
25/06/2018 12.06 <DIR> FFOutput
09/10/2018 14.51 0 file2.docx
28/08/2018 10.28 <DIR> FILM
18/07/2018 07.44 <DIR> FOTO
11/04/2018 11.09 <DIR> HP
12/07/2018 20.24 <DIR> leaves-and-wombats
09/10/2018 15.45 <DIR> multimedia
16/08/2018 09.22 <DIR> MUSIC
09/10/2018 15.47 0 teks.txt
10/08/2018 10.22 <DIR> TUTORIAL
18/05/2018 20.07 <DIR> Wallpaper
31/07/2018 16.36 <DIR> zia
4 File(s) 4.333.335 bytes
15 Dir(s) 392.177.111.040 bytes free
D:\>copy D:\alun.jpg
The file cannot be copied onto itself.
0 file(s) copied.
D:\>copy D:\alun.jpg D:\multimedia
1 file(s) copied.
D:\>copy D:\bahagia.mp3 D:\multimedia
1 file(s) copied.
D:\>copy D:\file2.docx D:\multimedia
1 file(s) copied.
D:\>copy D:\teks.txt D:\multimedia
1 file(s) copied.
D:\>

4. Lalu cek pada folder multimedia.



MODUL 5

1. 5 Distro Linux

- **Linux Mint**

Salah satu distro linux terbaik untuk tahun 2018 adalah Linux Mint. Distro ini cocok bagi pengguna Linux baru. Linux Mint dilengkapi dengan banyak perangkat lunak untuk memenuhi kebutuhan produktivitas pengguna saat beralih dari Mac atau Windows, seperti LibreOffice, dll. Mint juga memiliki dukungan yang lebih baik untuk format media proprietary. Hal ini memungkinkan pengguna untuk memutar video, DVD dan file musik MP3 tanpa harus repot-repot menginstall codex-nya terlebih dahulu.

- **Ubuntu**

Ubuntu merupakan salah satu distro Linux yang paling populer. Sama dengan Linux Mint, distro ini sangat direkomendasikan untuk pemula yang baru mencoba Linux, karena distro ini sangat mudah diakses dengan komunitas yang besar. Versi baru Ubuntu dirilis setiap enam bulan sekali. Pada saat artikel ini ditulis, Ubuntu telah dirilis sampai versi Ubuntu 17.10. Setiap tahun, Canonical, yang merupakan pengembang Ubuntu, merilis versi Ubuntu LTS (long-term service). Versi ini menjamin pengguna lima tahun security dan general maintenance update. Jadi, pengguna dapat terus menggunakan Ubuntu tanpa perlu melakukan upgrade penuh setiap beberapa bulan sekali. Untuk versi non-LTS, security dan maintenance update-nya hanya diberikan selama satu tahun sejak tangal rilis.

- **Kali Linux**

Kali Linux, yang dulunya dikenal dengan nama BackTrack, adalah salah satu distro Linux yang dirancang khusus untuk Penetration Testing dan Security Auditing. Kali Linux dikembangkan, didanai dan dikelola oleh Offensive Security, sebuah perusahaan pelatihan keamanan informasi terkemuka. Berbasis Debian, Kali Linux mempunyai ratusan pre-install tool di dalamnya untuk kebutuhan penetration testing. Distro ini juga telah dipakai oleh banyak security professional, yang juga merupakan spesialis

di bidang penetration testing, forensik, reverse engineering, dan vulnerability assessment.

- **CentOS 7**

CentOS 7 adalah salah satu distro Linux terbaik untuk tahun 2018, yang merupakan distro cabang dari versi Enterprise Red Hat Linux dan difokuskan untuk stability (stabilitas). Layaknya Red Hat, security dan maintenance update untuk CentOS didukung sampai 10 tahun dari awal rilis. CentOS khusus dirancang untuk menjadi distro atau OS yang super-reliable. Oleh karena itu, distro ini sangat cocok digunakan untuk server. CentOS sendiri sangat jarang digunakan untuk pemakaian sehari-hari di PC desktop atau laptop pengguna.

- **openSUSE**

Sebelumnya dikenal sebagai SUSE Linux dan kemudian SuSE Linux Professional, openSUSE ditujukan untuk para pengembang dan administrator sistem. Untuk alasan itu, distro ini mempunyai protokol keamanan yang sangat ketat. OpenSUSE ini mempunyai dua varian distro utama: openSUSE Leap dan openSUSE Tumbleweed. Pengembangan Leap menggunakan source code dari SUSE Linux Enterprise, yang membuatnya jauh lebih stabil dari Tumbleweed. Versi baru dari openSUSE Leap ini dirilis kira-kira setahun sekali dan didukung selama tiga tahun. Berbeda dari Leap, pengembangan Tumbleweed didasarkan pada Factory, base development dari openSUSE sendiri. Tumbleweed menggunakan model peluncuran rolling. Dengan kata lain, suatu package aplikasi akan tersedia untuk didownload setelah diuji. Artinya, Tumbleweed berisi aplikasi terbaru yang stabil dan bagus untuk penggunaan sehari-hari.

2. 20 Perintah Dasar Linux

- ls = melihat isi direktor
- mkdir = mencipatakan direktori
- cd = mengubah direktori

- rmdir = menghapus direktori
- cat = Menampilkan isi file dan menciptakan file
- cp = Menyalin file
- rm = menghapus file
- mv = mengganti nama file/direktori dan memindahkan file ke direktori lain
- ln = link ke file lain
- lp = Mencetak isi file
- find = mencari file
- chmod = untuk mengubah model akses terhadap file atau direktori
- chgrp = mengubah grup fie
- chown = mengubah kepemilikan dari file
- echo = Menampilkan tulisan yang di buat setelah perintah echo dan itu tidak disimpan.
- sort = Mengurutkan suatu file teks menurut abjad.
- cut = Mengambil kolom tertentu dari baris-baris masukannya yang ditentukan pada option –c.
- uniq = Menghilangkan baris – baris berurutan yang mengalami duplikasi.
- locate = Mencari suatu file pada direktori lain yang sedang tidak dikunjungi.
- finger = Melihat informasi user yang telah ditambahkan oleh perintah chfn.

3. **Pengertian Init 0, Init 1, Init 2, Init 3, Init 4, Init 5, Init 6**

1. Init 0 => Digunakan utk maintenance, diagnostic hardware, booting selain dari disk misal dari cdroom.
command : init 0, shutdown -i0
2. Init 1 => Single user mode, digunakan utk menambahkan patches, backup/restore system. di level ini kita bisa menjalankan/access semua file tapi user lain tidak bisa login ke dalam sytem kita.
command: init 1, shutdown -i1
3. Init 2 => multiuser mode, biasanya utk digunakan dalam network. tapi disini tidak ada resourches yang di share.
command: init2, shutdown -i2
4. Init 3 ==> memperluas multiuser mode,kita bisa membuat local resourches share pada network kita. sehingga kita bisa berbagi data dilevel ini dalam network.
command: init 3, shutdown -i3

5. Init 4 ==> utk alternative multiuser mode tetapi saat ini belum bisa digunakan.
command: init4, shutdown -i4
6. Init 5 ==> utk shutdown/ power off.
command: init5, shutdown -i5
7. Init 6 ==> men stop operating system kemudian reboot dan kembali ke initdefault nya yang ada di /etc/inittab
command: init 6, shutdown -i6

4. Pengertian Quota

Quota adalah nilai batas yang ditetapkan untuk mengelola akses ke sumber daya sistem dan jaringan atau jumlah penyimpanan yang digunakan oleh User atau Group tertentu.

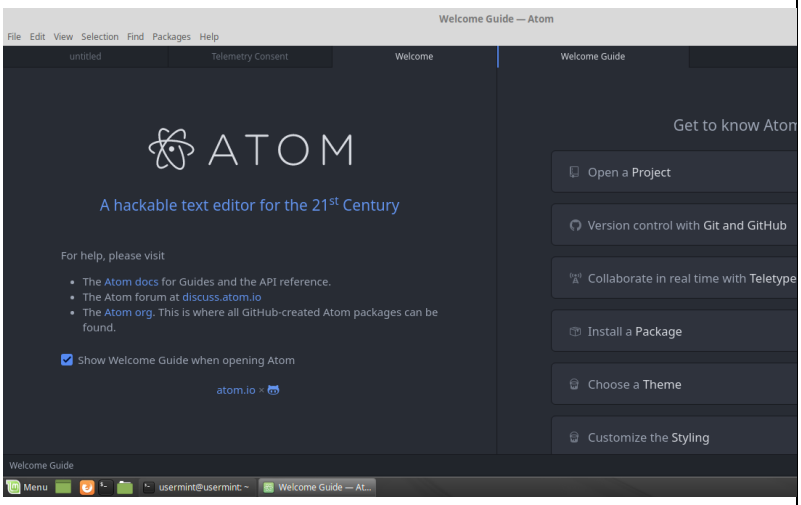
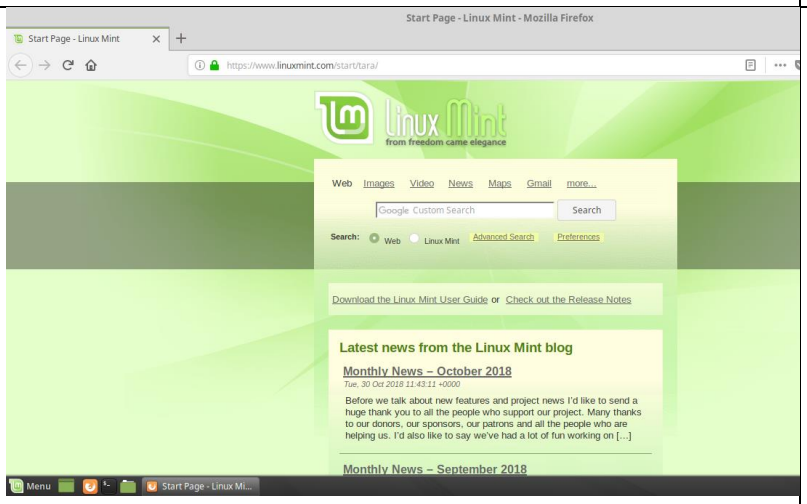
Disk quota bisa diterapakan per user atau per group.jika diterapkan per user maka quota yang diterapkan mutlak milik user tersebut. misal : user Ical memiliki disk quota 5 MB, maka total 5MB tersebut adalah mutlak milik user Ical.jika disk quota diterapkan per group maka kapasitas yang ditetapkan adalah milik bersama group tersebut. misal : user Ical dan RedHat adalah anggota group Linux's. Jika group Linux's diberi quota sebesar 10 MB maka kapasitas tersebut adalah milik user Ical dan RedHat. Jadi misalkan user Ical menggunakan sebanyak 6MB maka masih terdapat 4MB untuk digunakan oleh user RedHat.

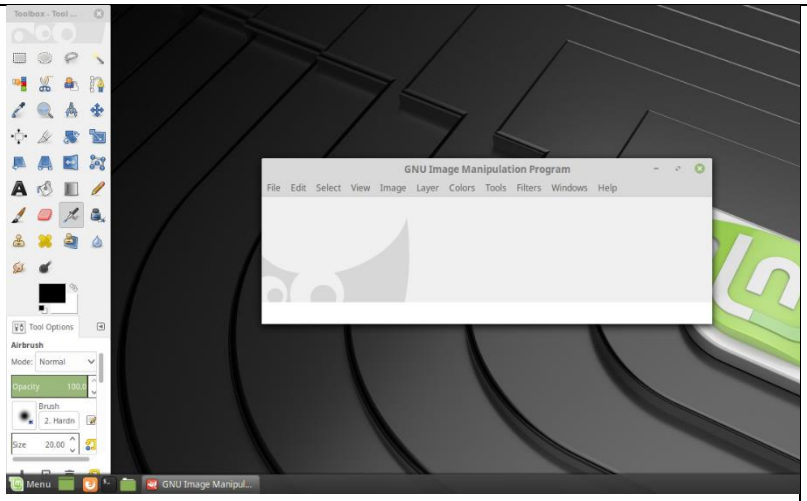
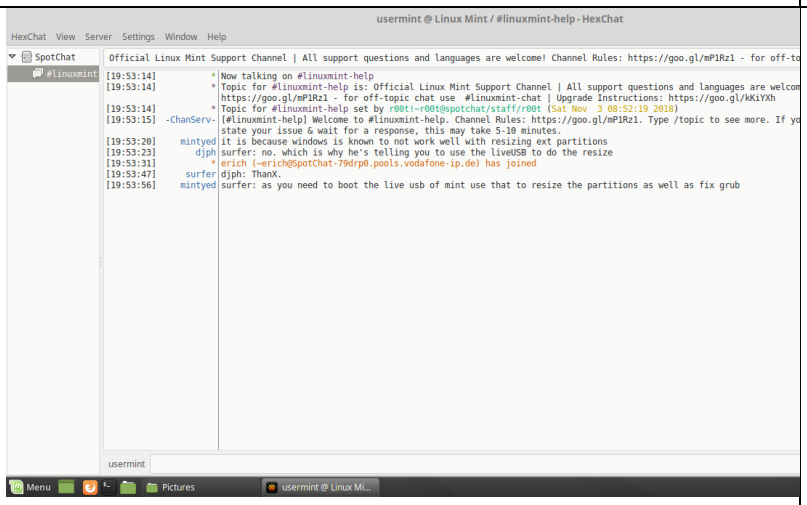
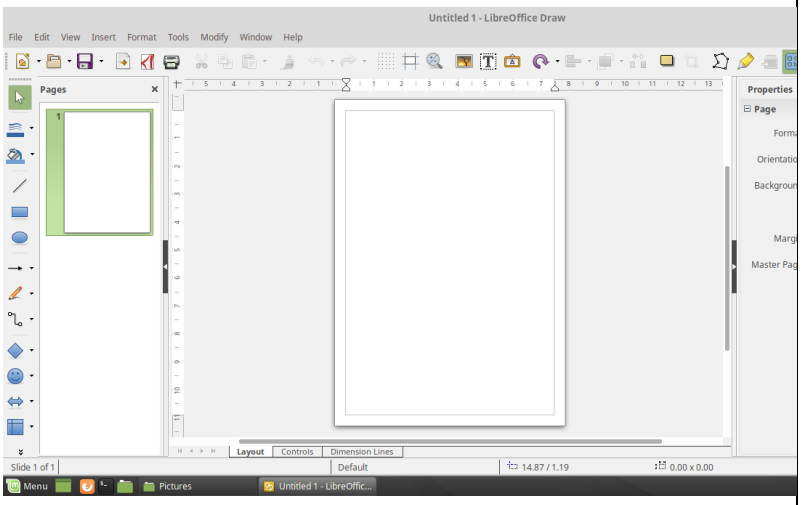
Pembatasan disk quota ditentukan oleh dua kategori yaitu hard limit dan soft limit:

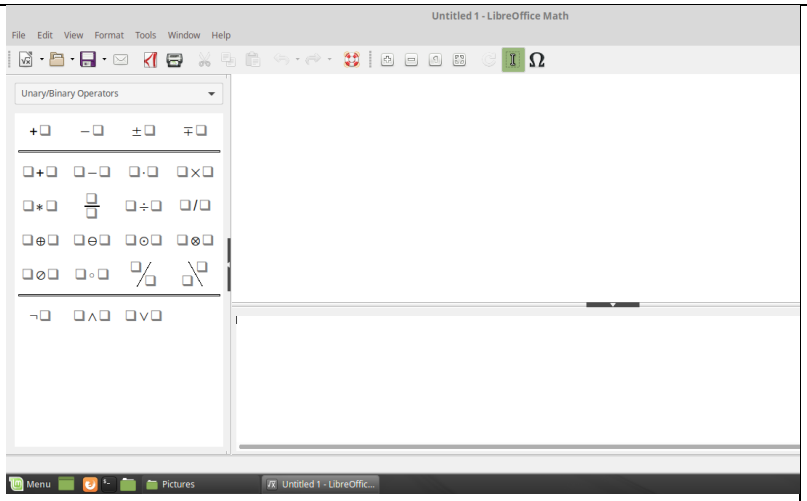
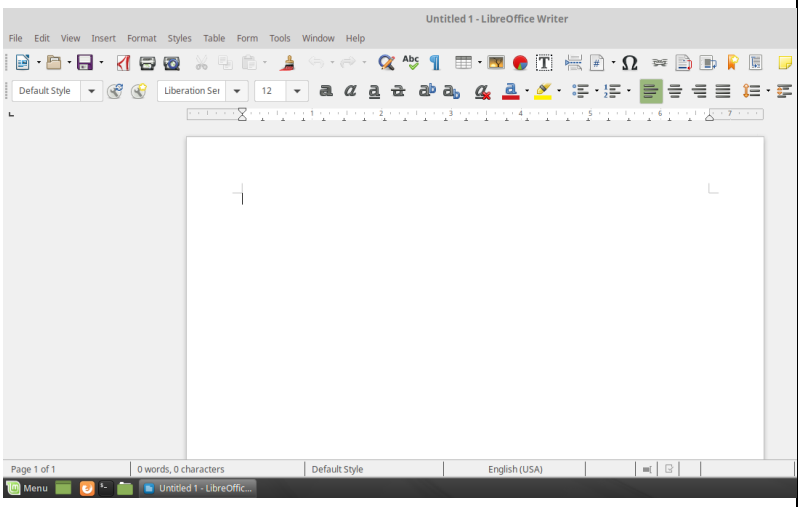
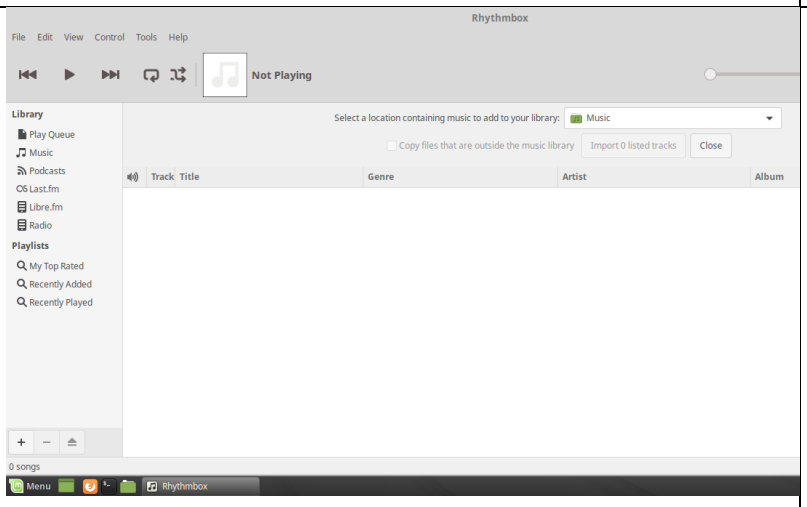
Hard Limit adalah batas yang tidak dapat dilewati. jika user telah mencapai batas hard limit maka user tersebut tidak dapat memasukkan data lagi ke hard disk. Contoh jika user Ical memiliki quota 5 MB dan sudah digunakan 4.9 MB dengan demikian sisanya tinggal 0.1 MB jika kemudian dia mencoba untuk menyimpan file sebesar 0.4MB maka sistem akan menolaknya.

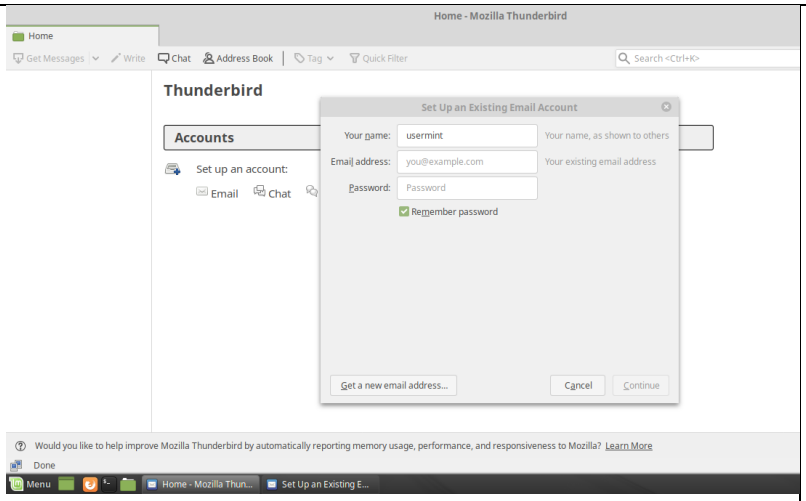
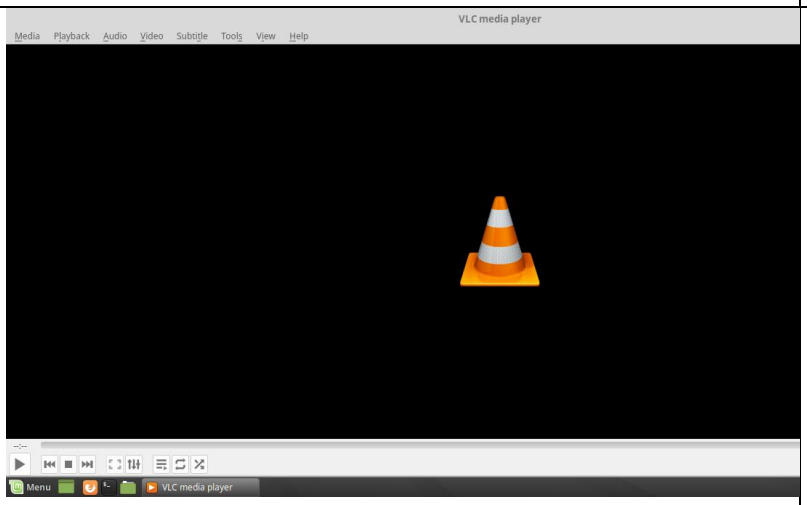
Soft Limit adalah batas yang bisa dilewati. Namun hanya dalam periode tertentu, periode tersebut disebut dengan grace period. Default nilai grace period adalah 7 hari. Umumnya nilai hard limit lebih besar dari soft limit. untuk lebih jelas perhatikan contoh berikut, misalkan user Ical diberikan soft limit sebesar 10 MB, hard limit 15 MB, serta grace period 3 hari. Jika user optimus sudah menggunkan kapasitas hard disk sebesar 12 MB maka nilai soft limitnya sudah terlewati, dengan demikian perhitungan grace period dimulai, jika dalam waktu 3 hari user optimus belum mengurangi penggunaan disknya sampai di bawah soft limit, maka dia tidak dapat menggunakan disk lagi walaupun nilai hard limitnya belum di capai, jika user optimus mengurangi batas penggunaan disknya sampai di bawah 10 MB maka nilai grace period kembali di reset ke 3 hari.

MODUL 6

No	Aplikasi	Tampilan	Fungsi
1	Atom		Berfungsi sebagai teks editor.
2	Firefox Web Browser		Sebagai web-browser atau penjelajah web.
3	Gimp		Berfungsi sebagai aplikasi pengolah gambar.

			
4	HexChat		Berfungsi sebagai aplikasi chatting IRC.
5	LibreOffice Draw		Berfungsi untuk membuat dan memanipulasi data gambar digital 2 dimensi.

