

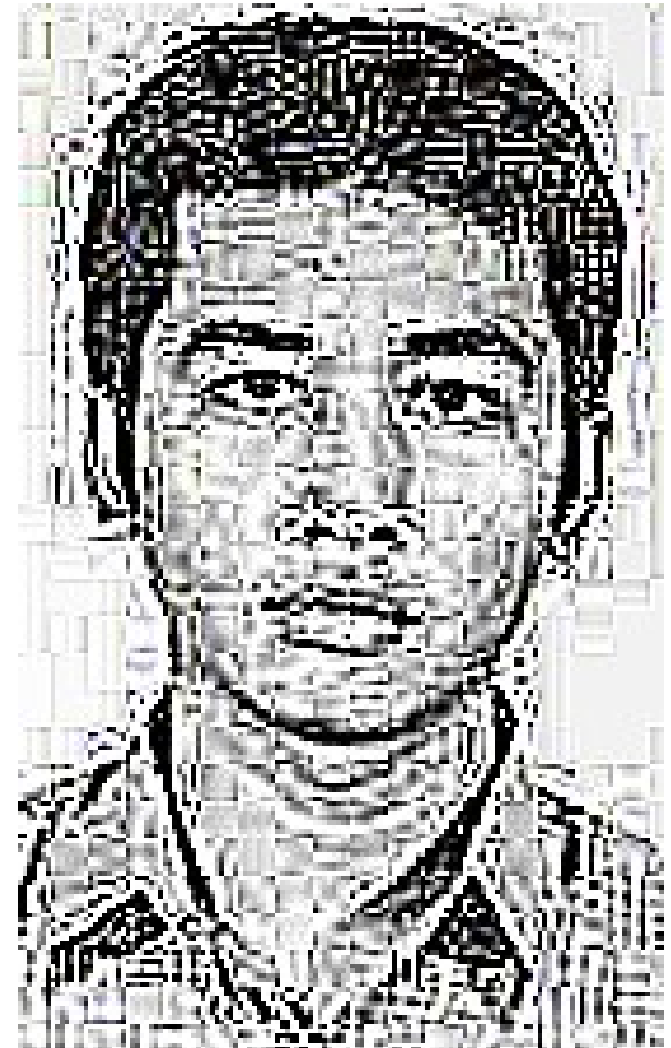
LINUX on Our Campus

Sritrusta Sukaridhoto

Head of Computer Network Lab & EEPIS-ITS Network Team

Tentang aku...

- Seorang pegawai negeri yang berusaha menjadi dosen yang baik,...
- Senang bermain dengan “Linux” sejak 1999 (kuliah sem 5)
- Pengalaman :
 - Mengajar
 - Penelitian
 - Jaringan komputer



Tentang aku ... lagi...

- bergabung dengan EEPIS-ITS tahun 2002
- berkenalan dengan Linux embedded di Tohoku University, Jepang (2003 - 2004)
- “Tukang jaga” lab jaringan komputer (2004 – sekarang)
- Membimbing Tugas Akhir, 25 mahasiswa menggunakan Linux, th 2005 (Rekor)
- Tim “Tukang melototin” Jaringan EEPIS (2002 – sekarang)
- mengurusin server “<http://kebo.vlsm.org>” (2000 – sekarang)
- Debian GNU/Linux – IP v6 developer (2002)
- GNU Octave developer (2002)
- EEPIS-ITS Goodle Crew (2005 – sekarang)
- Linux – SH4 developer (2004 – sekarang)
-

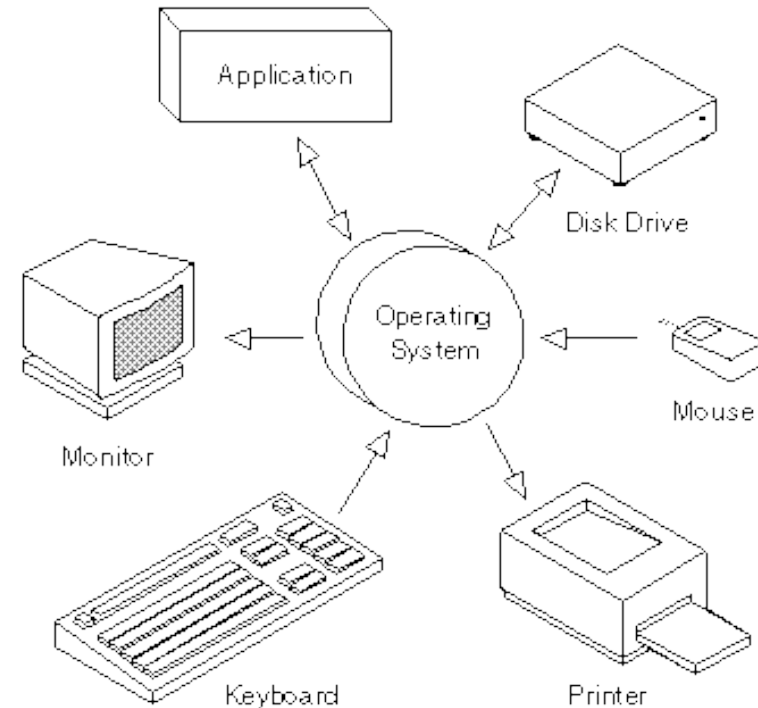
Daftar Isi...

- Linux itu apa ??? (kerupuk...)
- EEPIS-ITS bermain Linux ???,... Ada ???,... bisa,...???
- Linux dan mahasiswa...
- Manfaat Linux
- Bagaimana cara belajar Linux...
- Instalasi Linux...
- Perintah dasar Linux...
- Dasar Jaringan Linux...
- X-Windows (GUI) si tampilan grafis...
- Ngetik-ngetik pake apa ya...???
- Linux bisa buat having fun ...???

Linux itu apa ??? Kerupuk ya...??