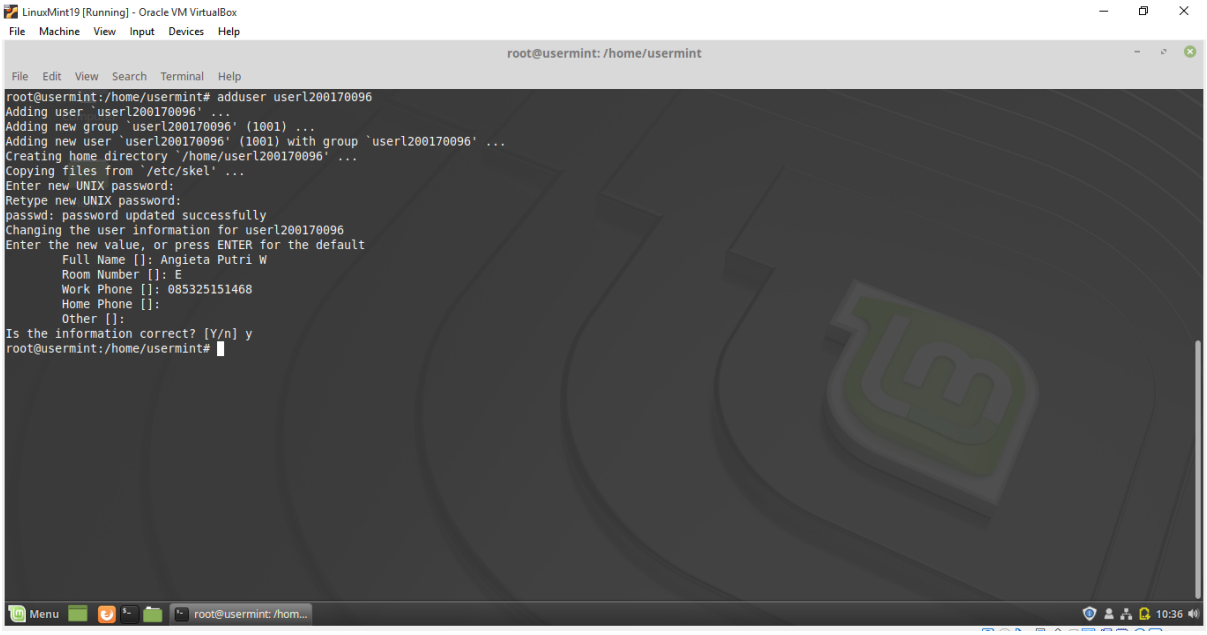
6	LibreOffice Math		Berfungsi sebagai penyunting rumus atau persamaan pada dokumen teks seperti LibreOffice Writer.
7	LibreOffice Writer		Berfungsi sebagai aplikasi pengolah kata.
8	Rhythmbox		Berfungsi sebagai aplikasi pemutar lagu.
9	ThunderBird		Berfungsi sebagai aplikasi klien surat elektronik.

			
10	VLC Media Player		Berfungsi sebagai aplikasi pemutar berkas multimedia.

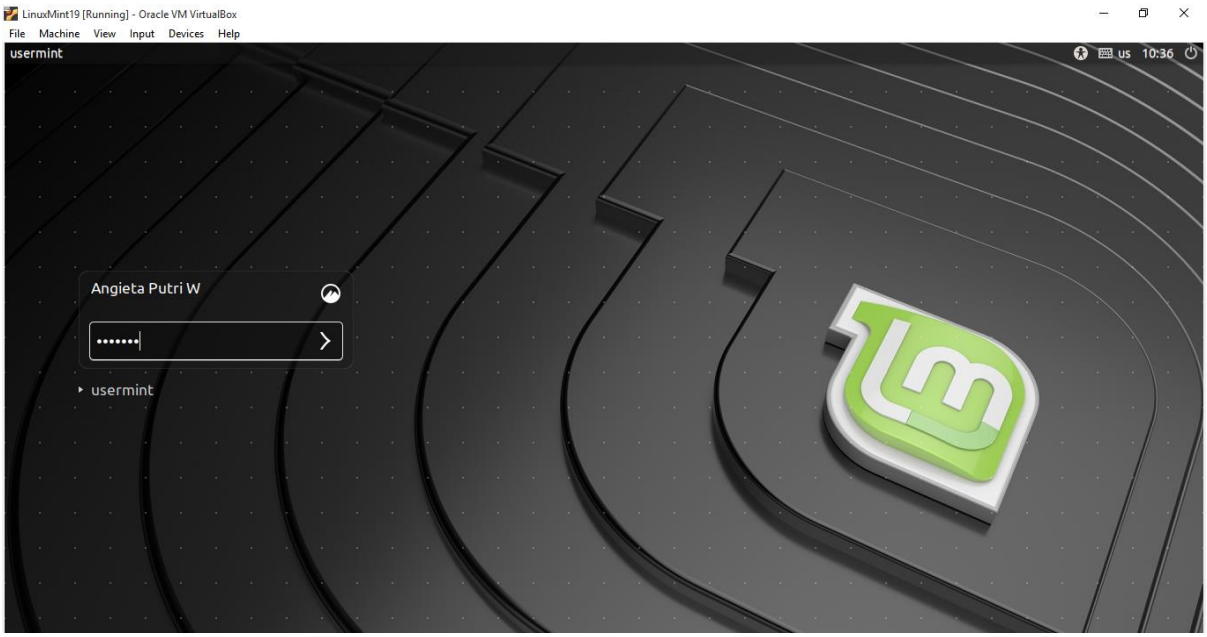
MODUL 7

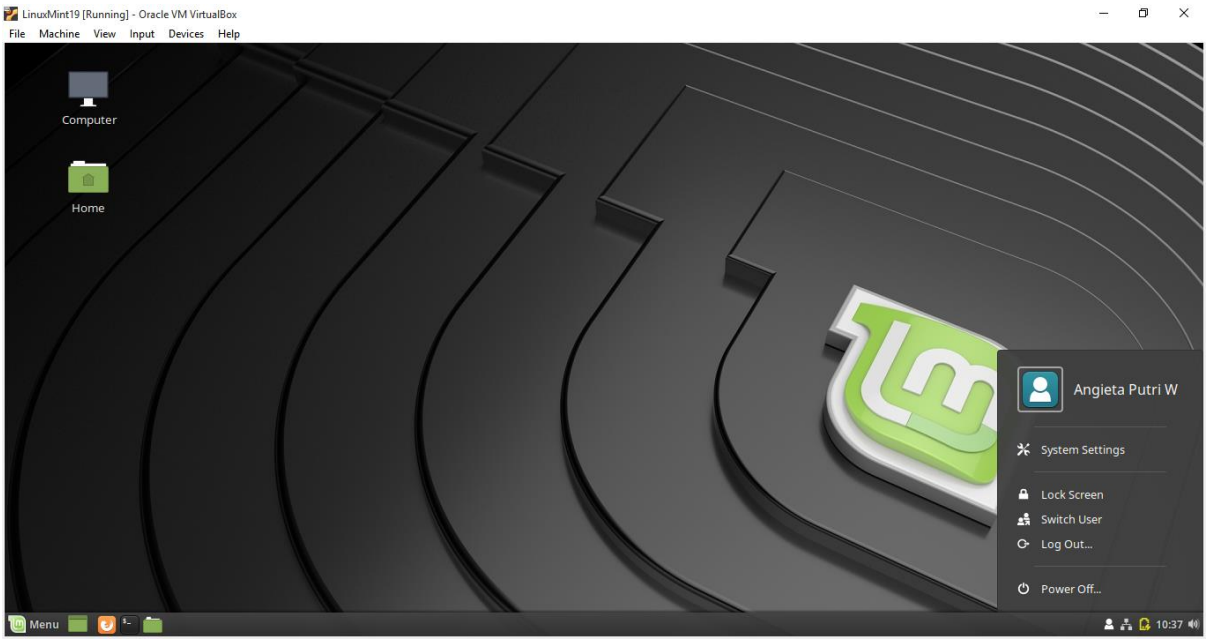
Praktikum 1:

1. Membuat user baru



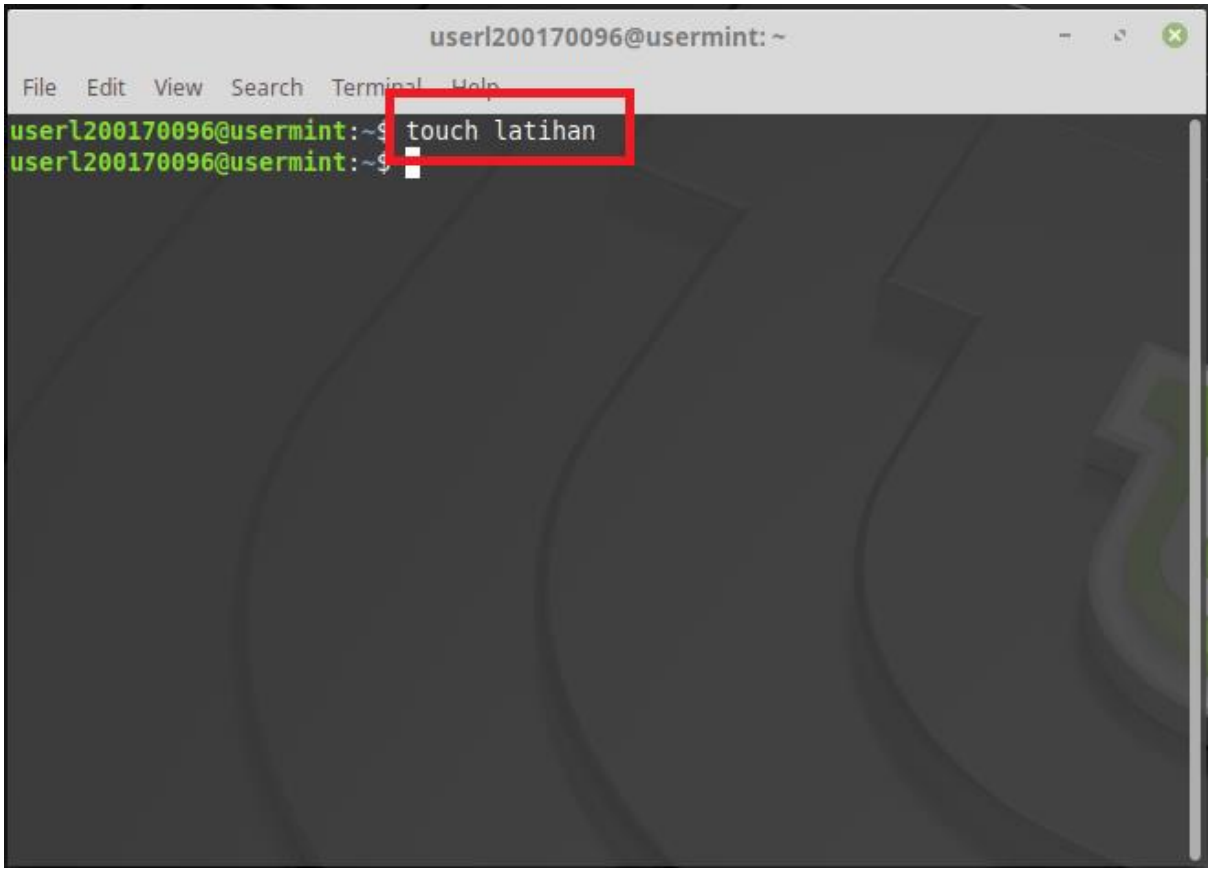
2. Login ke user baru



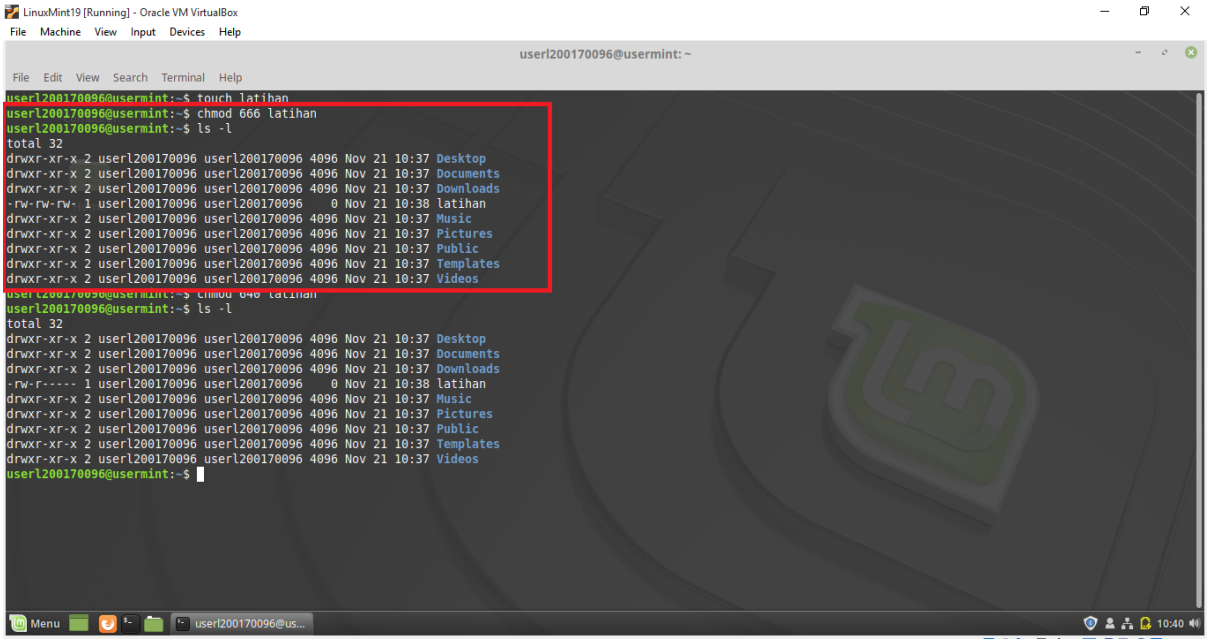


Praktikum 2:

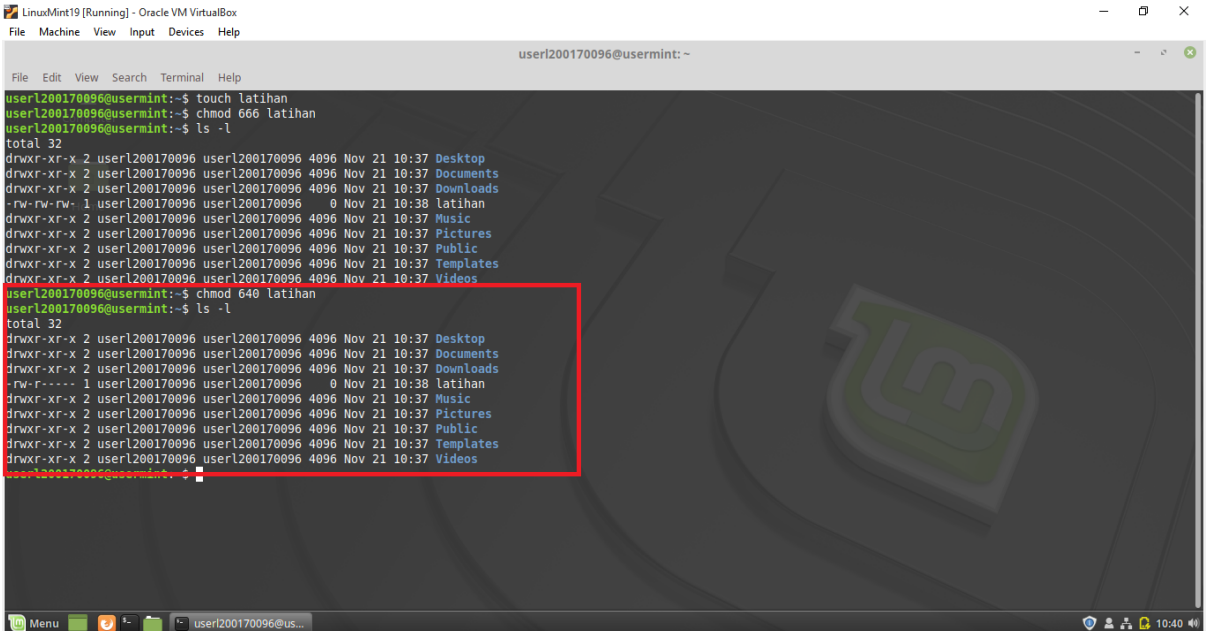
1. Membuat file baru



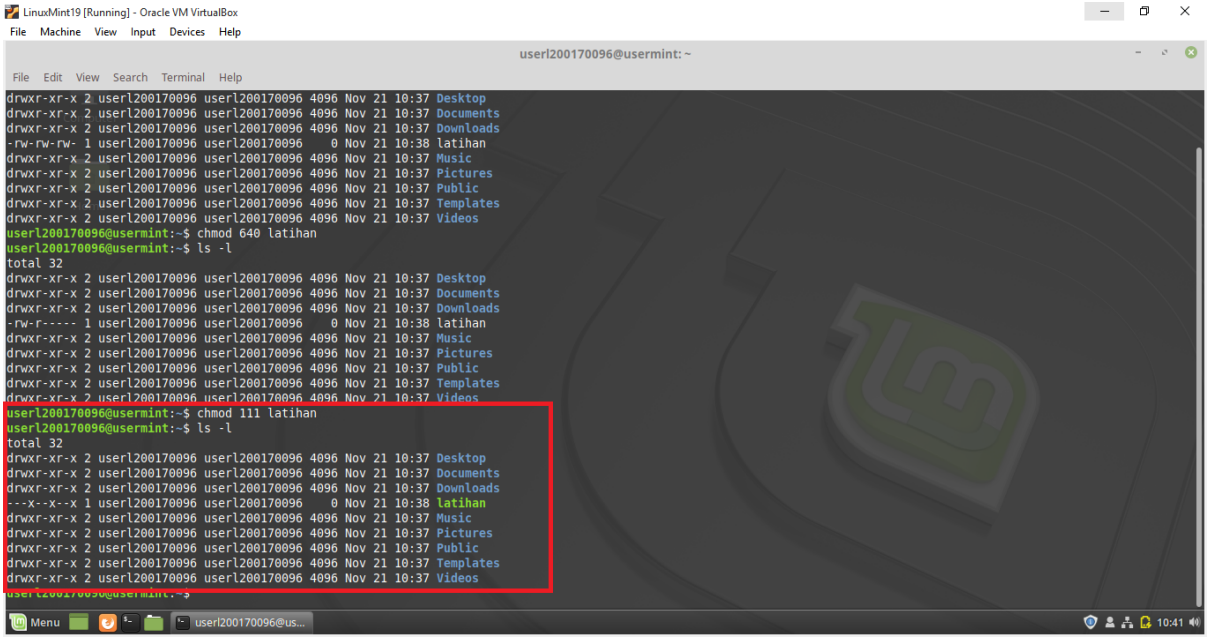
2. Membuat izin akses menjadi read dan write untuk semua pengguna



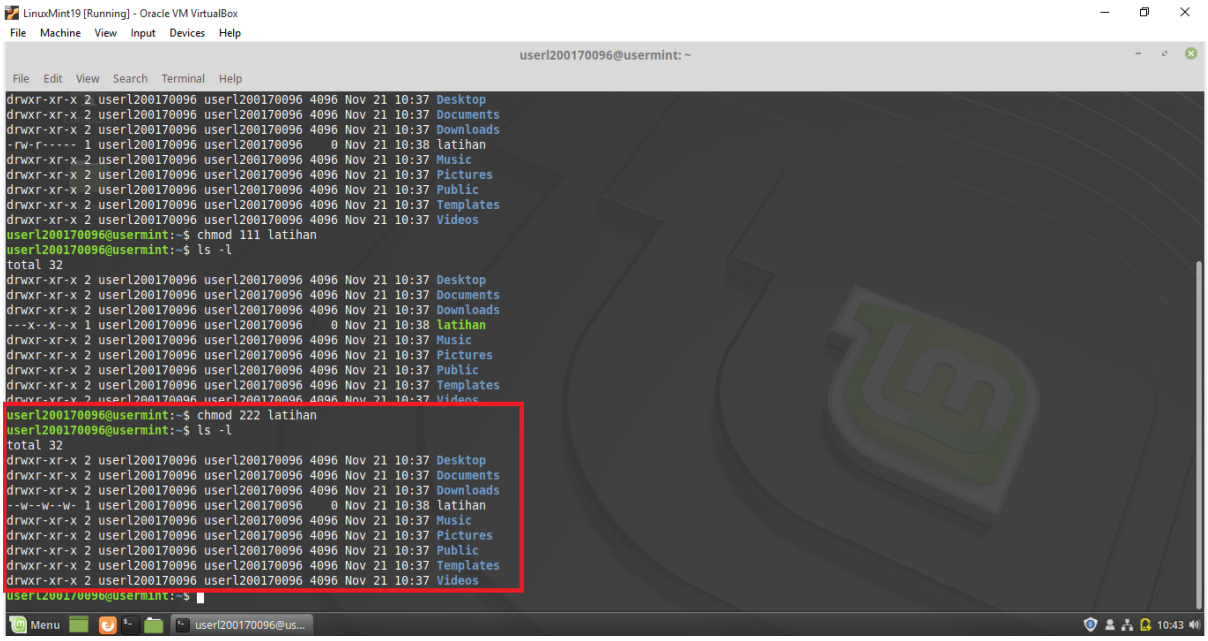
3. Membuat izin akses menjadi read, write untuk user dan read untuk group



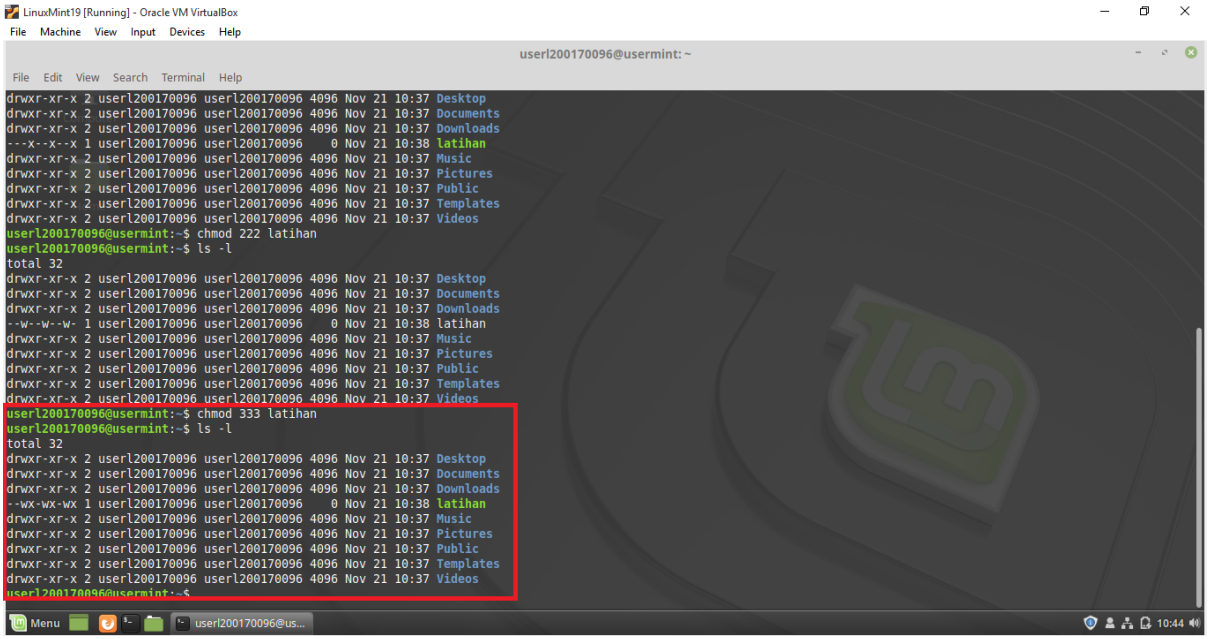
4. Membuat izin akses menjadi execute untuk semua pengguna



5. Membuat izin akses menjadi write untuk semua pengguna

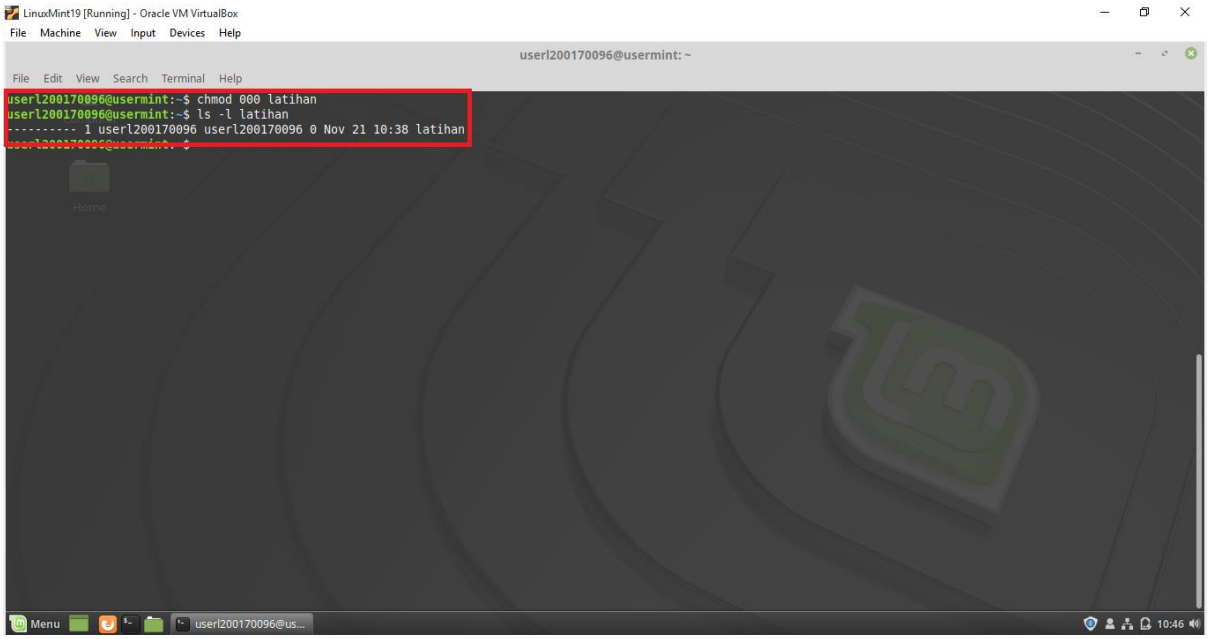


6. Membuat izin akses menjadi write dan execute untuk semua pengguna

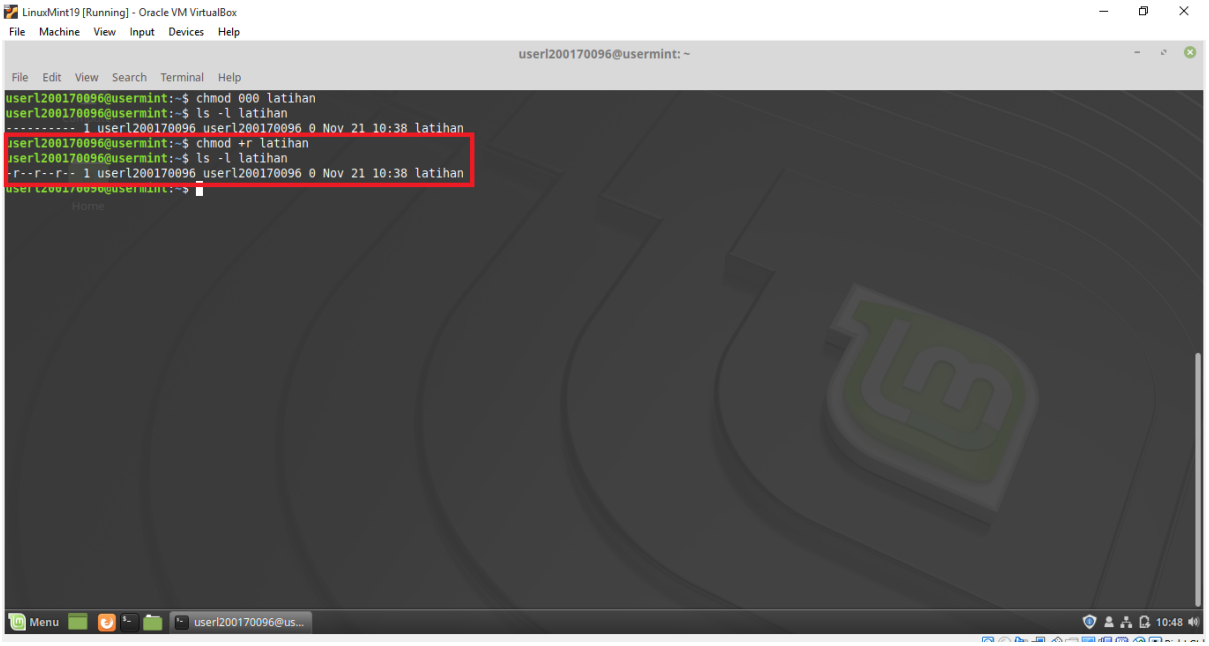


Praktikum 3

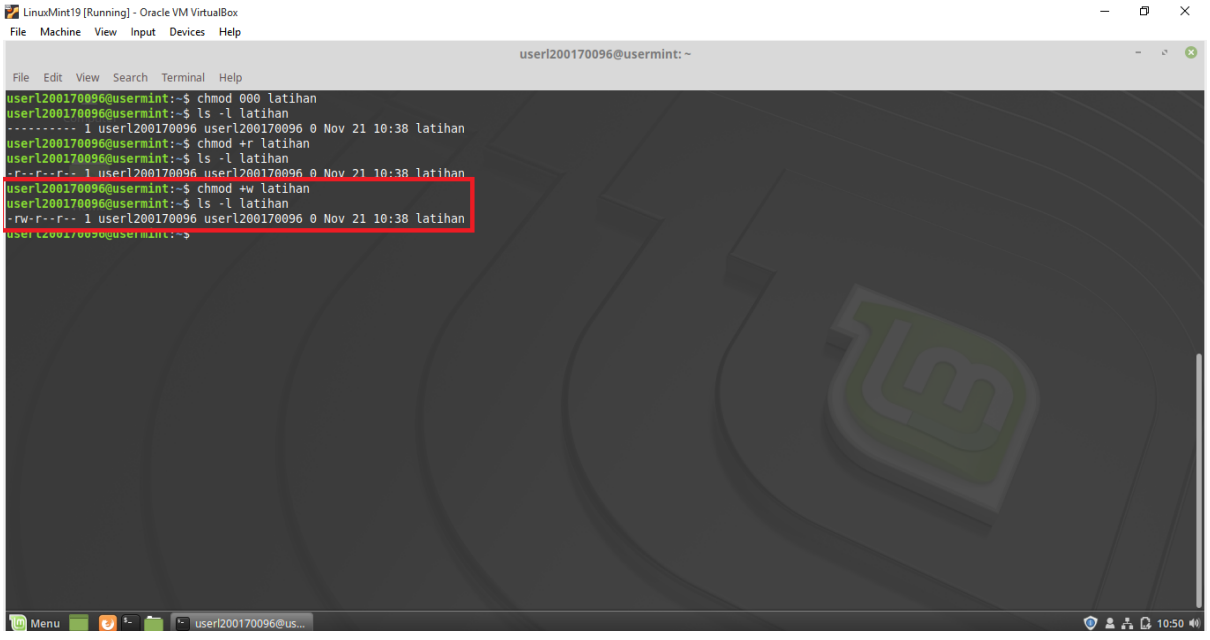
1. Tidak memberikan hak akses



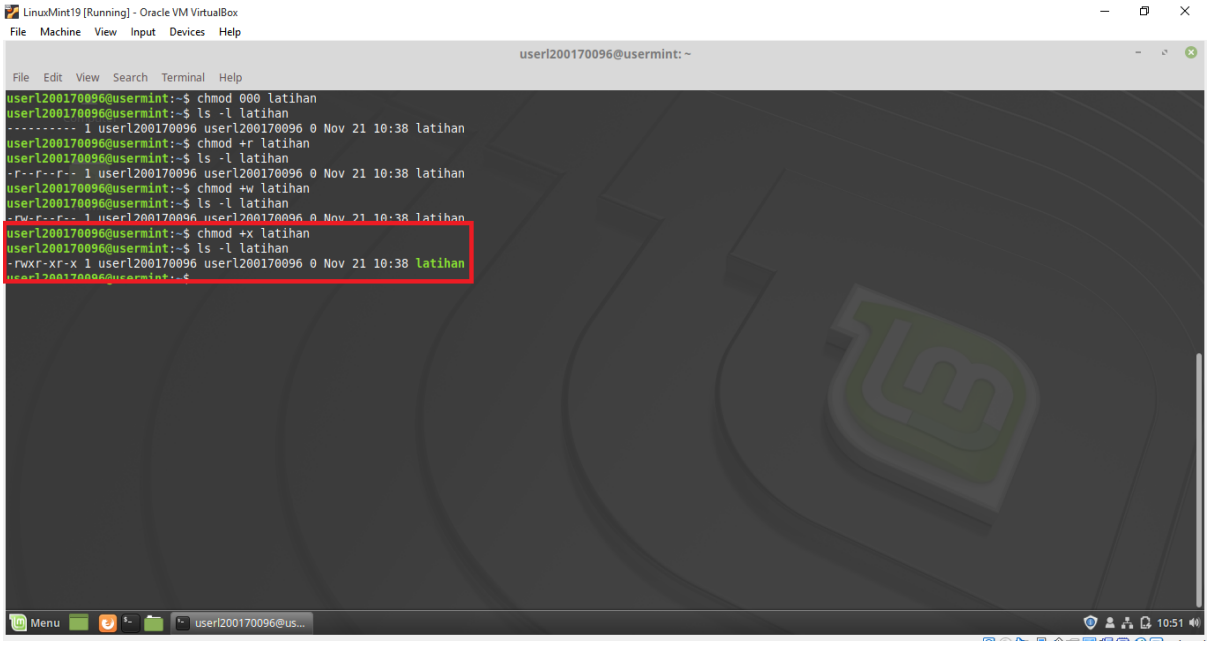
2. Menambah hak akses read



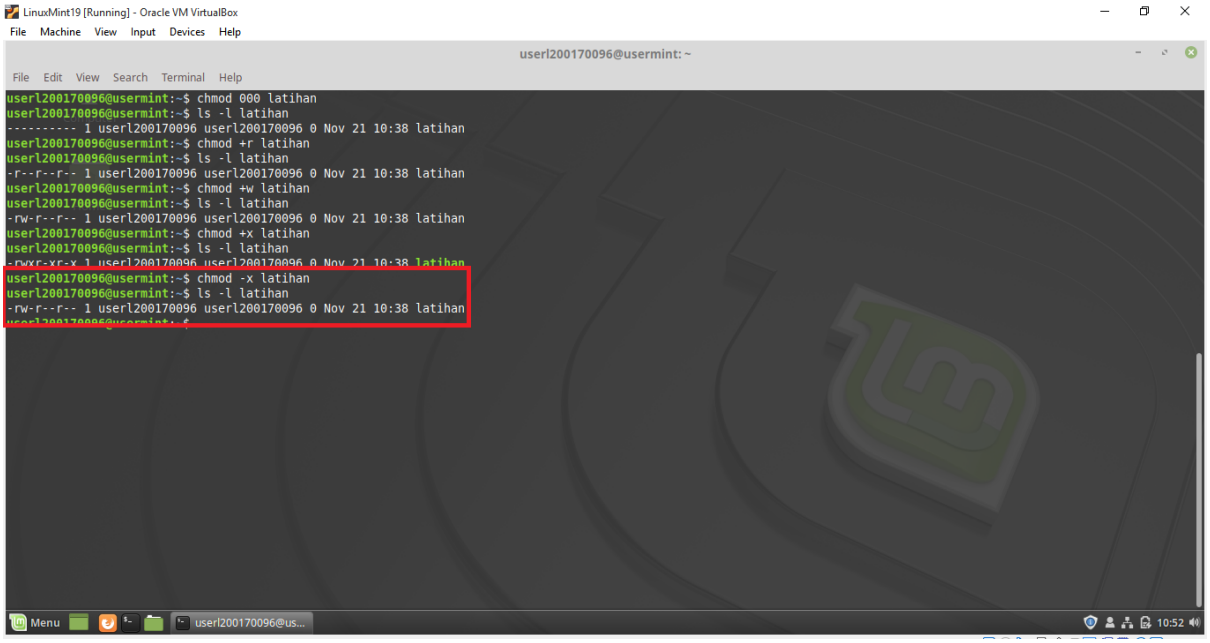
3. Menambahkan hak akses write



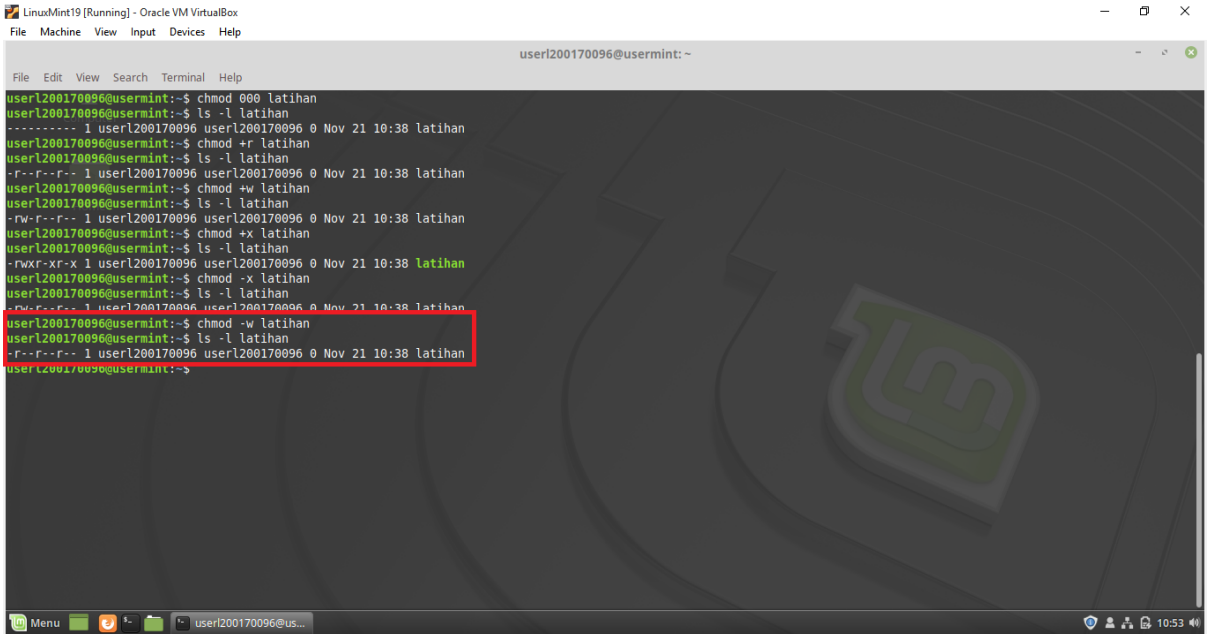
4. Menambahkan hak akses execute



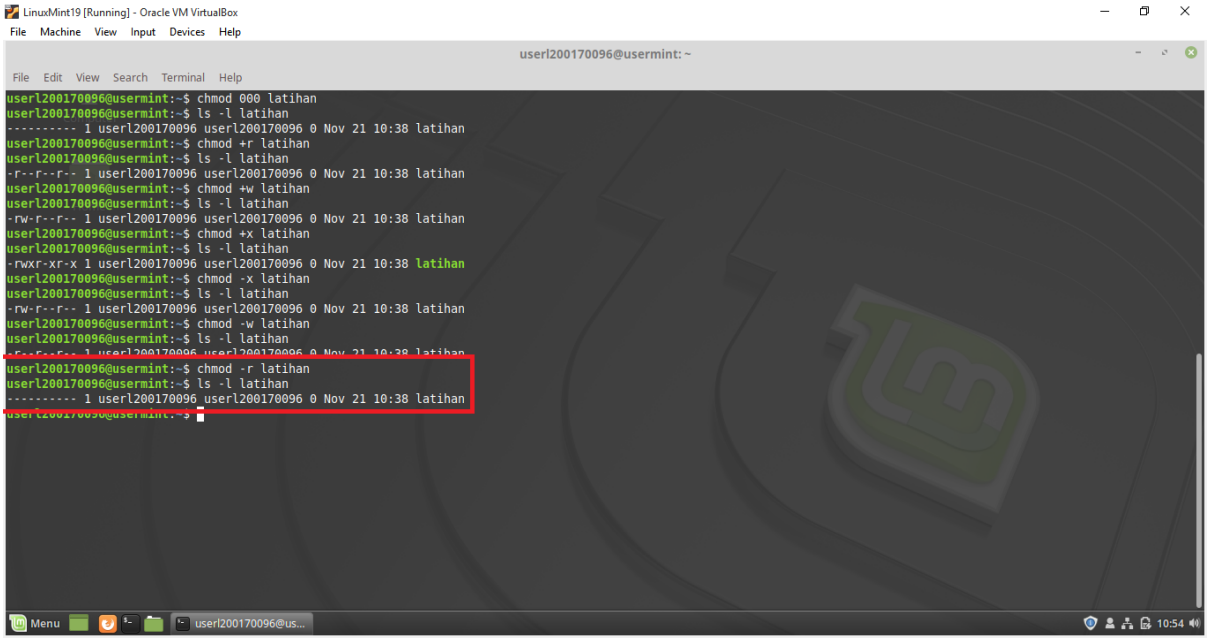
5. Menghilangkan hak akses execute



6. Menghilangkan hak akses write

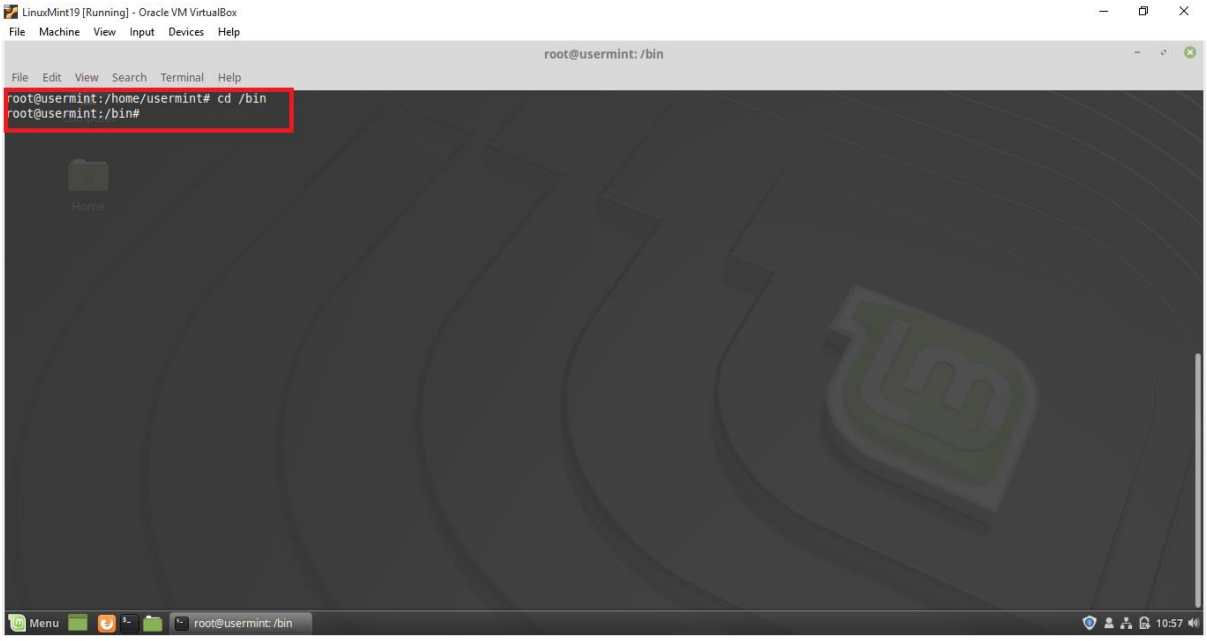


7. Menghilangkan hak akses read

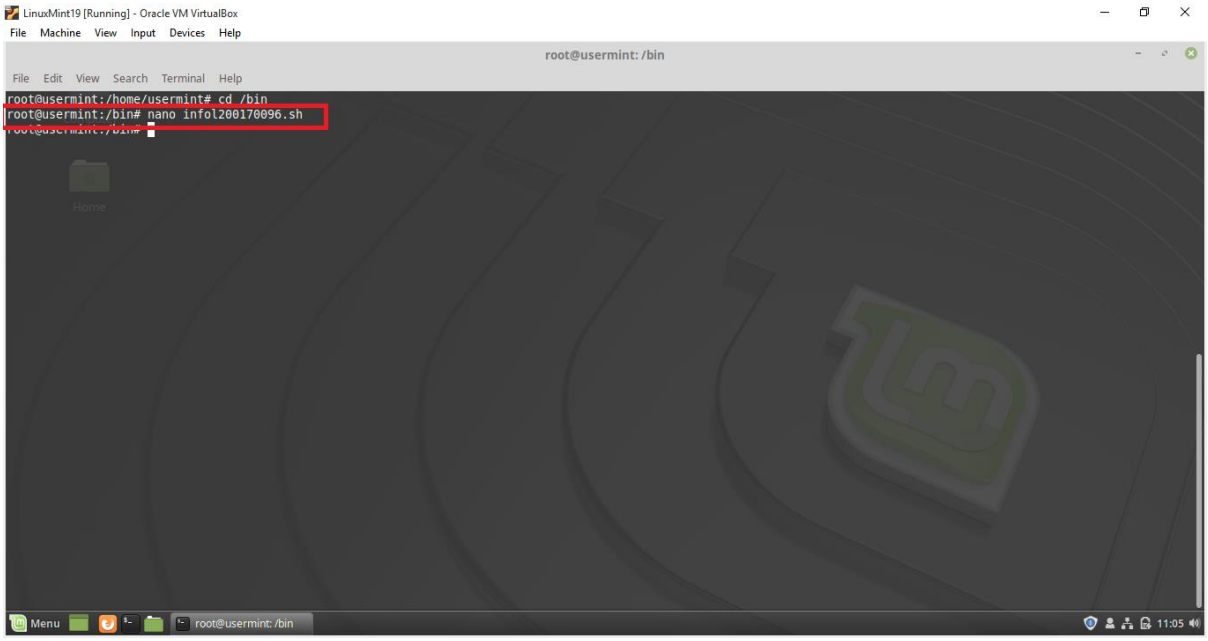


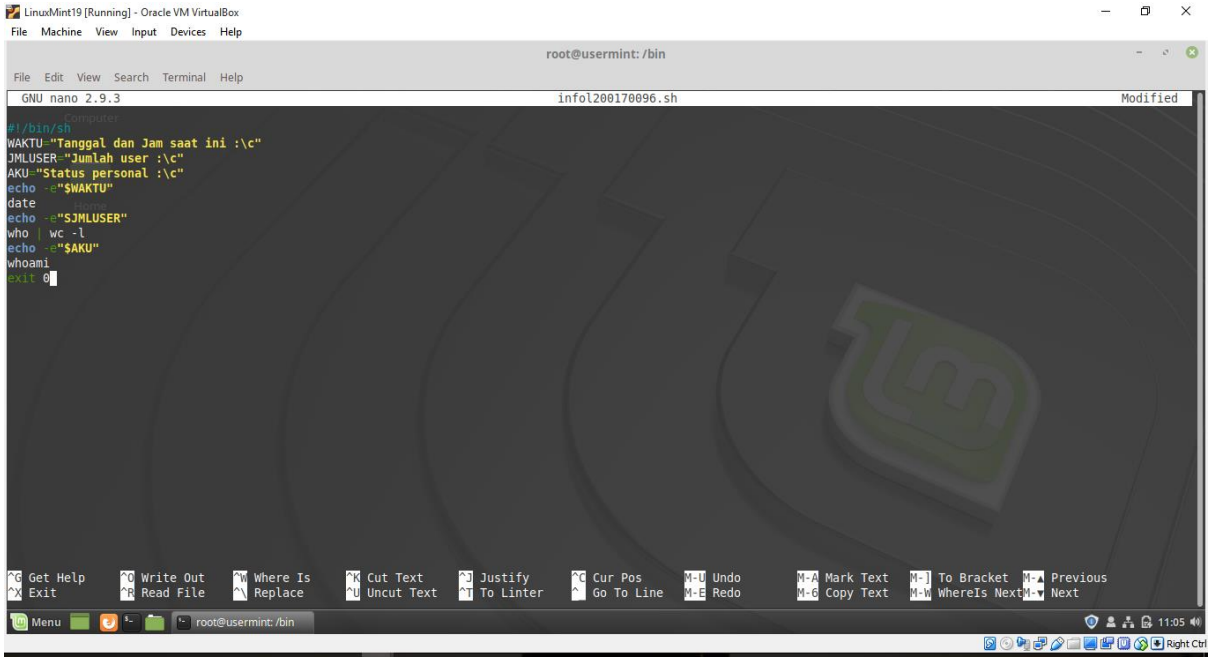
Praktikum 4

1. Masuk ke bin

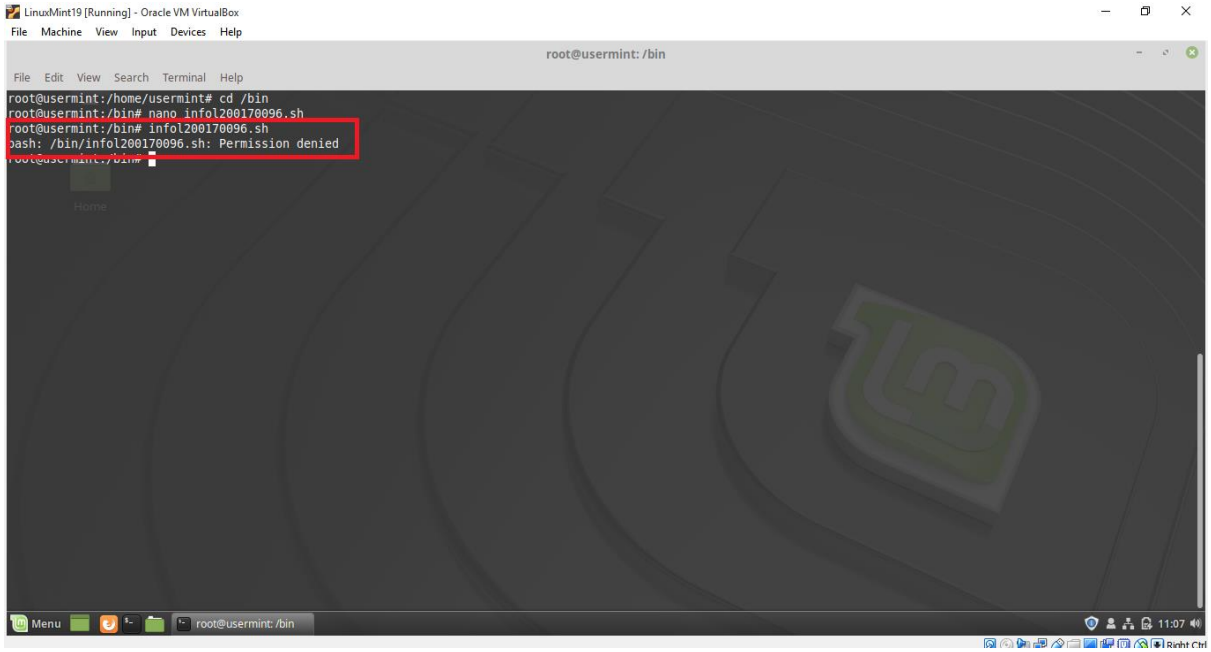


2. Membuat file dan sekaligus ketik isi

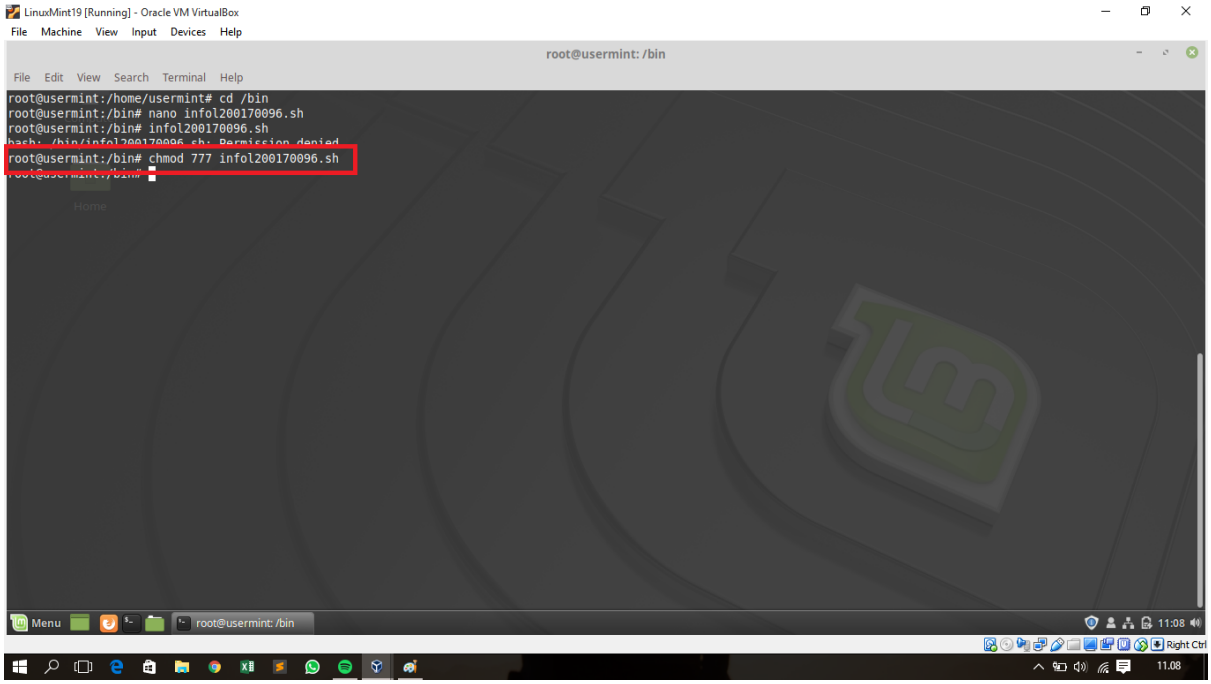