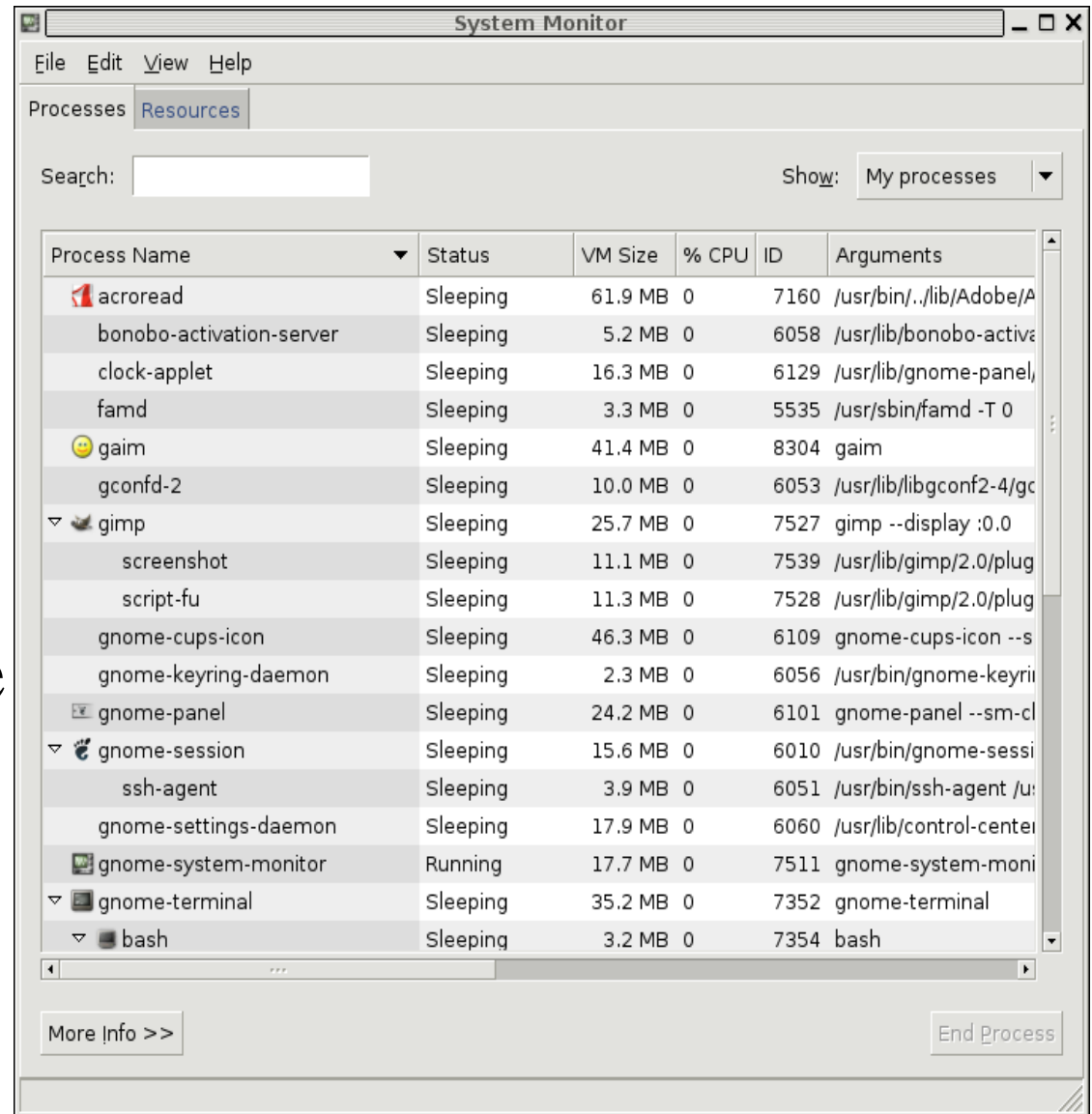
Sistem Operasi

- Linux itu Sistem Operasi di Komputer...
- Tugas :
 - Mengatur Hardware : monitor, drive, mouse, memory
 - Mengatur aplikasi



Isinya sistem operasi apa aja...?

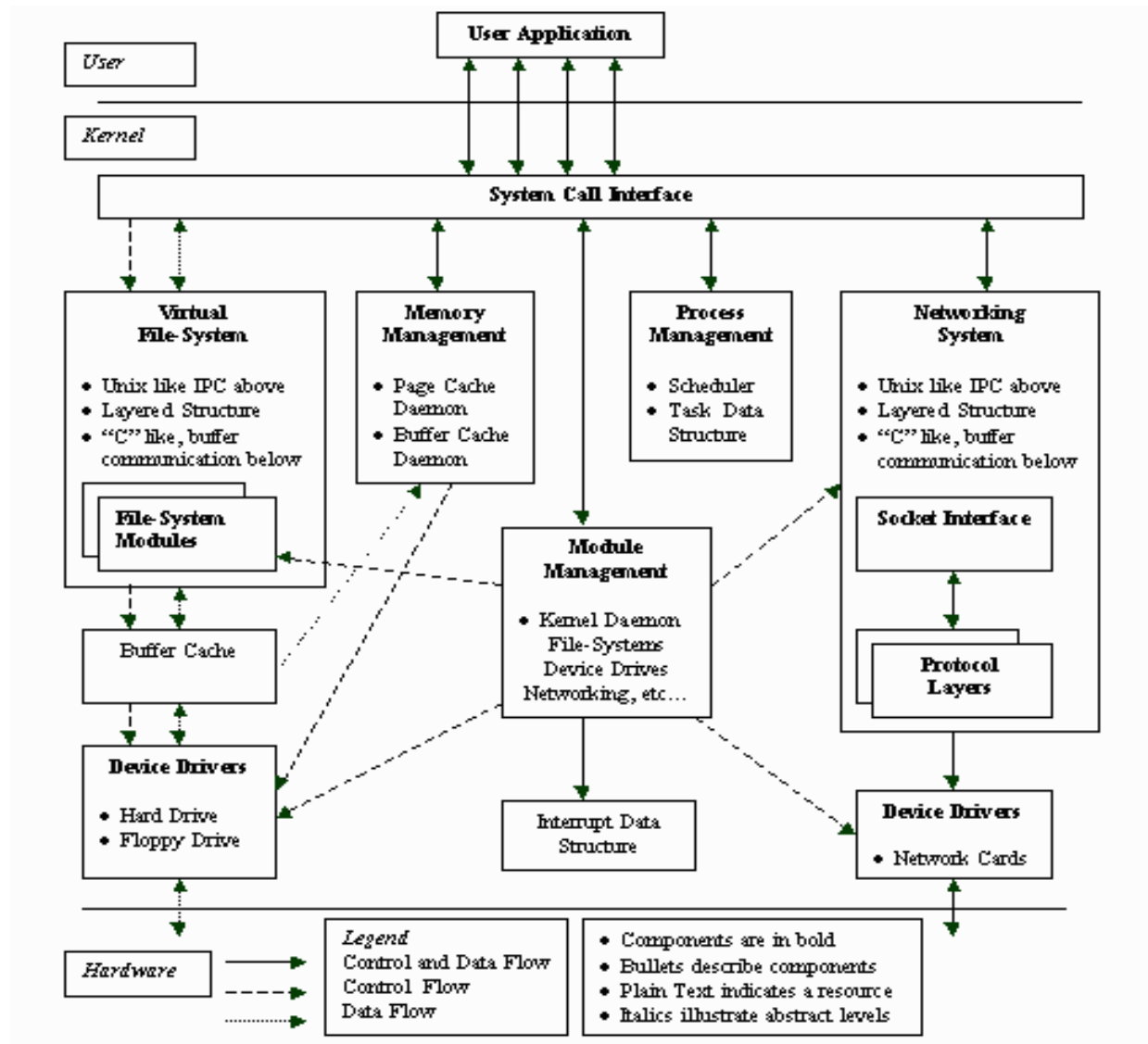
- Manajemen proses
- Manajemen memori
- Proteksi terhadap informasi
- Manajemen dan penjadwalan resource
- Struktur file sistem



The screenshot shows the 'System Monitor' window with the 'Resources' tab selected. It displays a table of processes with columns for Process Name, Status, VM Size, % CPU, ID, and Arguments. The processes listed include acroread, bonobo-activation-server, clock-applet, famd, gaim, gconfd-2, gimp, screenshot, script-fu, gnome-cups-icon, gnome-keyring-daemon, gnome-panel, gnome-session, ssh-agent, gnome-settings-daemon, gnome-system-monitor, gnome-terminal, and bash.

Process Name	Status	VM Size	% CPU	ID	Arguments
acroread	Sleeping	61.9 MB	0	7160	/usr/bin/./lib/Adobe/A
bonobo-activation-server	Sleeping	5.2 MB	0	6058	/usr/lib/bonobo-activa
clock-applet	Sleeping	16.3 MB	0	6129	/usr/lib/gnome-panel,
famd	Sleeping	3.3 MB	0	5535	/usr/sbin/famd -T 0
gaim	Sleeping	41.4 MB	0	8304	gaim
gconfd-2	Sleeping	10.0 MB	0	6053	/usr/lib/libgconf2-4/gc
gimp	Sleeping	25.7 MB	0	7527	gimp --display :0.0
screenshot	Sleeping	11.1 MB	0	7539	/usr/lib/gimp/2.0/plug
script-fu	Sleeping	11.3 MB	0	7528	/usr/lib/gimp/2.0/plug
gnome-cups-icon	Sleeping	46.3 MB	0	6109	gnome-cups-icon --s
gnome-keyring-daemon	Sleeping	2.3 MB	0	6056	/usr/bin/gnome-keyri
gnome-panel	Sleeping	24.2 MB	0	6101	gnome-panel --sm-cl
gnome-session	Sleeping	15.6 MB	0	6010	/usr/bin/gnome-sessi
ssh-agent	Sleeping	3.9 MB	0	6051	/usr/bin/ssh-agent /u
gnome-settings-daemon	Sleeping	17.9 MB	0	6060	/usr/lib/control-center
gnome-system-monitor	Running	17.7 MB	0	7511	gnome-system-moni
gnome-terminal	Sleeping	35.2 MB	0	7352	gnome-terminal
bash	Sleeping	3.2 MB	0	7354	bash

Kernel



OS yg modern harus bisa...

- Multithreading ← Thread
- Symmetric multiprocessing
- Multi-tasking
- Multi-user

OS ada apa aja...