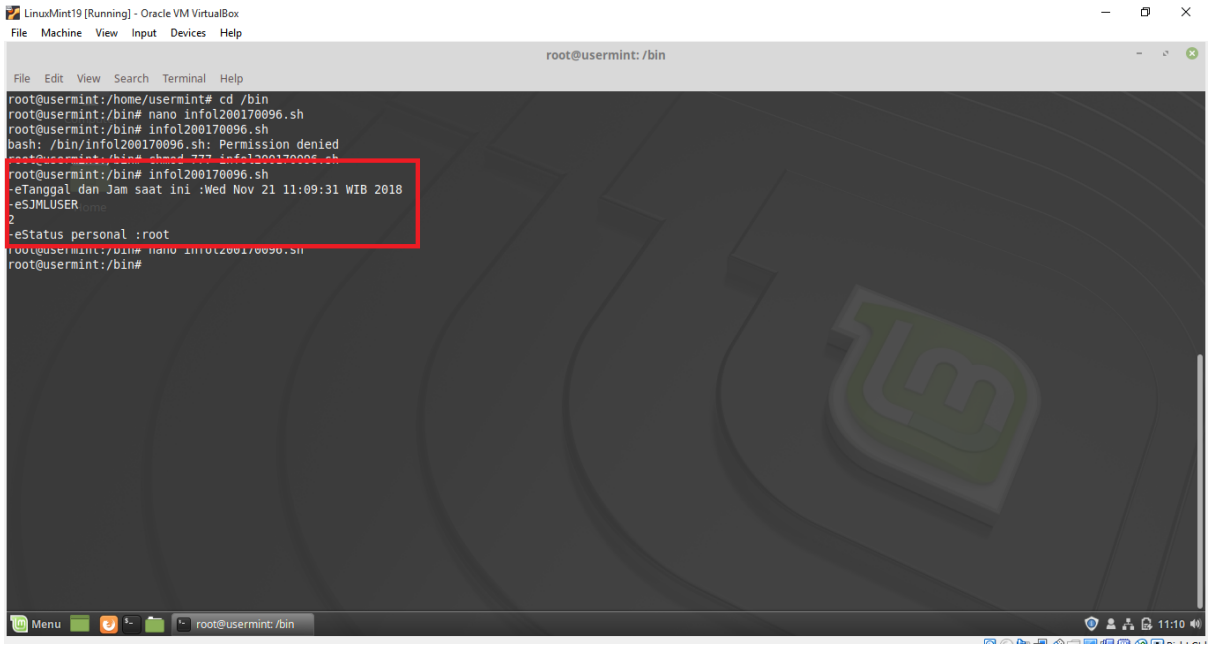
3. Masukkan perintah logininfo.sh



5. Ubah hak akses

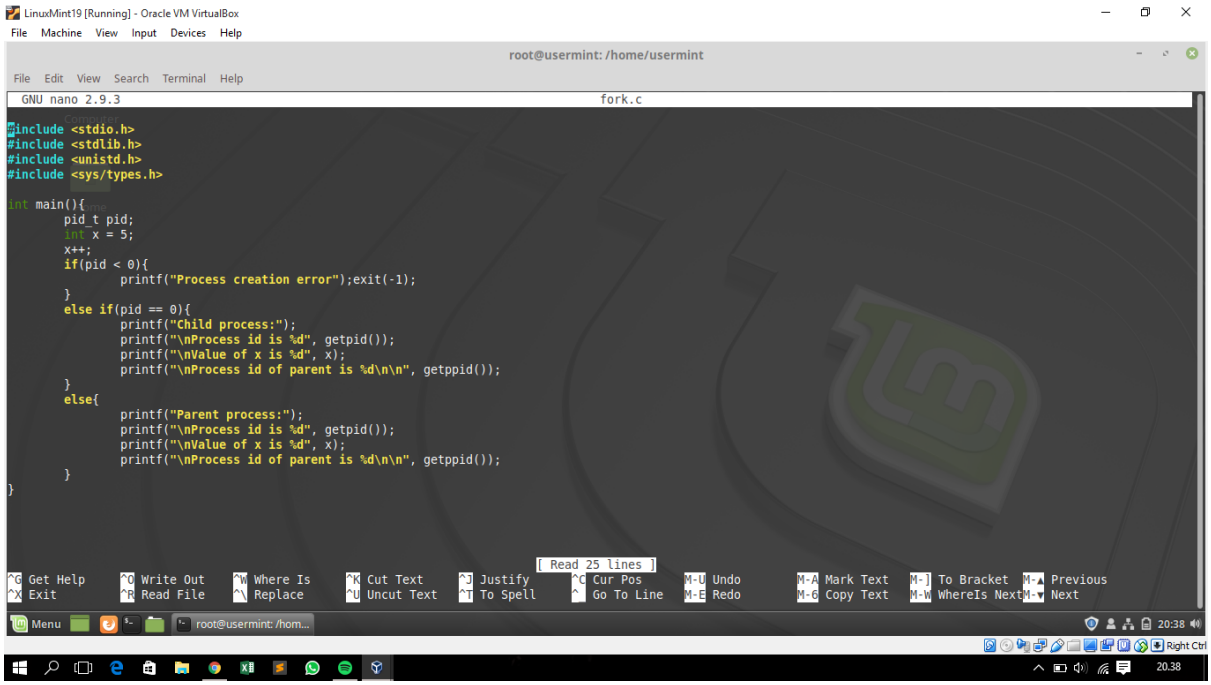


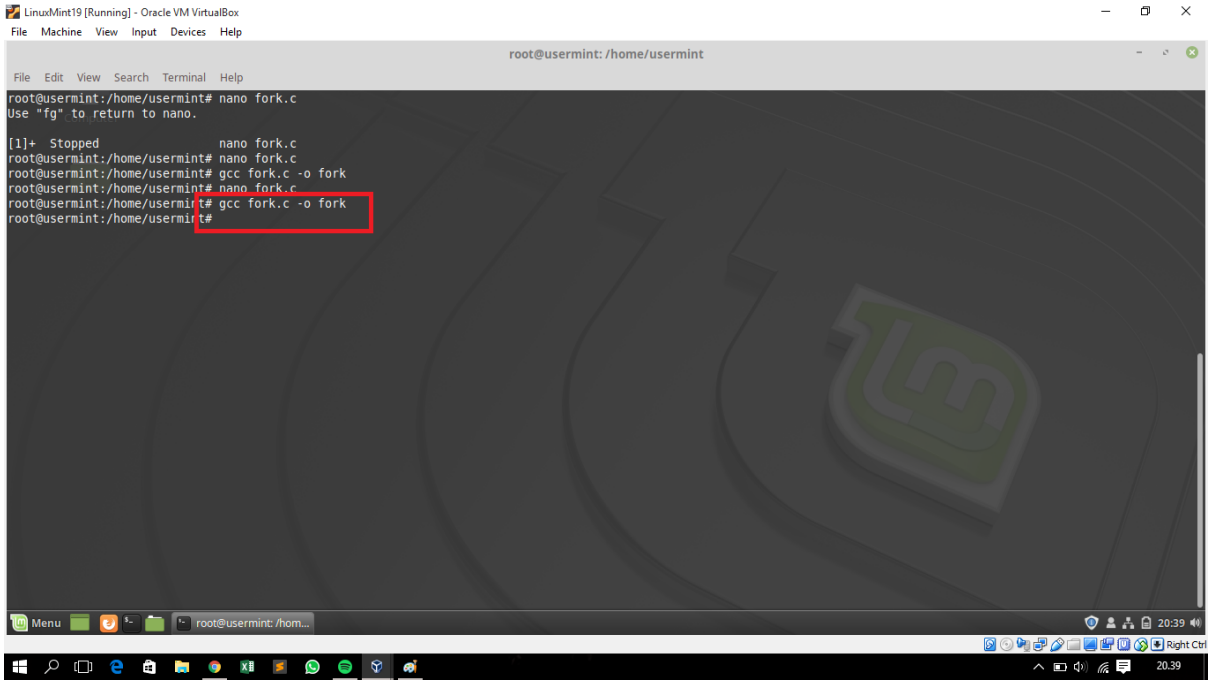
6. Lihat hasilnya

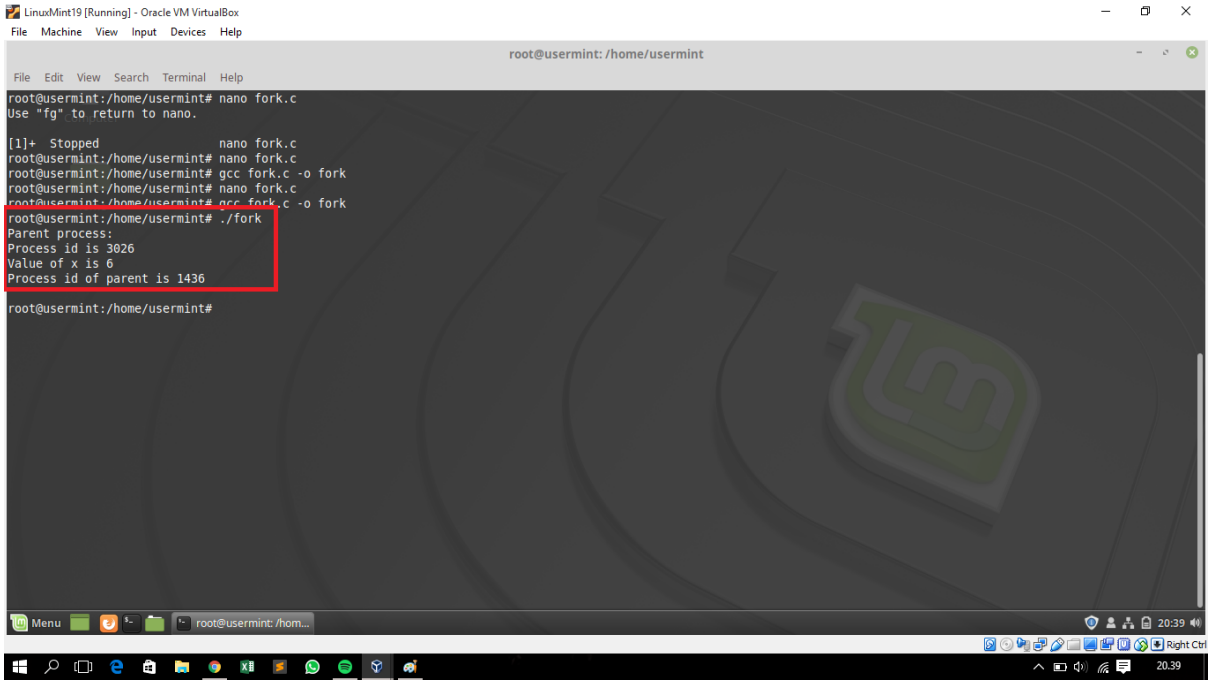


MODUL 8

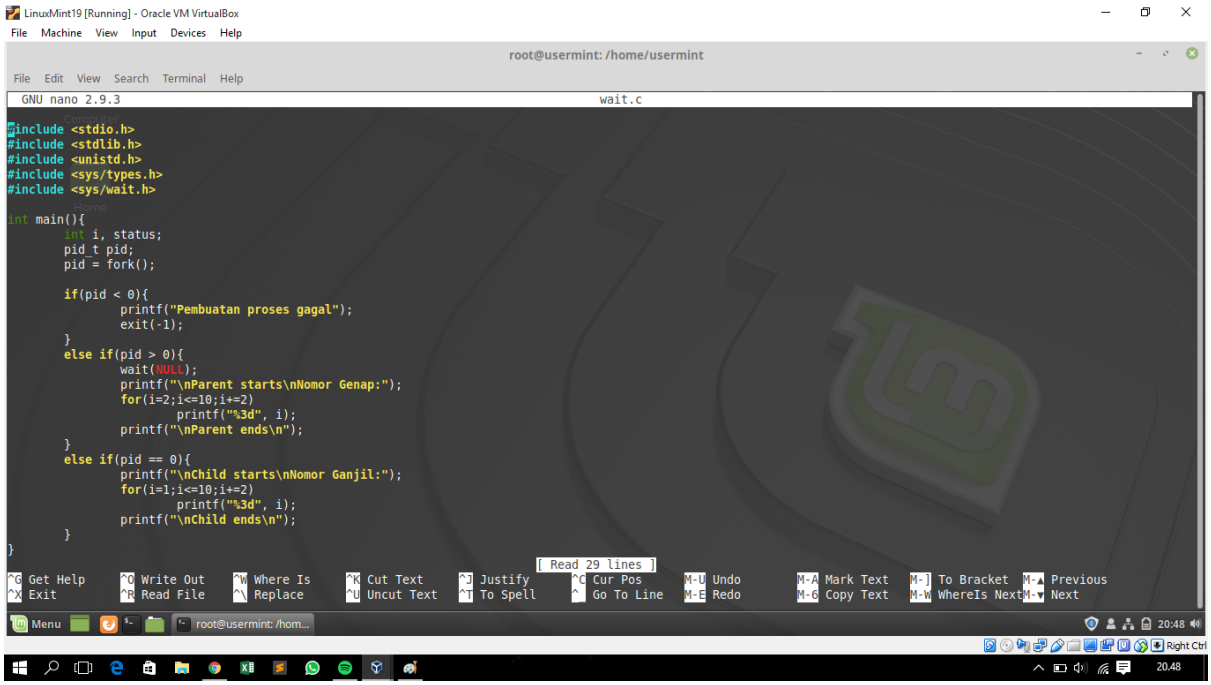
Fork.c

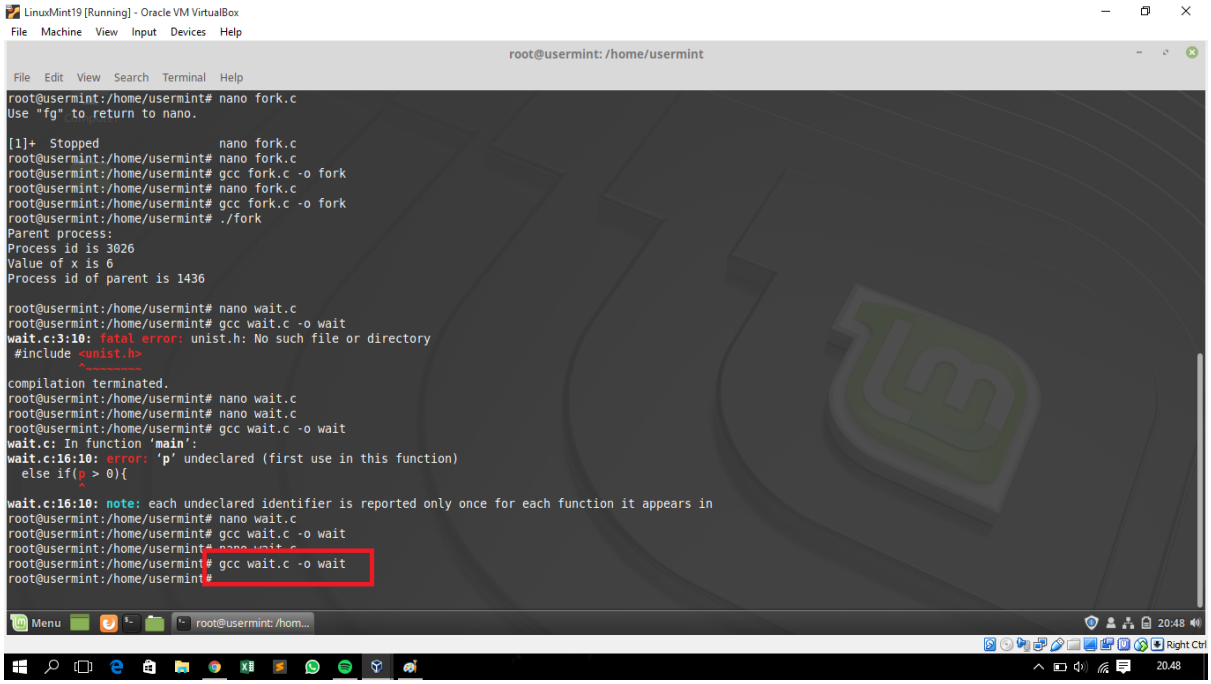


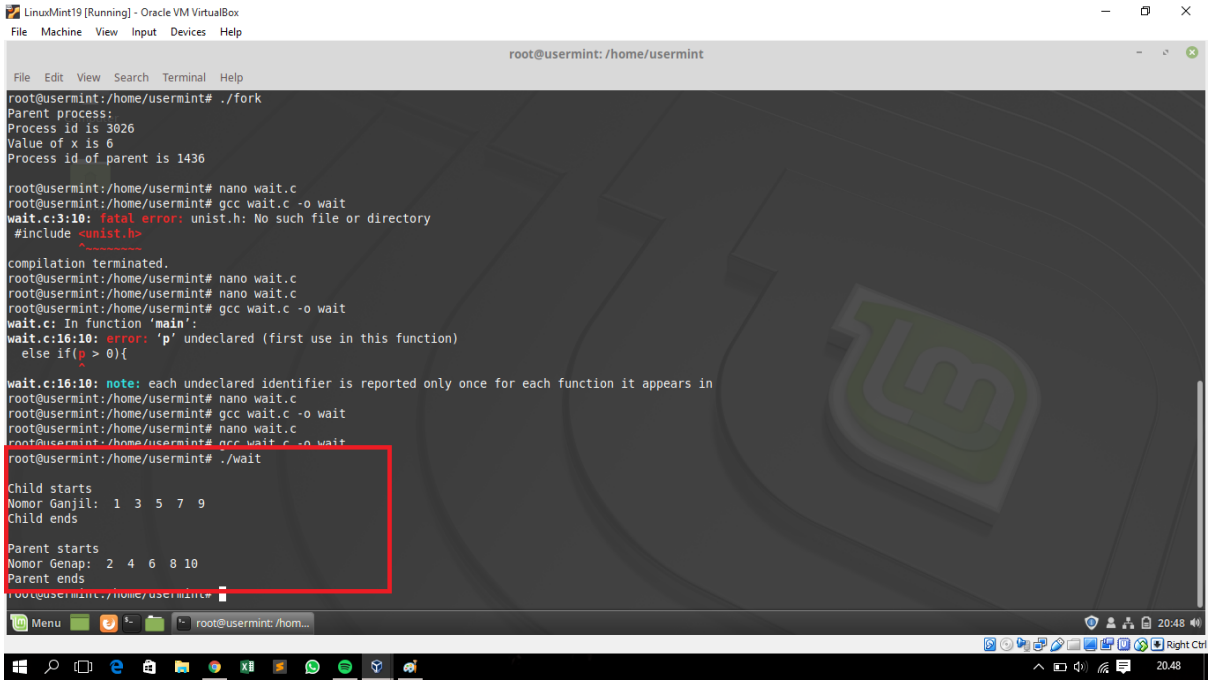



LinuxMint19 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
root@usermint: /home/usermint
File Edit View Search Terminal Help
root@usermint:/home/usermint# nano fork.c
Use "fg" to return to nano.
[1]+ Stopped nano fork.c
root@usermint:/home/usermint# nano fork.c
root@usermint:/home/usermint# gcc fork.c -o fork
root@usermint:/home/usermint# nano fork.c
root@usermint:/home/usermint# gcc fork.c -o fork
root@usermint:/home/usermint# ./fork
Parent process:
Process id is 3026
Value of x is 6
Process id of parent is 1436
root@usermint:/home/usermint#
Menu
root@usermint: /hom...
20:39
Right Ctrl
20.39