symbian

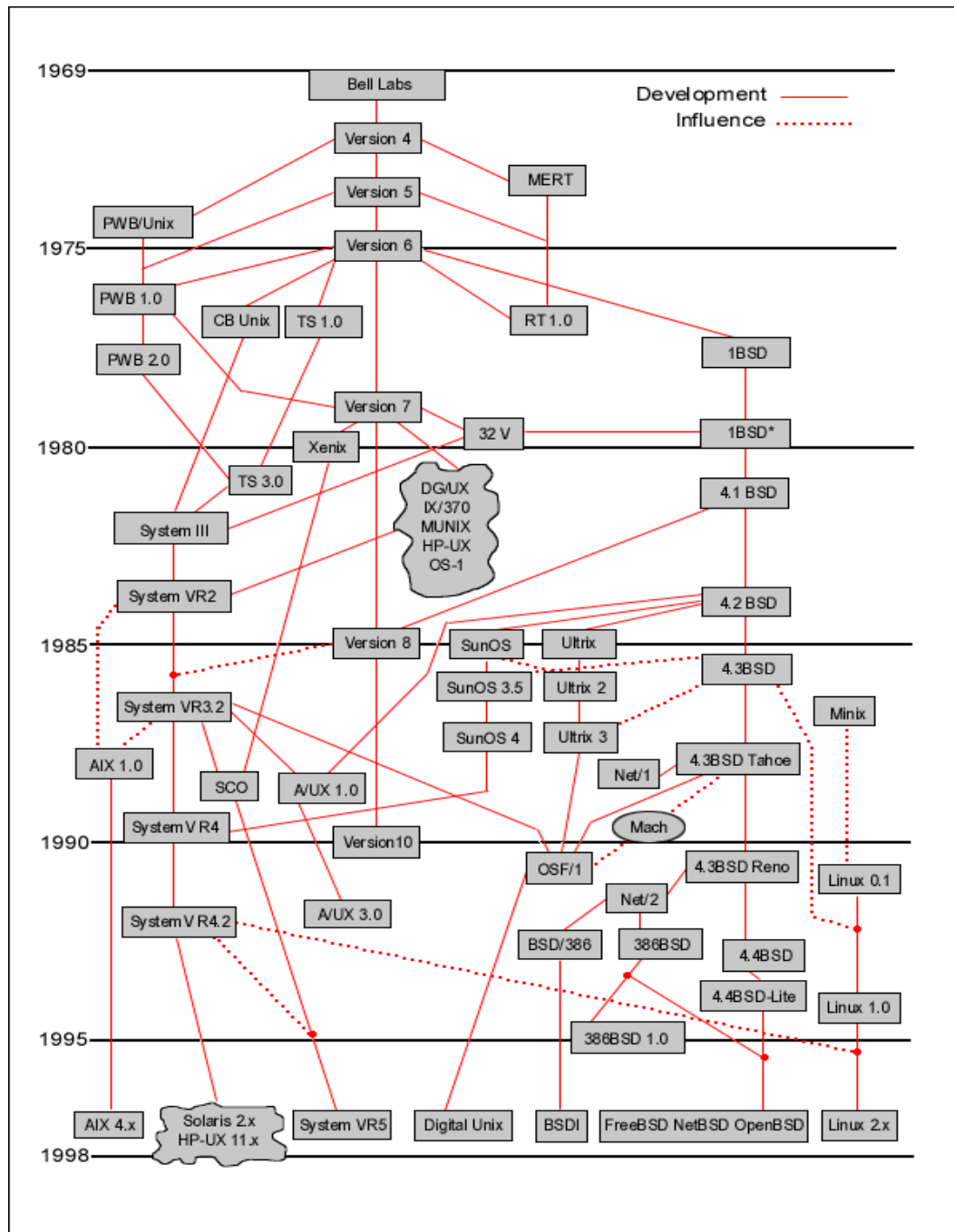


Novell

Linux



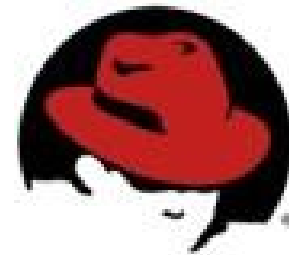
- Yang membuat **Linus Trovald** (1991)
- Dibuat secara **open-source**
- Dikembangkan oleh banyak komunitas di dunia
- **Gratis**
- Turunan dari **UNIX**
- Punya **DISTRO**



LINUX vs OS yang lain

- **LINUX:**
 - Free
 - Multi-tasking dan Multi-user
 - I386 (intel), PPC, Sparc, Alpha, dll
 - Bebas VIRUS
- Yang lain:
 - Unix, windows, apple : **BAYAR**
 - MS-DOS tidak support multi-tasking dan multi-user
 - **MacOS** hanya di Apple computer, **Windows** hanya di Intel, **Solaris** hanya di SPARC, **Unix** hanya di Alpha
 - **Windows** Penyakit, VIRUS

Distro Linux



EEPIS-ITS bermain Linux ???,... Ada ???,...
bisa,...???

LINUX di EEPIS

- Direktur EEPIS-ITS (Pak Titon) pakai LINUX
- Lab Linux dan buku-buku tentang LINUX
- Training dan workshop tentang LINUX
- Dosen pengajar Linux
- Komunitas yg menggunakan LINUX
 - Goodle crew
 - Open-Source
- Server mirror Linux <http://mirror.eepis-its.edu>
- Installer Linux

Direktur EEPIS-ITS

- Linux = Debian GNU/Linux
- Programming = GCC
- Editor = Emacs
- Grafik = GNUPlot
- Digunakan sehari-hari, penelitian, dsb

Kalo tidak percaya bisa datang ke ruangnya sekarang !!!

Lab Linux



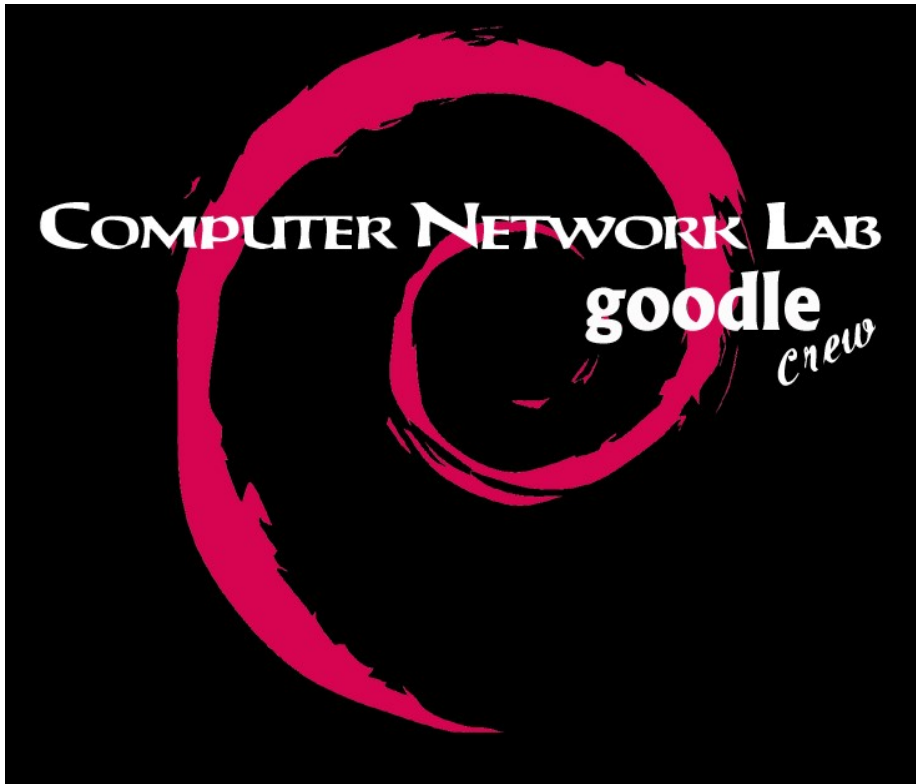
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Linux dan Mahasiswa

- Praktikum
 - Konsep pemrograman
 - Sistem Operasi
 - Komunikasi data dan Jaringan Komputer
 - GIS
- Tugas Akhir
- Sehari-hari... ngetik, musik, nonton film dll

Komunitas

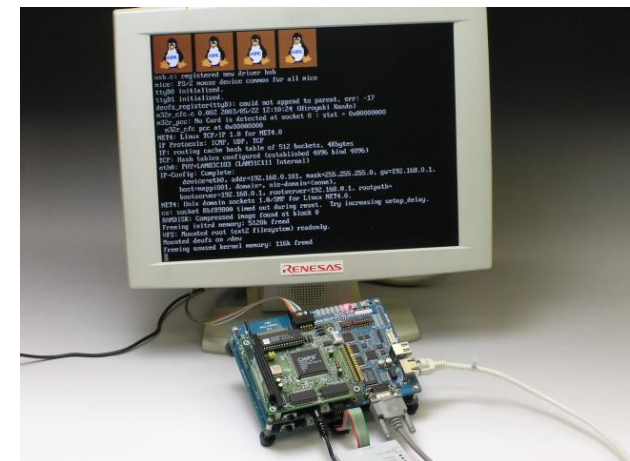
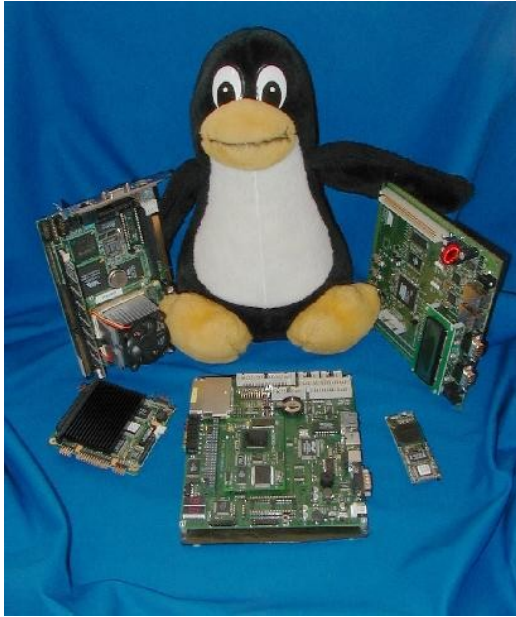


- Goodle Crew
- Open-Source

Manfaat Linux

- Server Internet
- Desktop
- Peralatan pengontrol industri
- PDA
- FPGA
- Mobil Otomatis ... (lihat berita jawapos)

Manfaat Linux ... terusannya



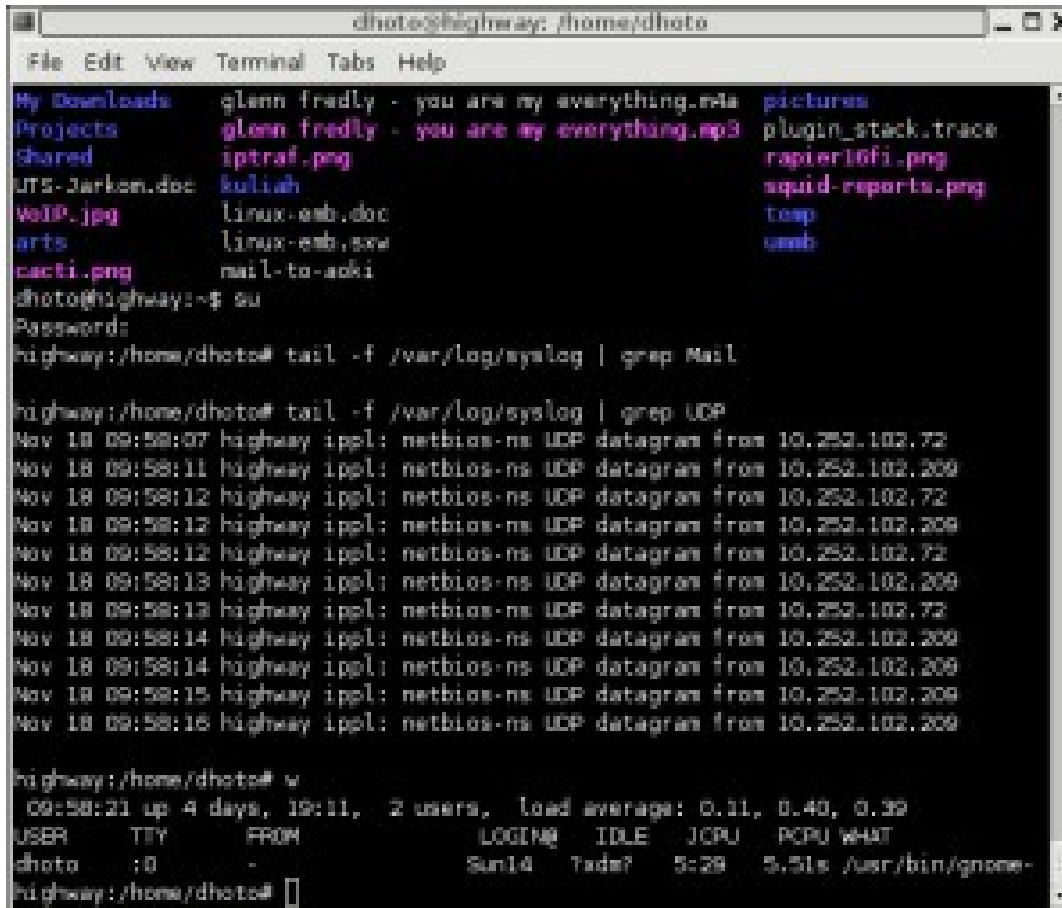
Cara belajar LINUX

- Cari “GURU” yang bener-bener “Sakti Linux”
- Kumpul-kumpul sama yg seneng Linux
- Punya CD-installer Linux
- Komputer ... bisa pinjam, di lab, ... terserah
- Mau dan suka baca-baca tentang LINUX
- **NEKATTTTTT !!!**

Instalasi Linux

- Siapkan komputernya (ketahui HW yg ada)
- Installer Linux (pemilihan distro Linux)
- Jangan asal klik “NEXT” ...
- **BACA PETUNJUK DGN BENAR !!!**
- Jangan lupa backup data terlebih dahulu...