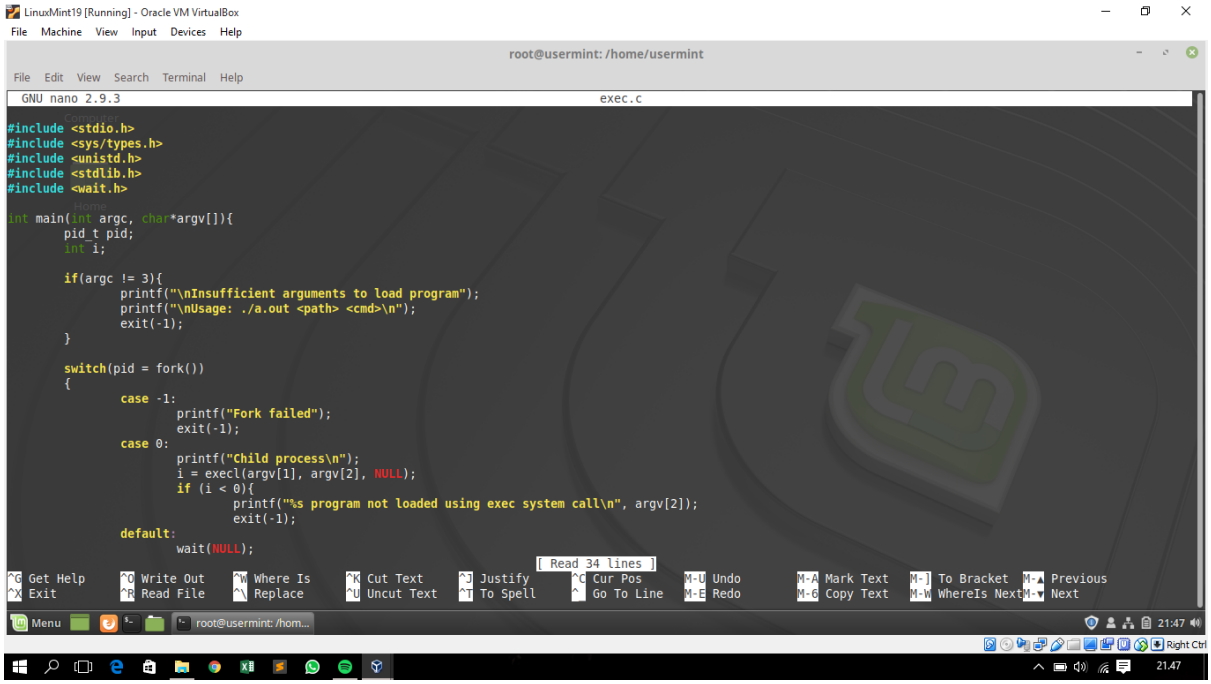
Wait.c

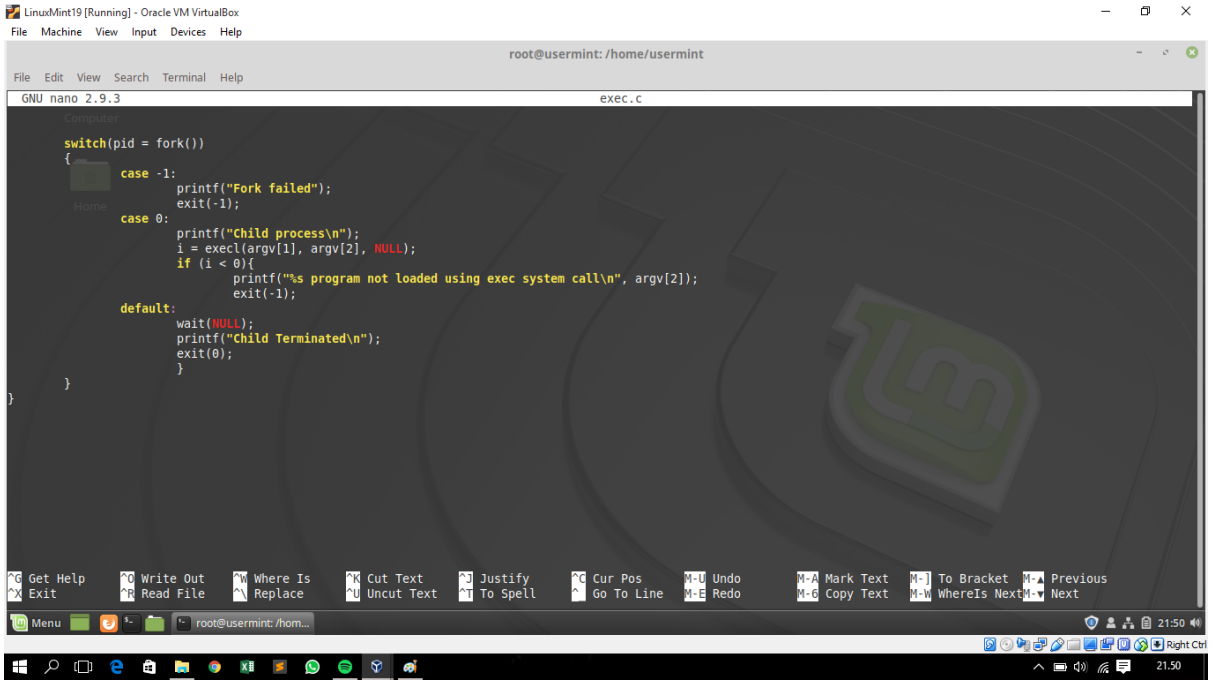

LinuxMint19 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
root@usermint: /home/usermint
File Edit View Search Terminal Help
GNU nano 2.9.3 wait.c
#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>
#include <sys/types.h>
#include <sys/wait.h>
int main(){
int i, status;
pid_t pid;
pid = fork();
if(pid < 0){
printf("Pembuatan proses gagal");
exit(-1);
}
else if(pid > 0){
wait(NULL);
printf("\nParent starts\nNomor Genap:");
for(i=2;i<=10;i+=2)
printf("%3d", i);
printf("\nParent ends\n");
}
else if(pid == 0){
printf("\nChild starts\nNomor Ganjil:");
for(i=1;i<=10;i+=2)
printf("%3d", i);
printf("\nChild ends\n");
}
}
[Read 29 lines]
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos M-U Undo M-A Mark Text M-] To Bracket M-▲ Previous
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell ^_ Go To Line M-E Redo M-6 Copy Text M-W WhereIs Next M-▼ Next
Menu
root@usermint: /hom...
20:48
Right Ctrl
20.48

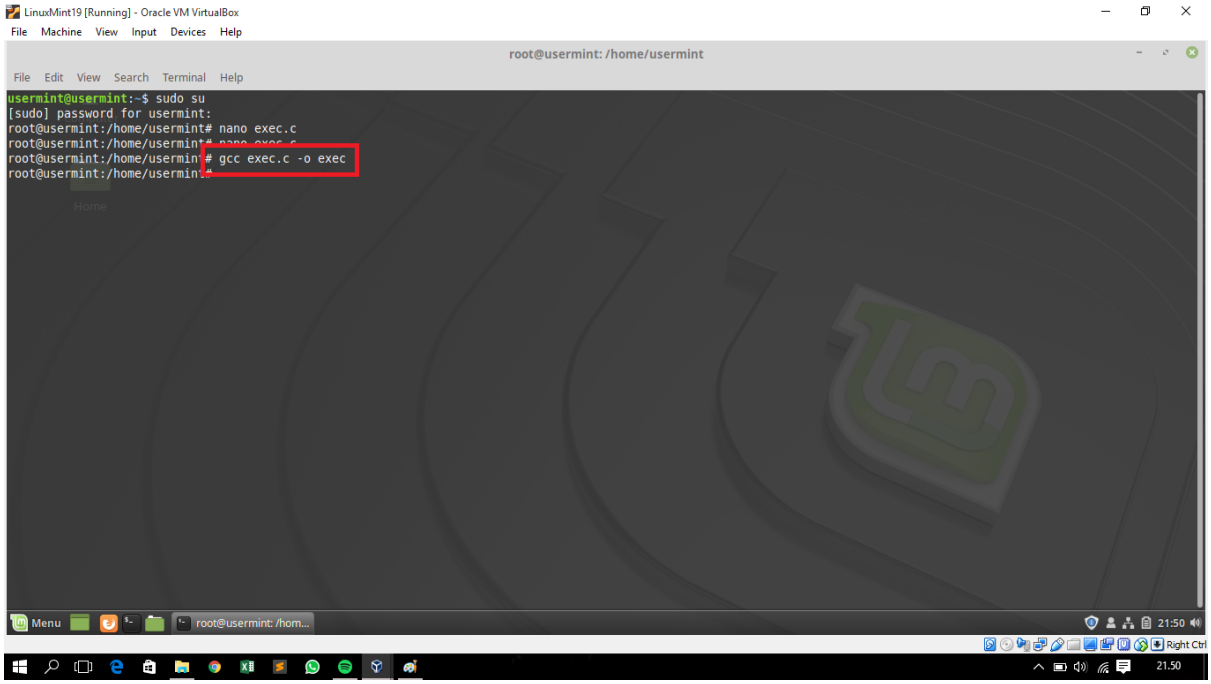

LinuxMint19 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
root@usermint: /home/usermint
File Edit View Search Terminal Help
root@usermint:/home/usermint# nano fork.c
Use "fg" to return to nano.
[1]+ Stopped nano fork.c
root@usermint:/home/usermint# nano fork.c
root@usermint:/home/usermint# gcc fork.c -o fork
root@usermint:/home/usermint# nano fork.c
root@usermint:/home/usermint# gcc fork.c -o fork
root@usermint:/home/usermint# ./fork
Parent process:
Process id is 3026
Value of x is 6
Process id of parent is 1436
root@usermint:/home/usermint# nano wait.c
root@usermint:/home/usermint# gcc wait.c -o wait
wait.c:3:10: fatal error: unist.h: No such file or directory
#include <unist.h>
^~~~~~~~
compilation terminated.
root@usermint:/home/usermint# nano wait.c
root@usermint:/home/usermint# nano wait.c
root@usermint:/home/usermint# gcc wait.c -o wait
wait.c: In function 'main':
wait.c:16:10: error: 'p' undeclared (first use in this function)
else if(p > 0){
^
wait.c:16:10: note: each undeclared identifier is reported only once for each function it appears in
root@usermint:/home/usermint# nano wait.c
root@usermint:/home/usermint# gcc wait.c -o wait
root@usermint:/home/usermint# nano wait.c
root@usermint:/home/usermint# gcc wait.c -o wait
root@usermint:/home/usermint#
Menu
root@usermint: /hom...
20:48
Right Ctrl
20.48

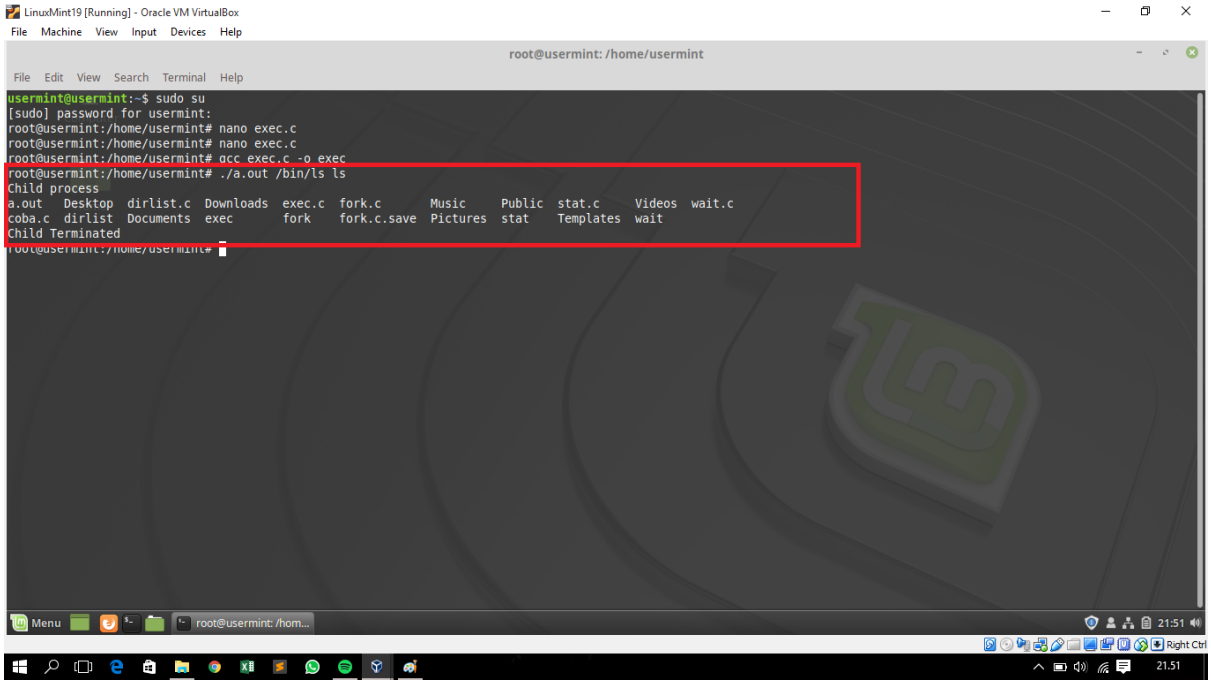

LinuxMint19 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
root@usermint: /home/usermint
File Edit View Search Terminal Help
root@usermint:/home/usermint# ./fork
Parent process:
Process id is 3026
Value of x is 6
Process id of parent is 1436
root@usermint:/home/usermint# nano wait.c
root@usermint:/home/usermint# gcc wait.c -o wait
wait.c:3:10: fatal error: unist.h: No such file or directory
#include <unist.h>
^~~~~~~~
compilation terminated.
root@usermint:/home/usermint# nano wait.c
root@usermint:/home/usermint# nano wait.c
root@usermint:/home/usermint# gcc wait.c -o wait
wait.c: In function 'main':
wait.c:16:10: error: 'p' undeclared (first use in this function)
else if(p > 0){
^
wait.c:16:10: note: each undeclared identifier is reported only once for each function it appears in
root@usermint:/home/usermint# nano wait.c
root@usermint:/home/usermint# gcc wait.c -o wait
root@usermint:/home/usermint# nano wait.c
root@usermint:/home/usermint# gcc wait.c -o wait
root@usermint:/home/usermint# ./wait
Child starts
Nomor Ganjil: 1 3 5 7 9
Child ends
Parent starts
Nomor Genap: 2 4 6 8 10
Parent ends
root@usermint:/home/usermint#
Menu
root@usermint: /hom...
20:48
Right Ctrl
20.48

Exec.c

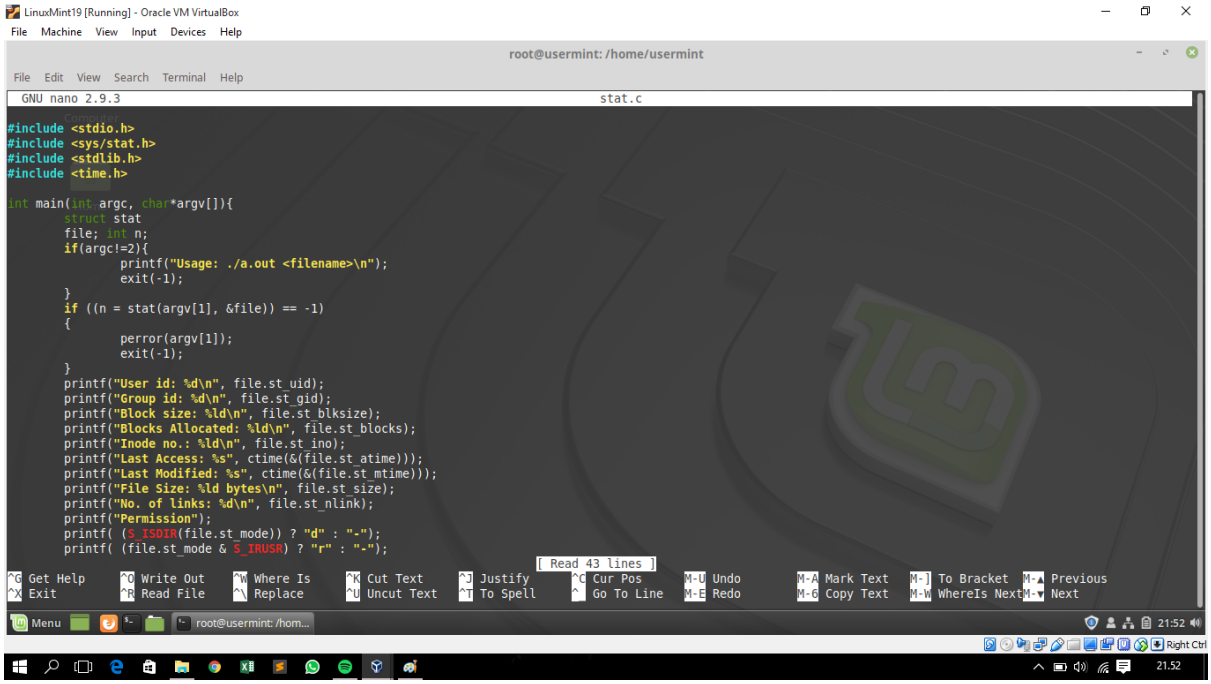

LinuxMint19 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
root@usermint: /home/usermint
File Edit View Search Terminal Help
GNU nano 2.9.3 exec.c
#include <stdio.h>
#include <sys/types.h>
#include <unistd.h>
#include <stdlib.h>
#include <wait.h>
int main(int argc, char*argv[]){
pid_t pid;
int i;
if(argc != 3){
printf("\nInsufficient arguments to load program");
printf("\nUsage: ./a.out <path> <cmd>\n");
exit(-1);
}
switch(pid = fork())
{
case -1:
printf("Fork failed");
exit(-1);
case 0:
printf("Child process\n");
i = execl(argv[1], argv[2], NULL);
if (i < 0){
printf("%s program not loaded using exec system call\n", argv[2]);
exit(-1);
default:
wait(NULL);
[Read 34 lines]
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos M-U Undo M-A Mark Text M-] To Bracket M-▲ Previous
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell ^_ Go To Line M-E Redo M-6 Copy Text M-W WhereIs Next M-▼ Next
Menu root@usermint: /hom...
21:47
Right Ctrl
21.47

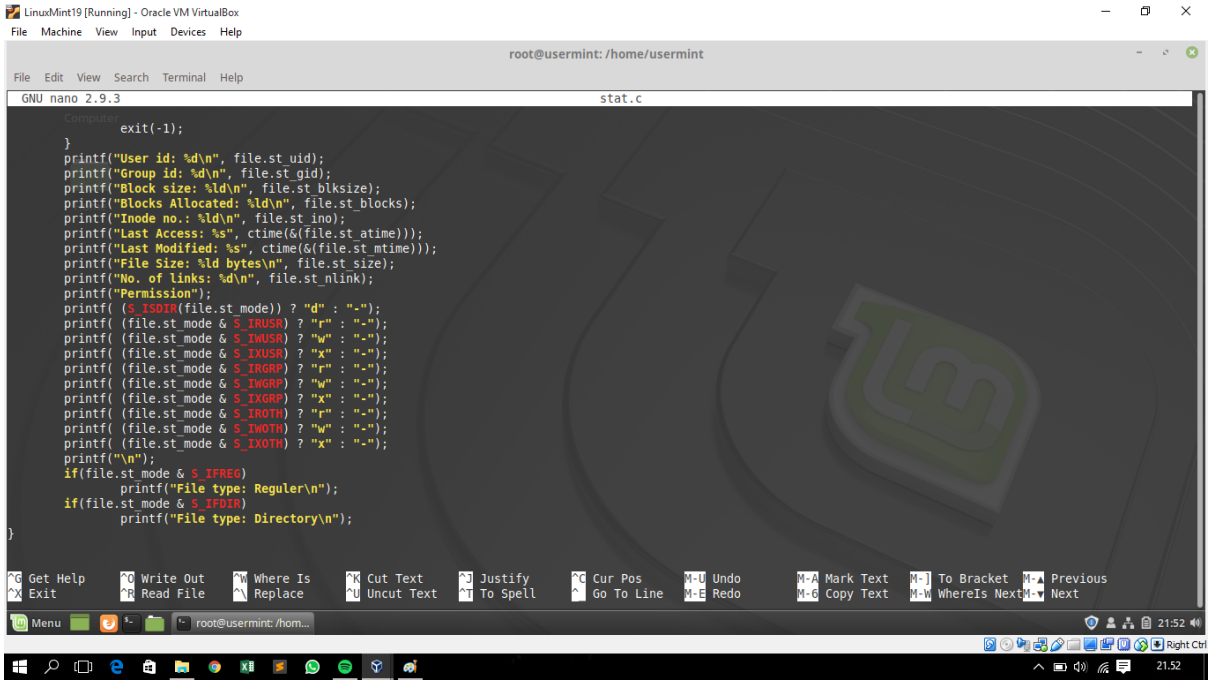

LinuxMint19 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
root@usermint: /home/usermint
File Edit View Search Terminal Help
GNU nano 2.9.3 exec.c
switch(pid = fork())
{
case -1:
printf("Fork failed");
exit(-1);
case 0:
printf("Child process\n");
i = execl(argv[1], argv[2], NULL);
if (i < 0){
printf("%s program not loaded using exec system call\n", argv[2]);
exit(-1);
default:
wait(NULL);
printf("Child Terminated\n");
exit(0);
}
}
}
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos M-U Undo M-A Mark Text M-] To Bracket M-▲ Previous
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell ^_ Go To Line M-E Redo M-6 Copy Text M-W WhereIs Next M-▼ Next
Menu root@usermint: /hom...
21:50
Right Ctrl
21.50