Perintah Dasar



```
dhoto@highway: /home/dhoto
File Edit View Terminal Tabs Help
My Downloads  glenn fredly - you are my everything.mta  pictures
Projects      glenn fredly - you are my everything.mp3      plugin_stack.trace
Shared        iptraf.png                                     rapiert6fi.png
UTS-Jarkom.doc kuliiah                                        squid-reports.png
VoIP.jpg      linux-emb.doc                                  temp
arts          linux-emb.saw                                  usb
cacti.png    mail-to-aski
dhoto@highway:~$ su
Password:
highway:/home/dhoto# tail -f /var/log/syslog | grep Mail
highway:/home/dhoto# tail -f /var/log/syslog | grep UDP
Nov 18 09:58:07 highway ippl: netbios-ns UDP datagram from 10.252.102.72
Nov 18 09:58:11 highway ippl: netbios-ns UDP datagram from 10.252.102.209
Nov 18 09:58:12 highway ippl: netbios-ns UDP datagram from 10.252.102.72
Nov 18 09:58:12 highway ippl: netbios-ns UDP datagram from 10.252.102.209
Nov 18 09:58:12 highway ippl: netbios-ns UDP datagram from 10.252.102.72
Nov 18 09:58:13 highway ippl: netbios-ns UDP datagram from 10.252.102.209
Nov 18 09:58:13 highway ippl: netbios-ns UDP datagram from 10.252.102.72
Nov 18 09:58:14 highway ippl: netbios-ns UDP datagram from 10.252.102.209
Nov 18 09:58:14 highway ippl: netbios-ns UDP datagram from 10.252.102.209
Nov 18 09:58:15 highway ippl: netbios-ns UDP datagram from 10.252.102.209
Nov 18 09:58:16 highway ippl: netbios-ns UDP datagram from 10.252.102.209
highway:/home/dhoto# w
 09:58:21 up 4 days, 19:11,  2 users,  load average: 0.31, 0.40, 0.39
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU   WHAT
dhoto    :0        -              Sun14   Tada?   5:29   5.51s  /usr/bin/gnome-
highway:/home/dhoto#
```

- Perhatikan huruf besar dan kecilnya
- Dgn “TAB” ga perlu ngetik perintah lengkap...
- Man ← manualnya perintah-perintah
- Contoh perintah :
 - Ls, cd, mkdir, cat , grep

Dasar Jaringan Linux

```
dhoto@highway: /home/dhoto
File Edit View Terminal Tabs Help
09:58:21 up 4 days, 19:11, 2 users, load average: 0.11, 0.40, 0.39
USER  TTY  FROM          LOGIN@  IDLE   JCPU   PCPU WHAT
dhoto  :0   -             Sun14  ?xdm?  5:29   5.51s /usr/bin/gnome-
highway:/home/dhoto# cd
highway:~# ifconfig
eth0    Link encap:Ethernet  HWaddr 00:0C:F1:BA:38:43
        inet addr:10.252.102.123 Bcast:10.252.102.255 Mask:255.255.255.0
        inet6 addr: fe80::20c:f1ff:feba:3843/64 Scope:Link
        UP BROADCAST RUNNING MULTICAST  MTU:1500 Metric:1
        RX packets:3215163 errors:0 dropped:0 overruns:0 frame:0
        TX packets:1305736 errors:0 dropped:0 overruns:0 carrier:0
        collisions:0 txqueuelen:1000
        RX bytes:815302897 (777.5 MiB)  TX bytes:831802103 (793.2 MiB)

lo      Link encap:Local Loopback
        inet addr:127.0.0.1 Mask:255.0.0.0
        inet6 addr: ::1/128 Scope:Host
        UP LOOPBACK RUNNING  MTU:16436 Metric:1
        RX packets:8499343 errors:0 dropped:0 overruns:0 frame:0
        TX packets:8499343 errors:0 dropped:0 overruns:0 carrier:0
        collisions:0 txqueuelen:0
        RX bytes:939002093 (895.5 MiB)  TX bytes:939002093 (895.5 MiB)

highway:~# route -n
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
10.252.102.0 0.0.0.0 255.255.255.0 U 0 0 0 eth0
0.0.0.0 10.252.102.1 0.0.0.0 UG 0 0 0 eth0
highway:~#
```

- Ifconfig
 - Melihat IP Address
- Route
 - Melihat dan memodifikasi routing
- Ping
 - Mengecek jaringan

X-Windows

- Core :
 - Xfree86
 - X.org
- Window Manager
 - Gnome
 - KDE
 - Windowmaker
 - XFce
 - Enlightenment
 - fwm

X-window (desktopku)



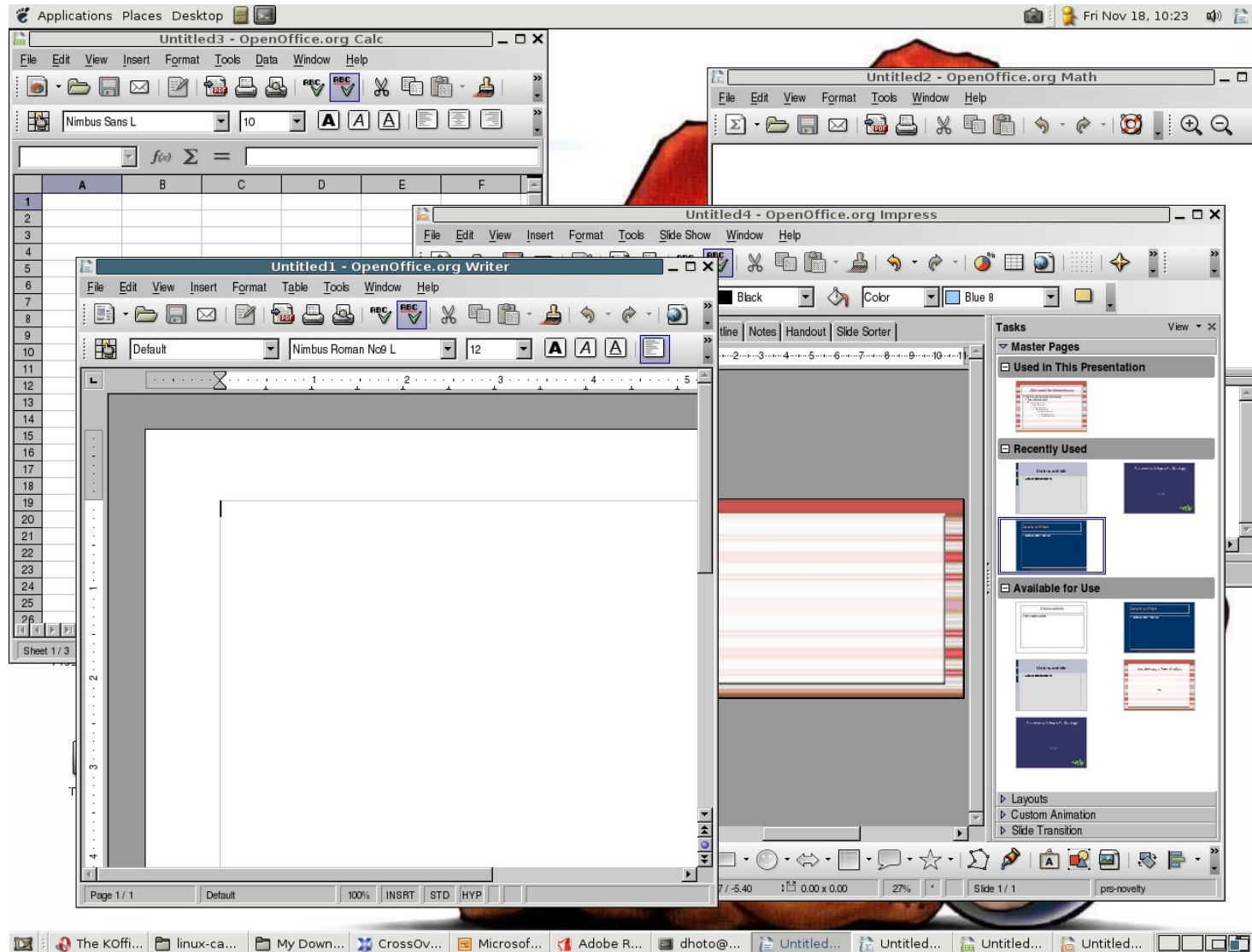
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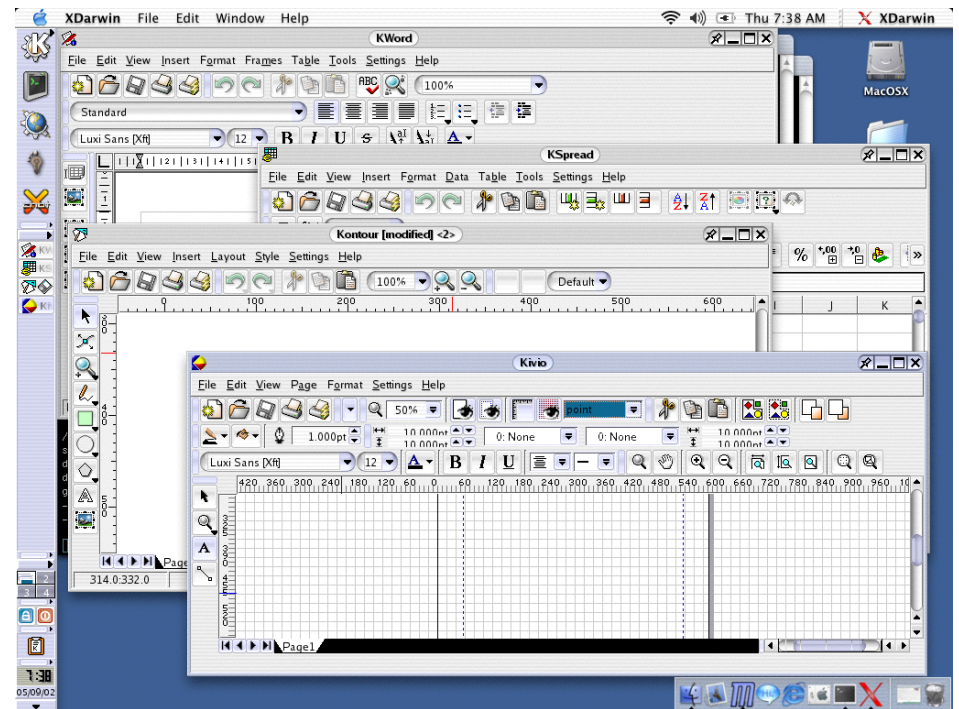
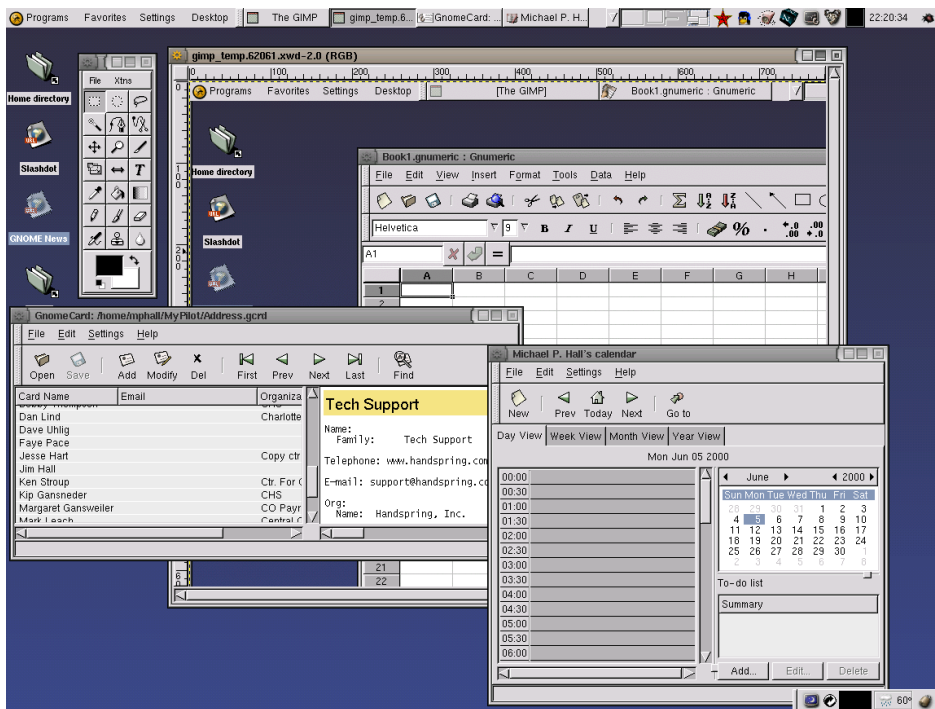
Buat ngetik pake ...