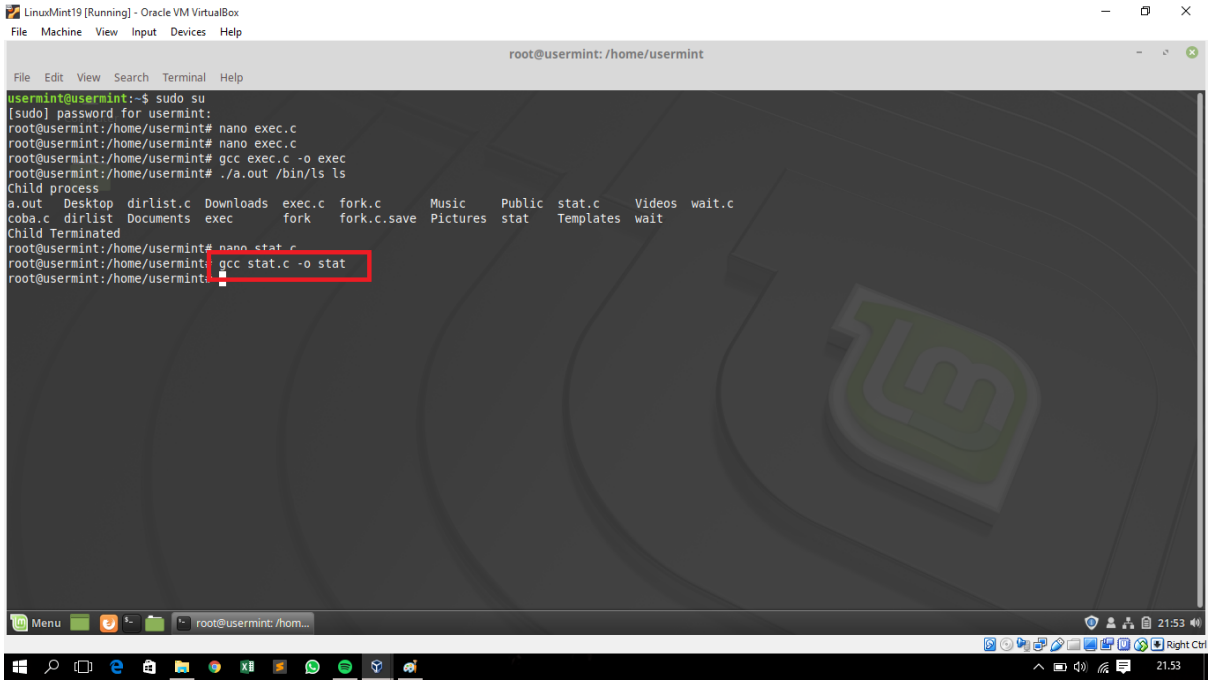

LinuxMint19 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
root@usermint: /home/usermint
File Edit View Search Terminal Help
usermint@usermint:~$ sudo su
[sudo] password for usermint:
root@usermint:/home/usermint# nano exec.c
root@usermint:/home/usermint# gcc exec.c -o exec
root@usermint:/home/usermint#
Menu
root@usermint: /hom...
21:50
Right Ctrl
21.50

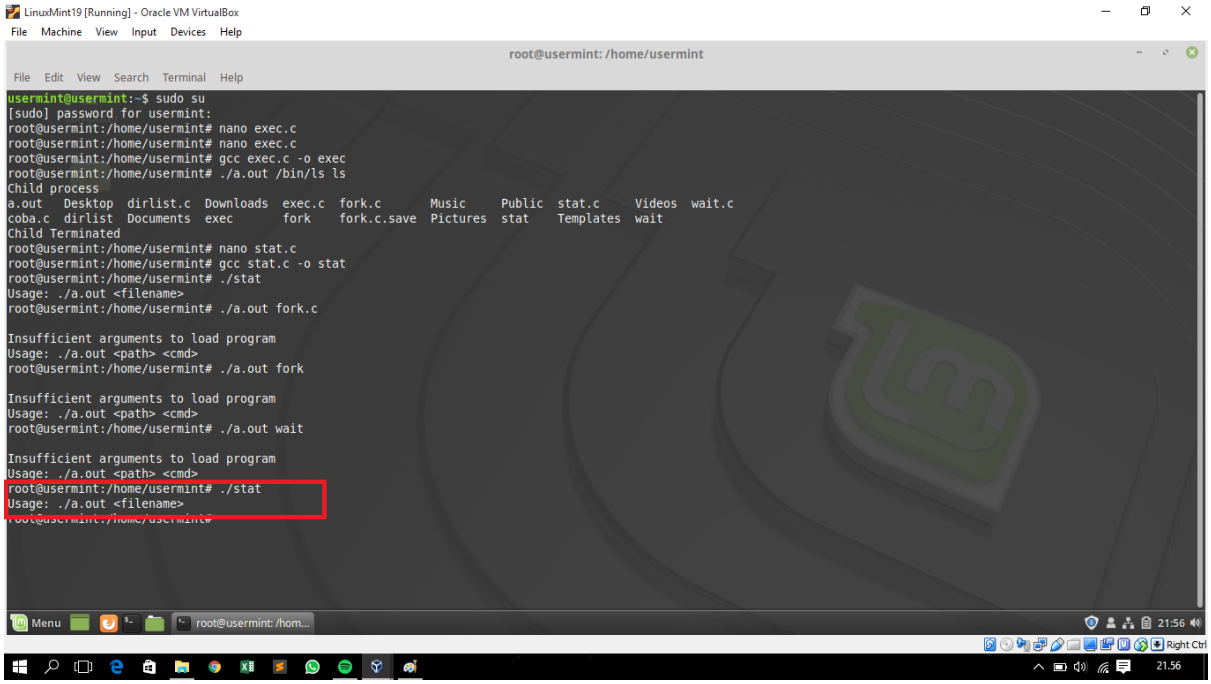

LinuxMint19 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
root@usermint: /home/usermint
File Edit View Search Terminal Help
usermint@usermint:~$ sudo su
[sudo] password for usermint:
root@usermint:/home/usermint# nano exec.c
root@usermint:/home/usermint# nano exec.c
root@usermint:/home/usermint# gcc exec.c -o exec
root@usermint:/home/usermint# ./a.out /bin/ls ls
Child process
a.out Desktop dirlist.c Downloads exec.c fork.c Music Public stat.c Videos wait.c
coba.c dirlist Documents exec fork fork.c.save Pictures stat Templates wait
Child Terminated
Menu
root@usermint: /hom...
21:51
Right Ctrl
21.51

Stat.c

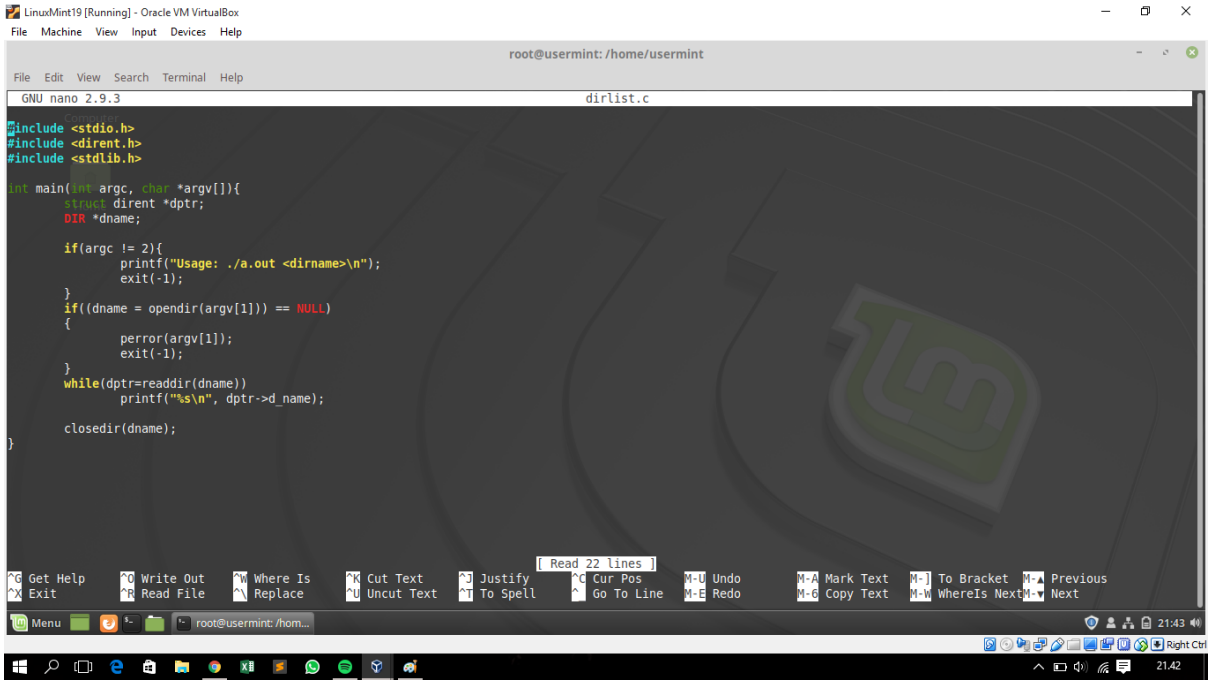

LinuxMint19 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
root@usermint: /home/usermint
File Edit View Search Terminal Help
GNU nano 2.9.3 stat.c
#include <stdio.h>
#include <sys/stat.h>
#include <stdlib.h>
#include <time.h>
int main(int argc, char*argv[]){
struct stat
file; int n;
if(argc!=2){
printf("Usage: ./a.out <filename>\n");
exit(-1);
}
if ((n = stat(argv[1], &file)) == -1)
{
perror(argv[1]);
exit(-1);
}
printf("User id: %d\n", file.st_uid);
printf("Group id: %d\n", file.st_gid);
printf("Block size: %ld\n", file.st_blksize);
printf("Blocks Allocated: %ld\n", file.st_blocks);
printf("Inode no.: %ld\n", file.st_ino);
printf("Last Access: %s", ctime(&(file.st_atime)));
printf("Last Modified: %s", ctime(&(file.st_mtime)));
printf("File Size: %ld bytes\n", file.st_size);
printf("No. of links: %d\n", file.st_nlink);
printf("Permission");
printf((S_ISDIR(file.st_mode)) ? "d" : "-");
printf((file.st_mode & S_IRUSR) ? "r" : "-");
[Read 43 lines]
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos M-U Undo M-A Mark Text M-] To Bracket M-▲ Previous
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell ^_ Go To Line M-E Redo M-6 Copy Text M-W WhereIs Next M-▼ Next
Menu root@usermint: /hom...
21:52
Right Ctrl
21.52

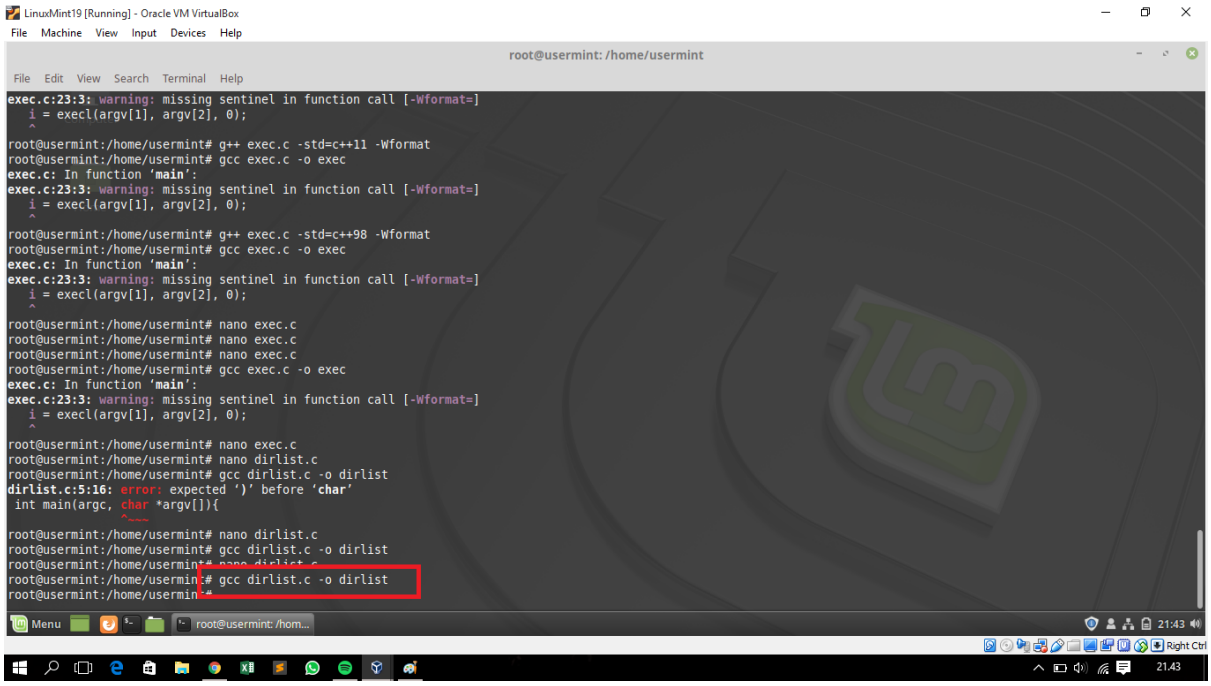

LinuxMint19 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
root@usermint: /home/usermint
File Edit View Search Terminal Help
GNU nano 2.9.3 stat.c
exit(-1);
}
printf("User id: %d\n", file.st_uid);
printf("Group id: %d\n", file.st_gid);
printf("Block size: %ld\n", file.st_blksize);
printf("Blocks Allocated: %ld\n", file.st_blocks);
printf("Inode no.: %ld\n", file.st_ino);
printf("Last Access: %s", ctime(&(file.st_atime)));
printf("Last Modified: %s", ctime(&(file.st_mtime)));
printf("File Size: %ld bytes\n", file.st_size);
printf("No. of links: %d\n", file.st_nlink);
printf("Permission");
printf((S_ISDIR(file.st_mode)) ? "d" : "-");
printf((file.st_mode & S_IRUSR) ? "r" : "-");
printf((file.st_mode & S_IWUSR) ? "w" : "-");
printf((file.st_mode & S_IXUSR) ? "x" : "-");
printf((file.st_mode & S_IRGRP) ? "r" : "-");
printf((file.st_mode & S_IWGRP) ? "w" : "-");
printf((file.st_mode & S_IXGRP) ? "x" : "-");
printf((file.st_mode & S_IROTH) ? "r" : "-");
printf((file.st_mode & S_IWOTH) ? "w" : "-");
printf((file.st_mode & S_IXOTH) ? "x" : "-");
printf("\n");
if(file.st_mode & S_IFREG)
printf("File type: Reguler\n");
if(file.st_mode & S_IFDIR)
printf("File type: Directory\n");
}
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos M-U Undo M-A Mark Text M-] To Bracket M-▲ Previous
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell ^_ Go To Line M-E Redo M-6 Copy Text M-W WhereIs Next M-▼ Next
Menu root@usermint: /hom...
21:52
Right Ctrl
21.52

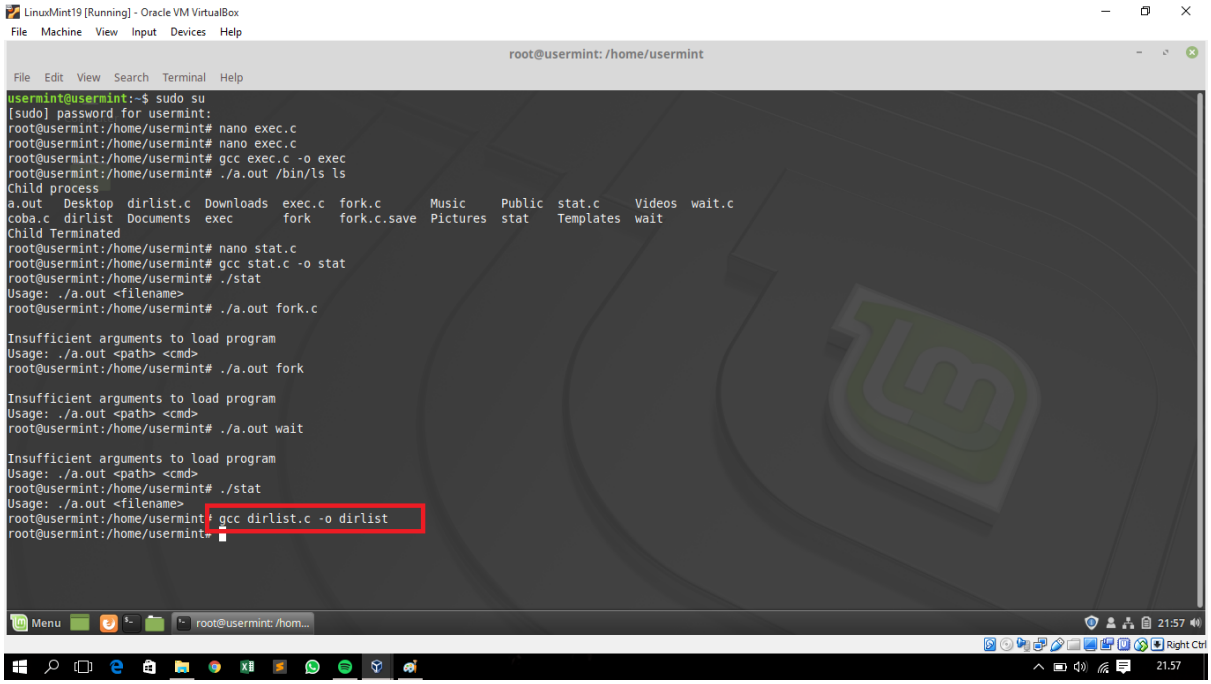

LinuxMint19 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
root@usermint: /home/usermint
File Edit View Search Terminal Help
usermint@usermint:~$ sudo su
[sudo] password for usermint:
root@usermint:/home/usermint# nano exec.c
root@usermint:/home/usermint# nano exec.c
root@usermint:/home/usermint# gcc exec.c -o exec
root@usermint:/home/usermint# ./a.out /bin/ls ls
Child process
a.out Desktop dirlist.c Downloads exec.c fork.c Music Public stat.c Videos wait.c
coba.c dirlist Documents exec fork fork.c.save Pictures stat Templates wait
Child Terminated
root@usermint:/home/usermint# nano stat.c
root@usermint:/home/usermint# gcc stat.c -o stat
root@usermint:/home/usermint#
Menu
root@usermint: /hom...
21:53
Right Ctrl
21.53


LinuxMint19 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
root@usermint: /home/usermint
File Edit View Search Terminal Help
usermint@usermint:~$ sudo su
[sudo] password for usermint:
root@usermint:/home/usermint# nano exec.c
root@usermint:/home/usermint# nano exec.c
root@usermint:/home/usermint# gcc exec.c -o exec
root@usermint:/home/usermint# ./a.out /bin/ls ls
Child process
a.out Desktop dirlist.c Downloads exec.c fork.c Music Public stat.c Videos wait.c
coba.c dirlist Documents exec fork fork.c.save Pictures stat Templates wait
Child Terminated
root@usermint:/home/usermint# nano stat.c
root@usermint:/home/usermint# gcc stat.c -o stat
root@usermint:/home/usermint# ./stat
Usage: ./a.out <filename>
root@usermint:/home/usermint# ./a.out fork.c
Insufficient arguments to load program
Usage: ./a.out <path> <cmd>
root@usermint:/home/usermint# ./a.out fork
Insufficient arguments to load program
Usage: ./a.out <path> <cmd>
root@usermint:/home/usermint# ./a.out wait
Insufficient arguments to load program
Usage: ./a.out <path> <cmd>
root@usermint:/home/usermint# ./stat
Usage: ./a.out <filename>
Menu
root@usermint: /hom...
21:56
Right Ctrl
21.56

Dirlist.c

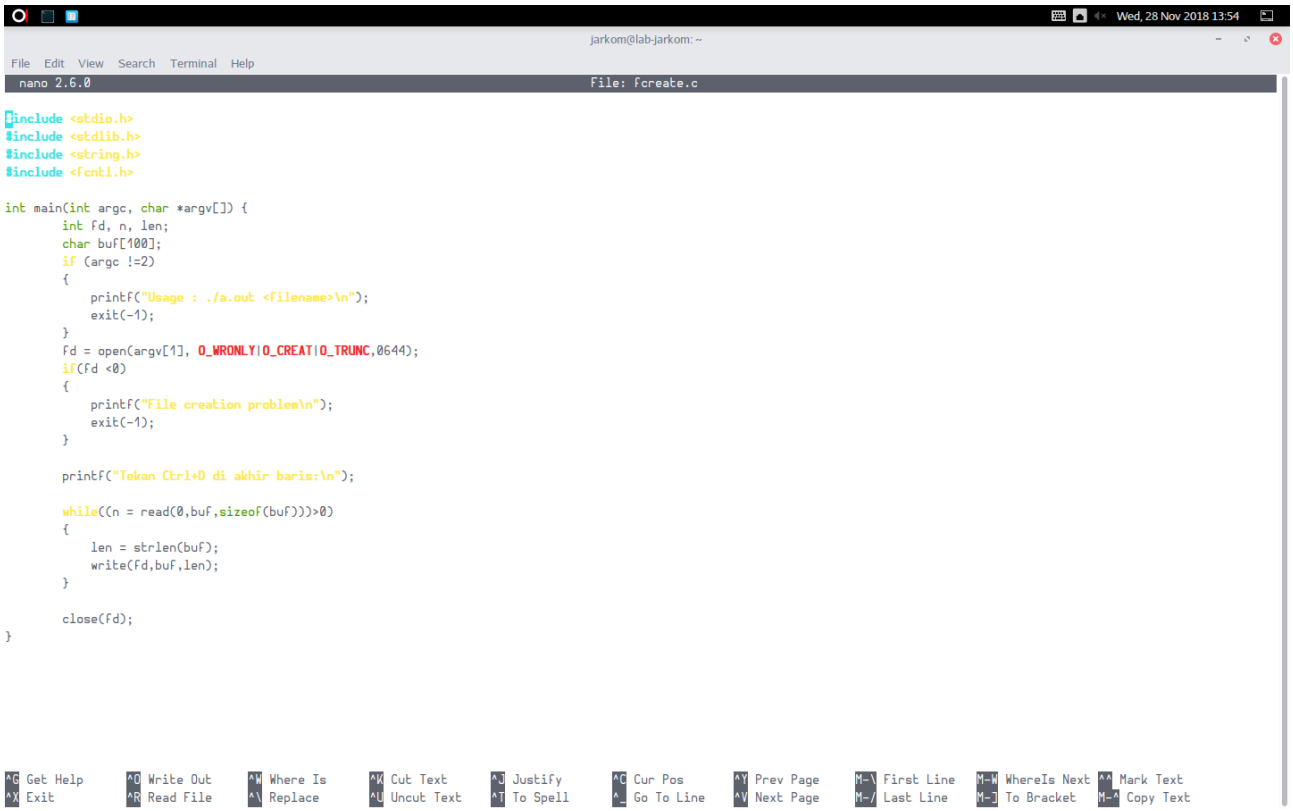

LinuxMint19 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
root@usermint: /home/usermint
File Edit View Search Terminal Help
GNU nano 2.9.3 dirlist.c
#include <stdio.h>
#include <dirent.h>
#include <stdlib.h>
int main(int argc, char *argv[]){
struct dirent *dptr;
DIR *dname;
if(argc != 2){
printf("Usage: ./a.out <dirname>\n");
exit(-1);
}
if((dname = opendir(argv[1])) == NULL)
{
perror(argv[1]);
exit(-1);
}
while(dptr=readdir(dname))
printf("%s\n", dptr->d_name);
closedir(dname);
}
[Read 22 lines]
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos M-U Undo M-A Mark Text M-] To Bracket M-▲ Previous
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell ^_ Go To Line M-E Redo M-6 Copy Text M-W WhereIs Next M-▼ Next
Menu root@usermint: /hom...
21:43
Right Ctrl
21.42


LinuxMint19 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
root@usermint: /home/usermint
File Edit View Search Terminal Help
exec.c:23:3: warning: missing sentinel in function call [-Wformat=]
i = execl(argv[1], argv[2], 0);
root@usermint:/home/usermint# g++ exec.c -std=c++11 -Wformat
root@usermint:/home/usermint# gcc exec.c -o exec
exec.c: In function 'main':
exec.c:23:3: warning: missing sentinel in function call [-Wformat=]
root@usermint:/home/usermint# g++ exec.c -std=c++98 -Wformat
root@usermint:/home/usermint# gcc exec.c -o exec
root@usermint:/home/usermint# nano exec.c
root@usermint:/home/usermint# nano dirlist.c
root@usermint:/home/usermint# gcc dirlist.c -o dirlist
dirlist.c:5:16: error: expected ')' before 'char'
int main(argc, char *argv[]){
root@usermint:/home/usermint# gcc dirlist.c -o dirlist
Menu root@usermint: /hom...
21:43
Right Ctrl
21.43

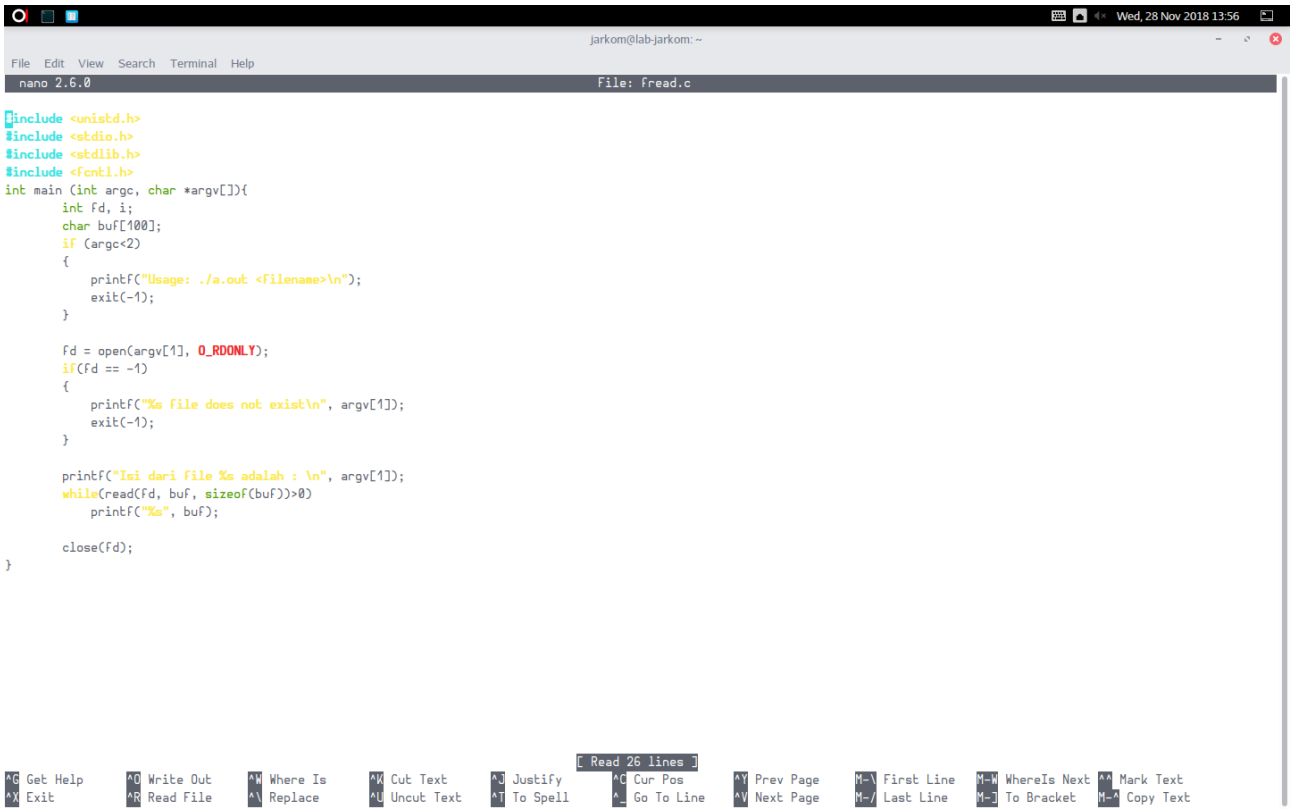

LinuxMint19 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
root@usermint: /home/usermint
File Edit View Search Terminal Help
usermint@usermint:~$ sudo su
[sudo] password for usermint:
root@usermint:/home/usermint# nano exec.c
root@usermint:/home/usermint# nano exec.c
root@usermint:/home/usermint# gcc exec.c -o exec
root@usermint:/home/usermint# ./a.out /bin/ls ls
Child process
a.out Desktop dirlist.c Downloads exec.c fork.c Music Public stat.c Videos wait.c
coba.c dirlist Documents exec fork fork.c.save Pictures stat Templates wait
Child Terminated
root@usermint:/home/usermint# nano stat.c
root@usermint:/home/usermint# gcc stat.c -o stat
root@usermint:/home/usermint# ./stat
Usage: ./a.out <filename>
root@usermint:/home/usermint# ./a.out fork.c
Insufficient arguments to load program
Usage: ./a.out <path> <cmd>
root@usermint:/home/usermint# ./a.out fork
Insufficient arguments to load program
Usage: ./a.out <path> <cmd>
root@usermint:/home/usermint# ./a.out wait
Insufficient arguments to load program
Usage: ./a.out <path> <cmd>
root@usermint:/home/usermint# ./stat
Usage: ./a.out <filename>
root@usermint:/home/usermint# gcc dirlist.c -o dirlist
root@usermint:/home/usermint#
Menu
root@usermint: /hom...
21:57
Right Ctrl
21.57

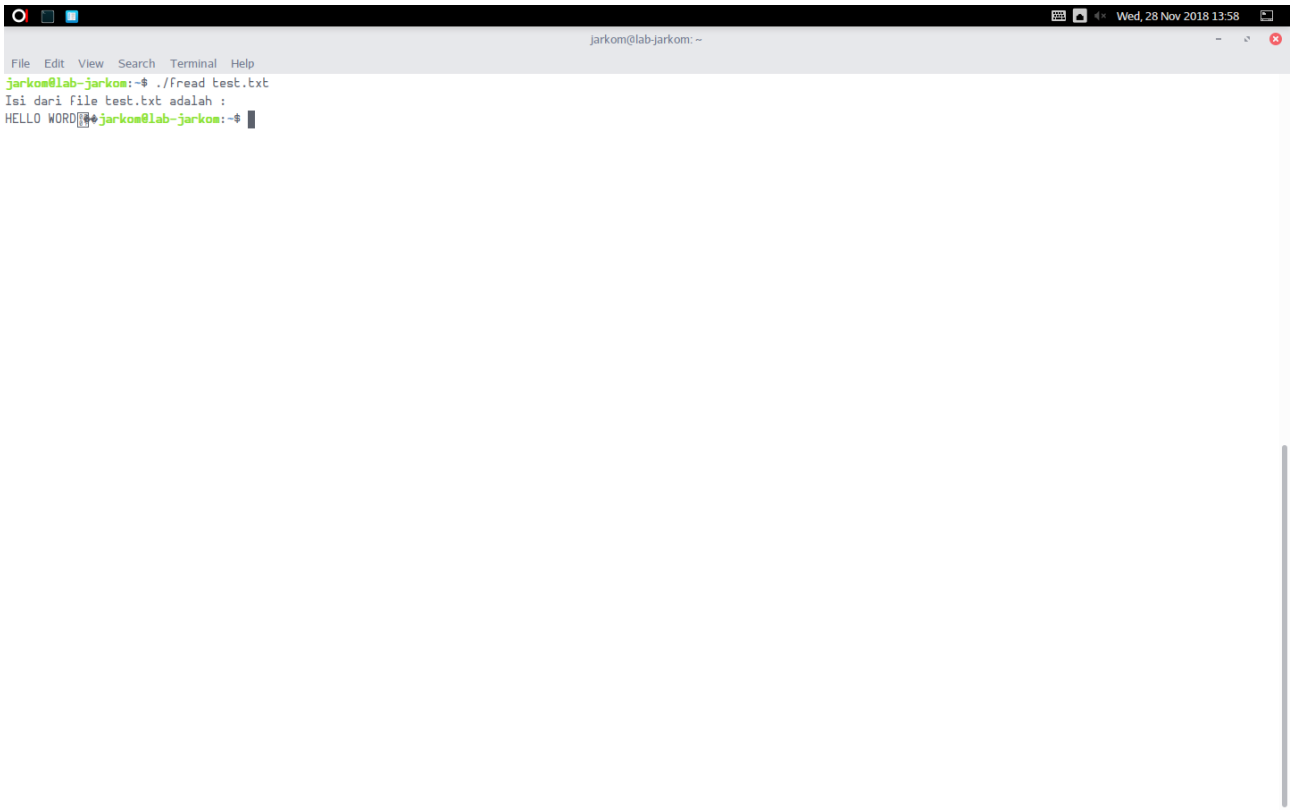
MODUL 9

FCREATE :

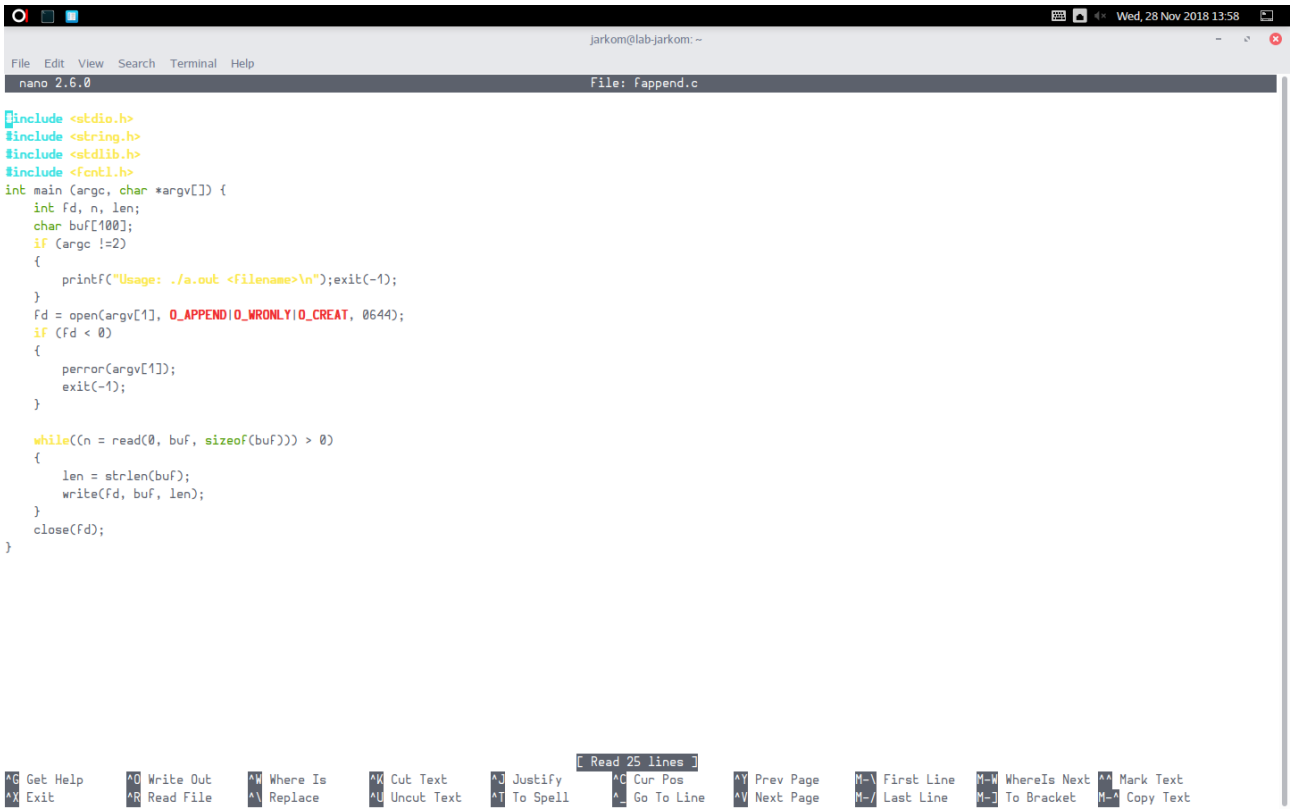


FREAD :


Wed, 28 Nov 2018 13:56
jarkom@lab-jarkom: ~
File Edit View Search Terminal Help
nano 2.6.0 File: fread.c
#include <unistd.h>
#include <stdio.h>
#include <stdlib.h>
#include <fcntl.h>
int main (int argc, char *argv[]){
int fd, i;
char buf[100];
if (argc<2)
{
printf("Usage: ./a.out <filename>\n");
exit(-1);
}
fd = open(argv[1], O_RDONLY);
if(fd == -1)
{
printf("%s file does not exist\n", argv[1]);
exit(-1);
}
printf("Isi dari file %s adalah : \n", argv[1]);
while(read(fd, buf, sizeof(buf))>0)
printf("%s", buf);
close(fd);
}
[Read 26 lines]
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos ^Y Prev Page M-\ First Line M-W WhereIs Next ^^ Mark Text
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell ^_ Go To Line ^V Next Page M-/ Last Line M-] To Bracket M-^ Copy Text

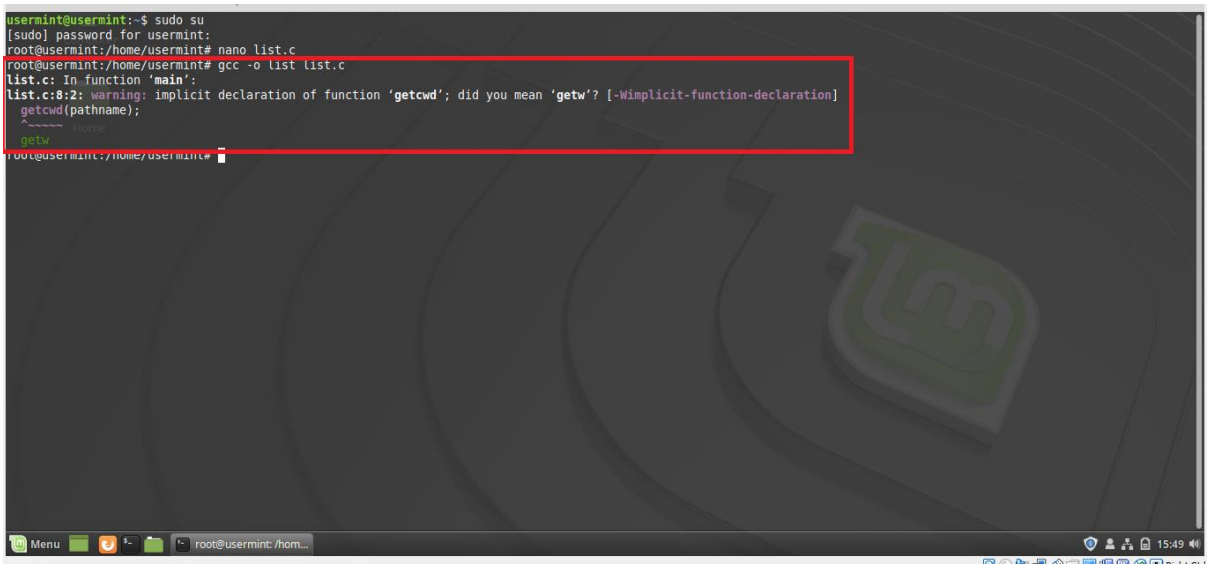

Wed, 28 Nov 2018 13:58
jarkom@lab-jarkom: ~
File Edit View Search Terminal Help
jarkom@lab-jarkom:~$ ./fread test.txt
Isi dari file test.txt adalah :
HELLO WORD
jarkom@lab-jarkom:~$

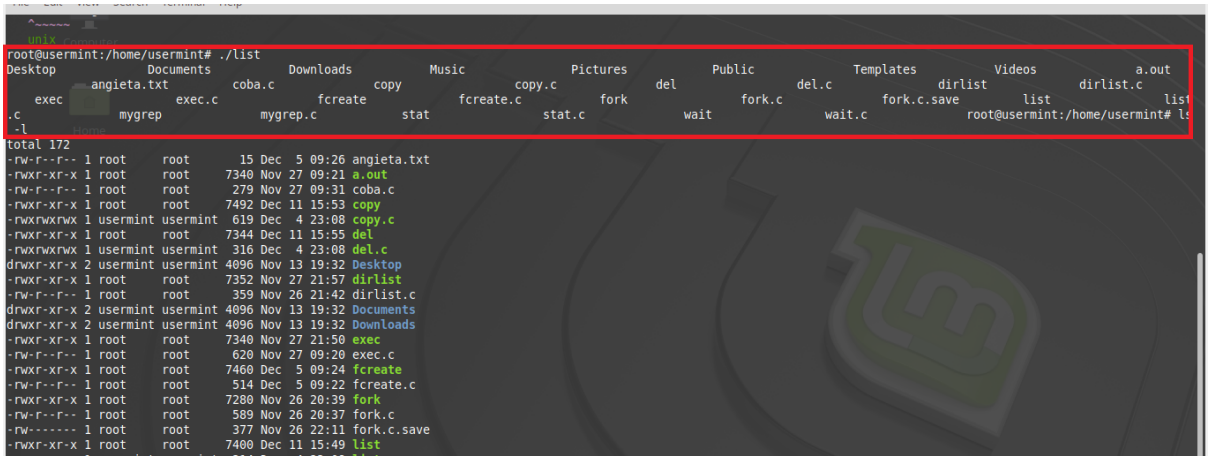
FAPPEND:


Wed, 28 Nov 2018 13:58
jarkom@lab-jarkom: ~
File Edit View Search Terminal Help
nano 2.6.0 File: fappend.c
#include <stdio.h>
#include <string.h>
#include <stdlib.h>
#include <fcntl.h>
int main (argc, char *argv[]) {
int fd, n, len;
char buf[100];
if (argc !=2)
{
printf("Usage: ./a.out <filename>\n");exit(-1);
}
fd = open(argv[1], O_APPEND|O_WRONLY|O_CREAT, 0644);
if (fd < 0)
{
perror(argv[1]);
exit(-1);
}
while((n = read(0, buf, sizeof(buf))) > 0)
{
len = strlen(buf);
write(fd, buf, len);
}
close(fd);
}
[Read 25 lines]
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos ^Y Prev Page M-\ First Line M-W WhereIs Next ^^ Mark Text
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell ^_ Go To Line ^V Next Page M-/ Last Line M-] To Bracket M-^ Copy Text

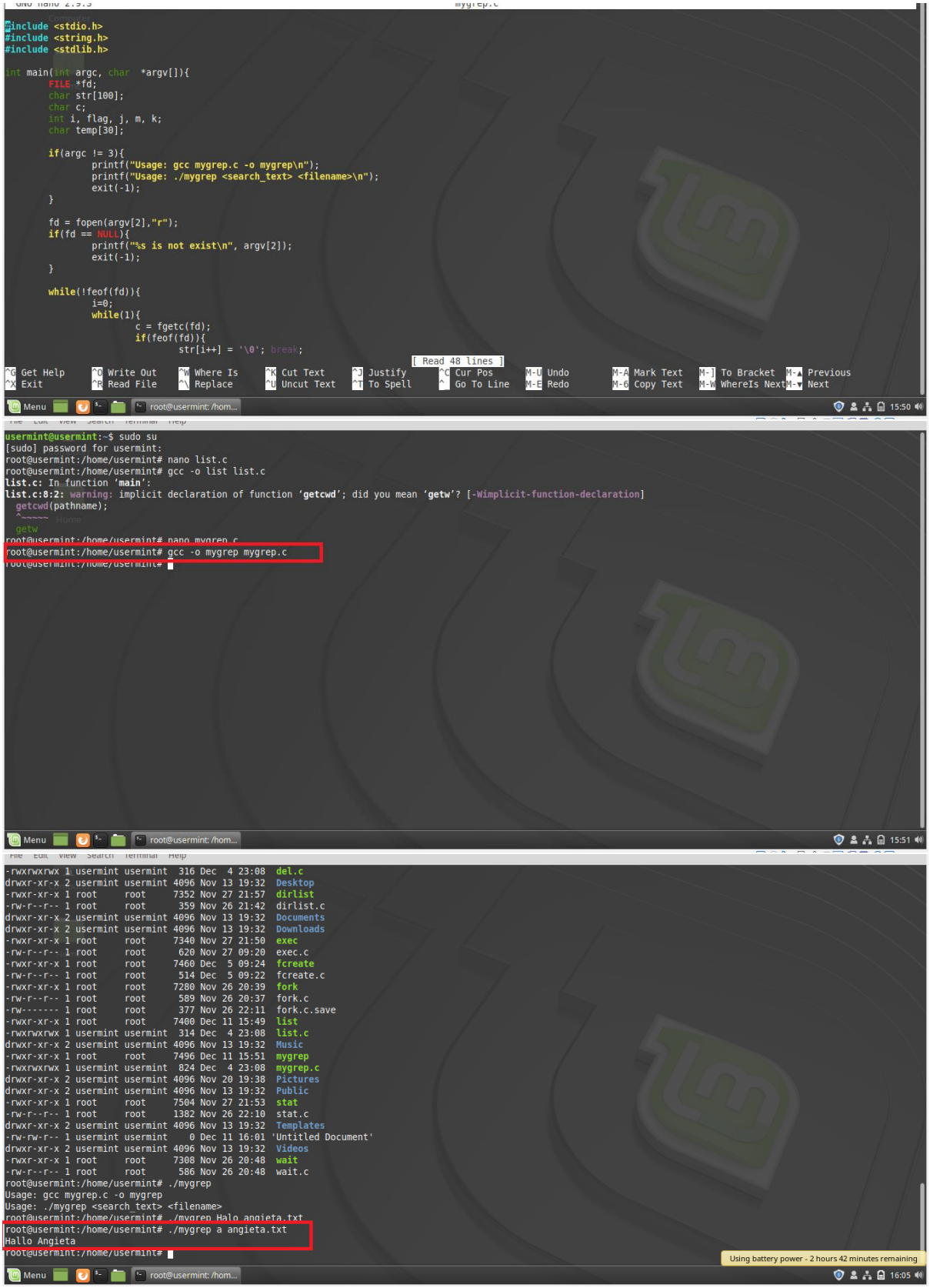
MODUL 10

1. List.c



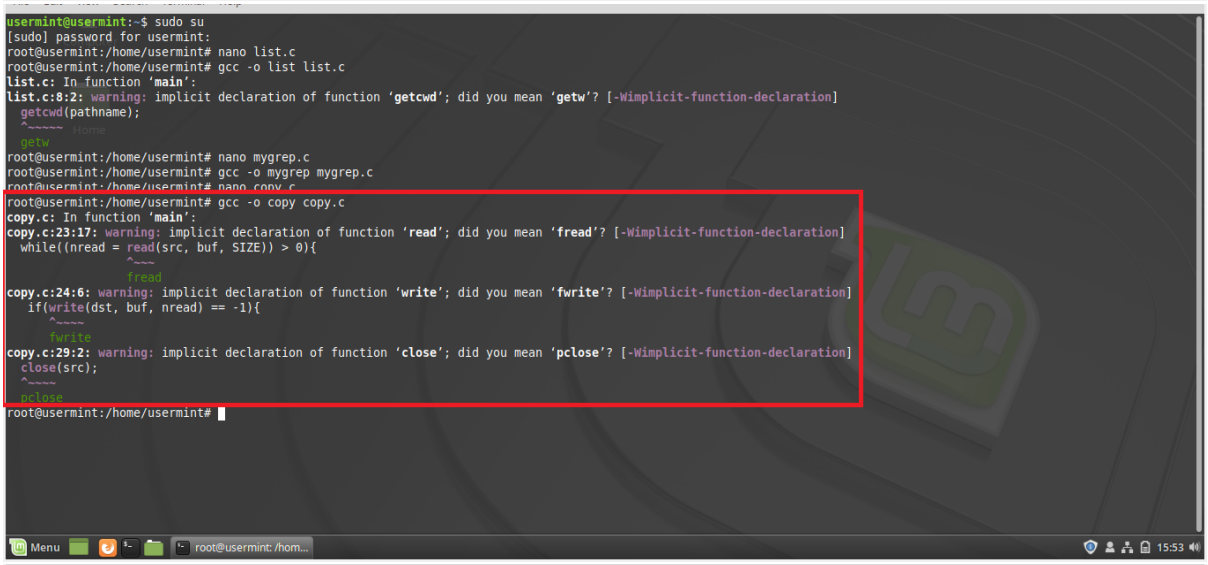


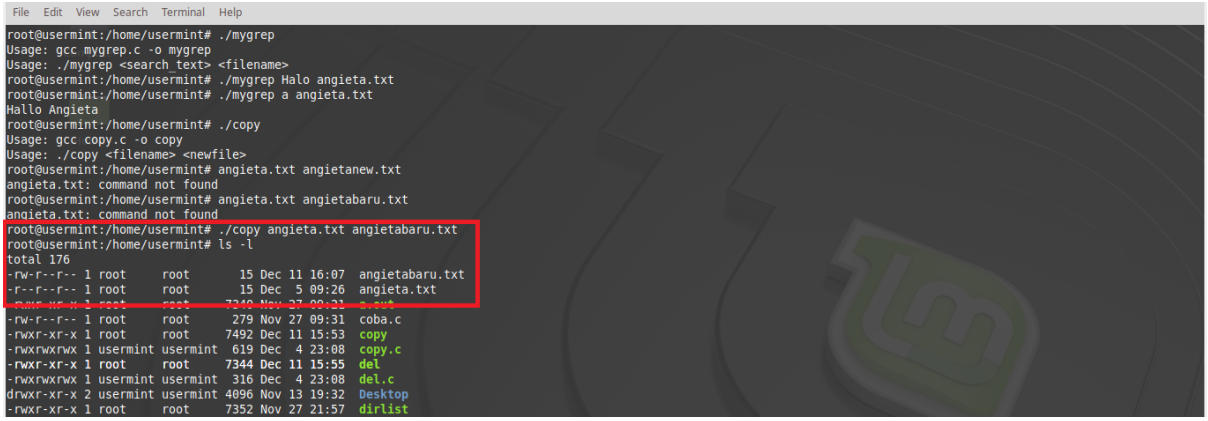
2. Mygrep.c


#include <stdio.h>
#include <string.h>
#include <stdlib.h>
int main(int argc, char *argv[]){
FILE *fd;
char str[100];
char c;
int i, flag, j, m, k;
char temp[30];
if(argc != 3){
printf("Usage: gcc mygrep.c -o mygrep\n");
printf("Usage: ./mygrep <search_text> <filename>\n");
exit(-1);
}
fd = fopen(argv[2],"r");
if(fd == NULL){
printf("%s is not exist\n", argv[2]);
exit(-1);
}
while(!feof(fd)){
i=0;
while(1){
c = fgetc(fd);
if(feof(fd)){
str[i++] = '\0'; break;
[Read 48 lines]
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos M-U Undo M-A Mark Text M-] To Bracket M-▲ Previous
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell ^_ Go To Line M-E Redo M-6 Copy Text M-W WhereIs Next M-▼ Next
Menu root@usermint: /hom... 15:50
usermint@usermint:~$ sudo su
[sudo] password for usermint:
root@usermint:/home/usermint# nano list.c
root@usermint:/home/usermint# gcc -o list list.c
list.c: In function 'main':
list.c:8:2: warning: implicit declaration of function 'getcwd'; did you mean 'getw'? [-Wimplicit-function-declaration]
getcwd(pathname);
getw
root@usermint:/home/usermint# nano mygrep.c
root@usermint:/home/usermint# gcc -o mygrep mygrep.c
Menu root@usermint: /hom... 15:51
-rwxrwxrwx 1 usermint usermint 316 Dec 4 23:08 del.c
drwxr-xr-x 2 usermint usermint 4096 Nov 13 19:32 Desktop
-rwxr-xr-x 1 root root 7352 Nov 27 21:57 dirlist
-rw-r--r-- 1 root root 359 Nov 26 21:42 dirlist.c
drwxr-xr-x 2 usermint usermint 4096 Nov 13 19:32 Documents
drwxr-xr-x 2 usermint usermint 4096 Nov 13 19:32 Downloads
-rwxr-xr-x 1 root root 7340 Nov 27 21:50 exec
-rw-r--r-- 1 root root 620 Nov 27 09:20 exec.c
-rwxr-xr-x 1 root root 7460 Dec 5 09:24 fcreate
-rw-r--r-- 1 root root 514 Dec 5 09:22 fcreate.c
-rwxr-xr-x 1 root root 7280 Nov 26 20:39 fork
-rw-r--r-- 1 root root 589 Nov 26 20:37 fork.c
-rw------- 1 root root 377 Nov 26 22:11 fork.c.save
-rwxr-xr-x 1 root root 7400 Dec 11 15:49 list
-rwxrwxrwx 1 usermint usermint 314 Dec 4 23:08 list.c
drwxr-xr-x 2 usermint usermint 4096 Nov 13 19:32 Music
-rwxr-xr-x 1 root root 7496 Dec 11 15:51 mygrep
-rwxrwxrwx 1 usermint usermint 824 Dec 4 23:08 mygrep.c
drwxr-xr-x 2 usermint usermint 4096 Nov 20 19:38 Pictures
drwxr-xr-x 2 usermint usermint 4096 Nov 13 19:32 Public
-rwxr-xr-x 1 root root 7504 Nov 27 21:53 stat
-rw-r--r-- 1 root root 1382 Nov 26 22:10 stat.c
drwxr-xr-x 2 usermint usermint 4096 Nov 13 19:32 Templates
-rw-rw-r-- 1 usermint usermint 0 Dec 11 16:01 'Untitled Document'
drwxr-xr-x 2 usermint usermint 4096 Nov 13 19:32 Videos
-rwxr-xr-x 1 root root 7308 Nov 26 20:48 wait
-rw-r--r-- 1 root root 586 Nov 26 20:48 wait.c
root@usermint:/home/usermint# ./mygrep
Usage: gcc mygrep.c -o mygrep
Usage: ./mygrep <search_text> <filename>
root@usermint:/home/usermint# ./mygrep Halo angieta.txt
root@usermint:/home/usermint# ./mygrep a angieta.txt
Hallo Angieta
root@usermint:/home/usermint#
Using battery power - 2 hours 42 minutes remaining
Menu root@usermint: /hom... 16:05

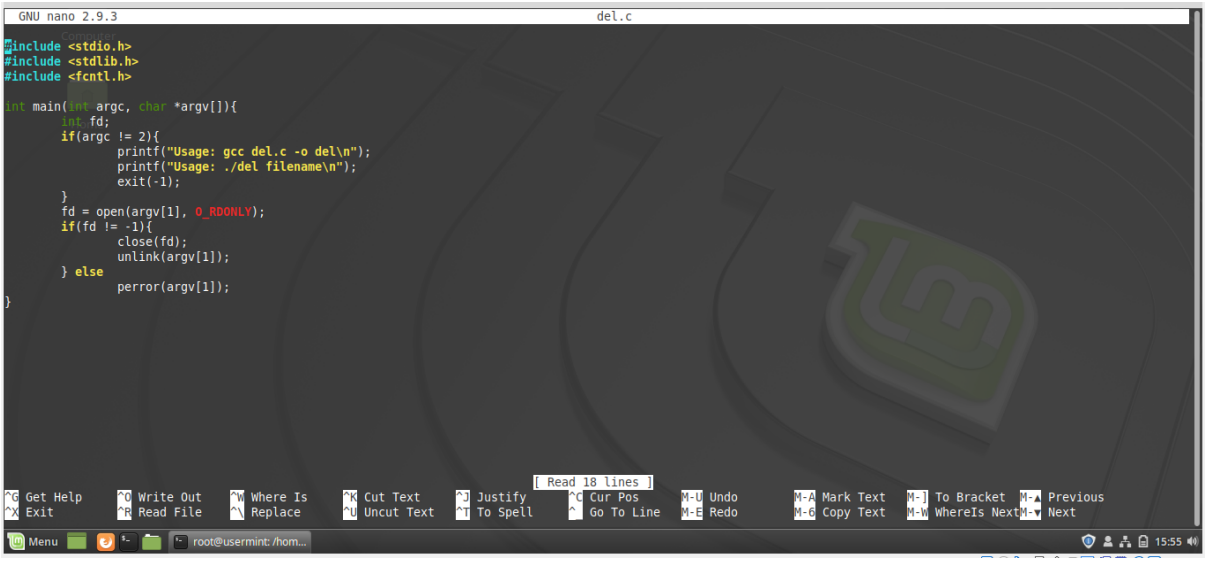
3. Copy.c

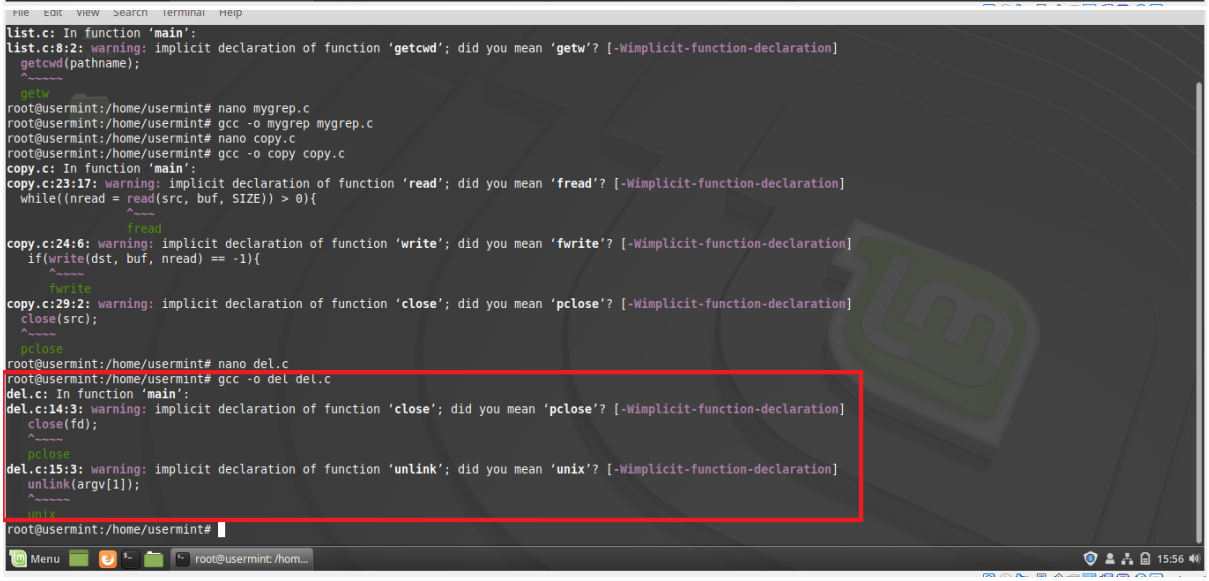

GNU nano 2.9.3
copy.c
#include <stdio.h>
#include <stdlib.h>
#include <fcntl.h>
#include <sys/stat.h>
#define SIZE 1024
int main(int argc, char *argv[]){
int src, dst, nread;
char buf[SIZE];
if(argc != 3){
printf("Usage: gcc copy.c -o copy\n");
printf("Usage: ./copy <filename> <newfile> \n");
exit(-1);
}
if((src = open(argv[1], O_RDONLY)) == -1){
perror(argv[1]);
exit(-1);
}
if((dst = creat(argv[2], 0644)) == -1){
perror(argv[1]);
exit(-1);
}
while((nread = read(src, buf, SIZE)) > 0){
if(write(dst, buf, nread) == -1){
printf("can't write \n");
exit(-1);
}
}
close(src);
[Read 31 lines]
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos M-U Undo M-A Mark Text M-] To Bracket M-▲ Previous
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell ^_ Go To Line M-E Redo M-6 Copy Text M-W WhereIs Next M-▼ Next
Menu
root@usermint: /hom...
15:53

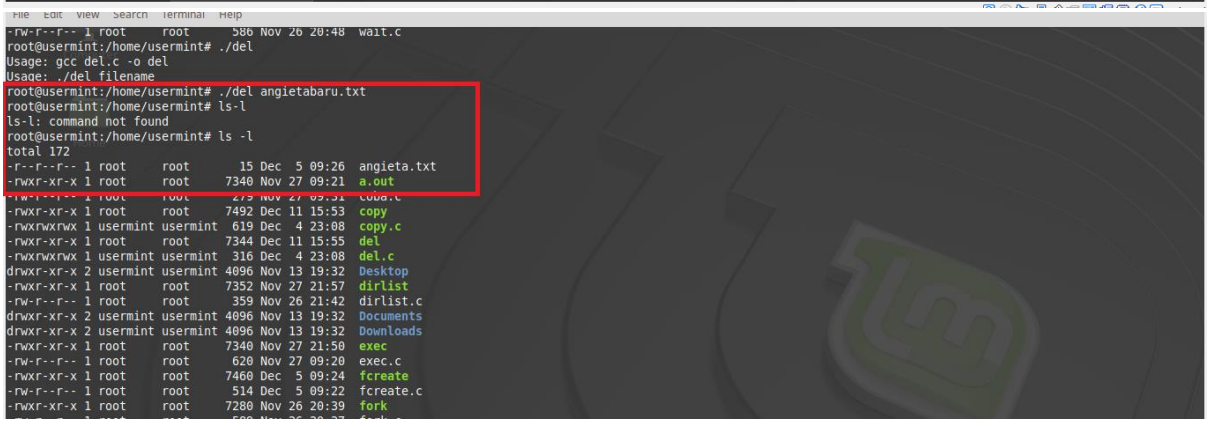

usermint@usermint:~$ sudo su
[sudo] password for usermint:
root@usermint:/home/usermint# nano list.c
root@usermint:/home/usermint# gcc -o list list.c
list.c: In function 'main':
list.c:8:2: warning: implicit declaration of function 'getcwd'; did you mean 'getw'? [-Wimplicit-function-declaration]
getcwd(pathname);
^~~~~~
getw
root@usermint:/home/usermint# nano mygrep.c
root@usermint:/home/usermint# gcc -o mygrep mygrep.c
root@usermint:/home/usermint# nano copy.c
root@usermint:/home/usermint# gcc -o copy copy.c
copy.c: In function 'main':
copy.c:23:17: warning: implicit declaration of function 'read'; did you mean 'fread'? [-Wimplicit-function-declaration]
while((nread = read(src, buf, SIZE)) > 0){
^~~~
fread
copy.c:24:6: warning: implicit declaration of function 'write'; did you mean 'fwrite'? [-Wimplicit-function-declaration]
if(write(dst, buf, nread) == -1){
^~~~~
fwrite
copy.c:29:2: warning: implicit declaration of function 'close'; did you mean 'pclose'? [-Wimplicit-function-declaration]
close(src);
^~~~~
pclose
root@usermint:/home/usermint#
Menu
root@usermint: /hom...
15:53


File Edit View Search Terminal Help
root@usermint:/home/usermint# ./mygrep
Usage: gcc mygrep.c -o mygrep
Usage: ./mygrep <search_text> <filename>
root@usermint:/home/usermint# ./mygrep Halo angieta.txt
root@usermint:/home/usermint# ./mygrep a angieta.txt
Hallo Angieta
root@usermint:/home/usermint# ./copy
Usage: gcc copy.c -o copy
Usage: ./copy <filename> <newfile>
root@usermint:/home/usermint# angieta.txt angietanew.txt
angieta.txt: command not found
root@usermint:/home/usermint# angieta.txt angietabaru.txt
angieta.txt: command not found
root@usermint:/home/usermint# ./copy angieta.txt angietabaru.txt
root@usermint:/home/usermint# ls -l
total 176
-rw-r--r-- 1 root root 15 Dec 11 16:07 angietabaru.txt
-r--r--r-- 1 root root 15 Dec 5 09:26 angieta.txt
-rwxr-xr-x 1 root root 7340 Nov 27 09:31 a.out
-rw-r--r-- 1 root root 279 Nov 27 09:31 coba.c
-rwxr-xr-x 1 root root 7492 Dec 11 15:53 copy
-rwxrwxrwx 1 usermint usermint 619 Dec 4 23:08 copy.c
-rwxr-xr-x 1 root root 7344 Dec 11 15:55 del
-rwxrwxrwx 1 usermint usermint 316 Dec 4 23:08 del.c
drwxr-xr-x 2 usermint usermint 4096 Nov 13 19:32 Desktop
-rwxr-xr-x 1 root root 7352 Nov 27 21:57 dirlist

4. Del.c


GNU nano 2.9.3
del.c
#include <stdio.h>
#include <stdlib.h>
#include <fcntl.h>
int main(int argc, char *argv[]){
int fd;
if(argc != 2){
printf("Usage: gcc del.c -o del\n");
printf("Usage: ./del filename\n");
exit(-1);
}
fd = open(argv[1], O_RDONLY);
if(fd != -1){
close(fd);
unlink(argv[1]);
} else
perror(argv[1]);
}
[Read 18 lines]
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos M-U Undo M-A Mark Text M-] To Bracket M-▲ Previous
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell ^_ Go To Line M-E Redo M-6 Copy Text M-W WhereIs Next M-▼ Next
Menu
root@usermint: /hom...
15:55


File Edit View Search Terminal Help
list.c: In function 'main':
list.c:8:2: warning: implicit declaration of function 'getcwd'; did you mean 'getw'? [-Wimplicit-function-declaration]
getcwd(pathname);
getw
root@usermint:/home/usermint# nano mygrep.c
root@usermint:/home/usermint# gcc -o mygrep mygrep.c
root@usermint:/home/usermint# nano copy.c
root@usermint:/home/usermint# gcc -o copy copy.c
copy.c: In function 'main':
copy.c:23:17: warning: implicit declaration of function 'read'; did you mean 'fread'? [-Wimplicit-function-declaration]
while((nread = read(src, buf, SIZE)) > 0){
fread
copy.c:24:6: warning: implicit declaration of function 'write'; did you mean 'fwrite'? [-Wimplicit-function-declaration]
if(write(dst, buf, nread) == -1){
fwrite
copy.c:29:2: warning: implicit declaration of function 'close'; did you mean 'pclose'? [-Wimplicit-function-declaration]
close(src);
pclose
root@usermint:/home/usermint# nano del.c
root@usermint:/home/usermint# gcc -o del del.c
del.c: In function 'main':
del.c:14:3: warning: implicit declaration of function 'close'; did you mean 'pclose'? [-Wimplicit-function-declaration]
close(fd);
pclose
del.c:15:3: warning: implicit declaration of function 'unlink'; did you mean 'unix'? [-Wimplicit-function-declaration]
unlink(argv[1]);
unix
root@usermint:/home/usermint#
Menu
root@usermint: /hom...
15:56


File Edit View Search Terminal Help
-rw-r--r-- 1 root root 586 Nov 26 20:48 wait.c
root@usermint:/home/usermint# ./del
Usage: gcc del.c -o del
Usage: ./del filename
root@usermint:/home/usermint# ./del angietabaru.txt
root@usermint:/home/usermint# ls-l
ls-l: command not found
root@usermint:/home/usermint# ls -l
total 172
-r--r--r-- 1 root root 15 Dec 5 09:26 angieta.txt
-rwxr-xr-x 1 root root 7340 Nov 27 09:21 a.out
-rwxr-xr-x 1 root root 7492 Dec 11 15:53 copy
-rwxrwxrwx 1 usermint usermint 619 Dec 4 23:08 copy.c
-rwxr-xr-x 1 root root 7344 Dec 11 15:55 del
-rwxrwxrwx 1 usermint usermint 316 Dec 4 23:08 del.c
drwxr-xr-x 2 usermint usermint 4096 Nov 13 19:32 Desktop
-rwxr-xr-x 1 root root 7352 Nov 27 21:57 dirlist
-rw-r--r-- 1 root root 359 Nov 26 21:42 dirlist.c
drwxr-xr-x 2 usermint usermint 4096 Nov 13 19:32 Documents
drwxr-xr-x 2 usermint usermint 4096 Nov 13 19:32 Downloads
-rwxr-xr-x 1 root root 7340 Nov 27 21:50 exec
-rw-r--r-- 1 root root 620 Nov 27 09:20 exec.c
-rwxr-xr-x 1 root root 7460 Dec 5 09:24 fcreate
-rw-r--r-- 1 root root 514 Dec 5 09:22 fcreate.c
-rwxr-xr-x 1 root root 7280 Nov 26 20:39 fork