- OpenOffice.org suite
 - Writer, calc, impress, math, Draw
- Gnome Office
 - Abiword, gnumeric, evolution, dia, gimp
- Koffice
 - Koffice-word, kspread, kpresenter, kexi, kivio
- StarOffice
- Latex, vim

OpenOffice.org yg ku pake



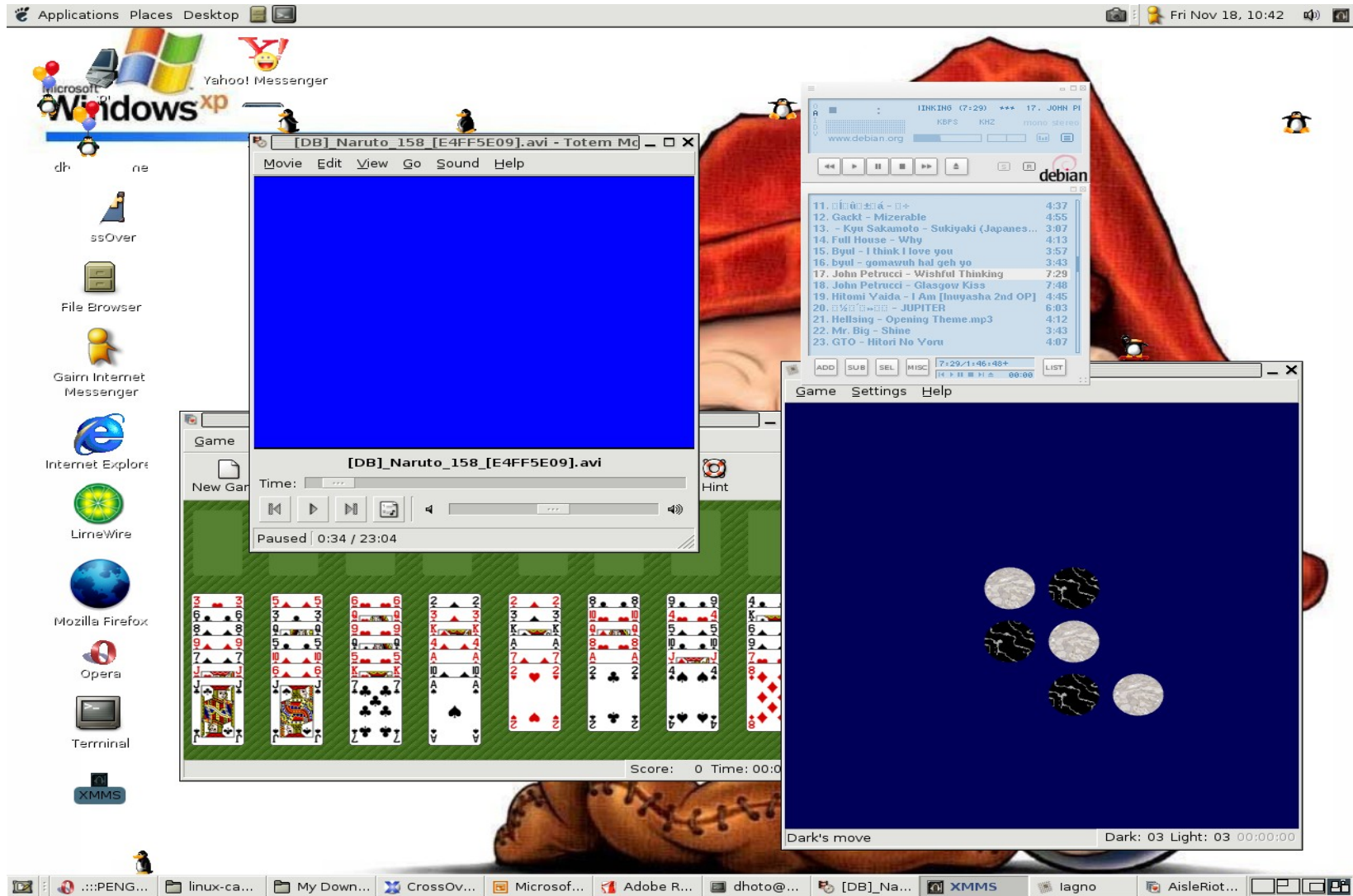
Contoh Office-ware



FUN

- Mp3 player
 - Xmms, freeamp, mpg123...
- Nonton film
 - Mplayer, totem, xine, kmplayer
- Games
 - Akeh polllllll.....
- Sound (gitar, midi,...)
 - Gnometab, sequencer,...

Linux having fun



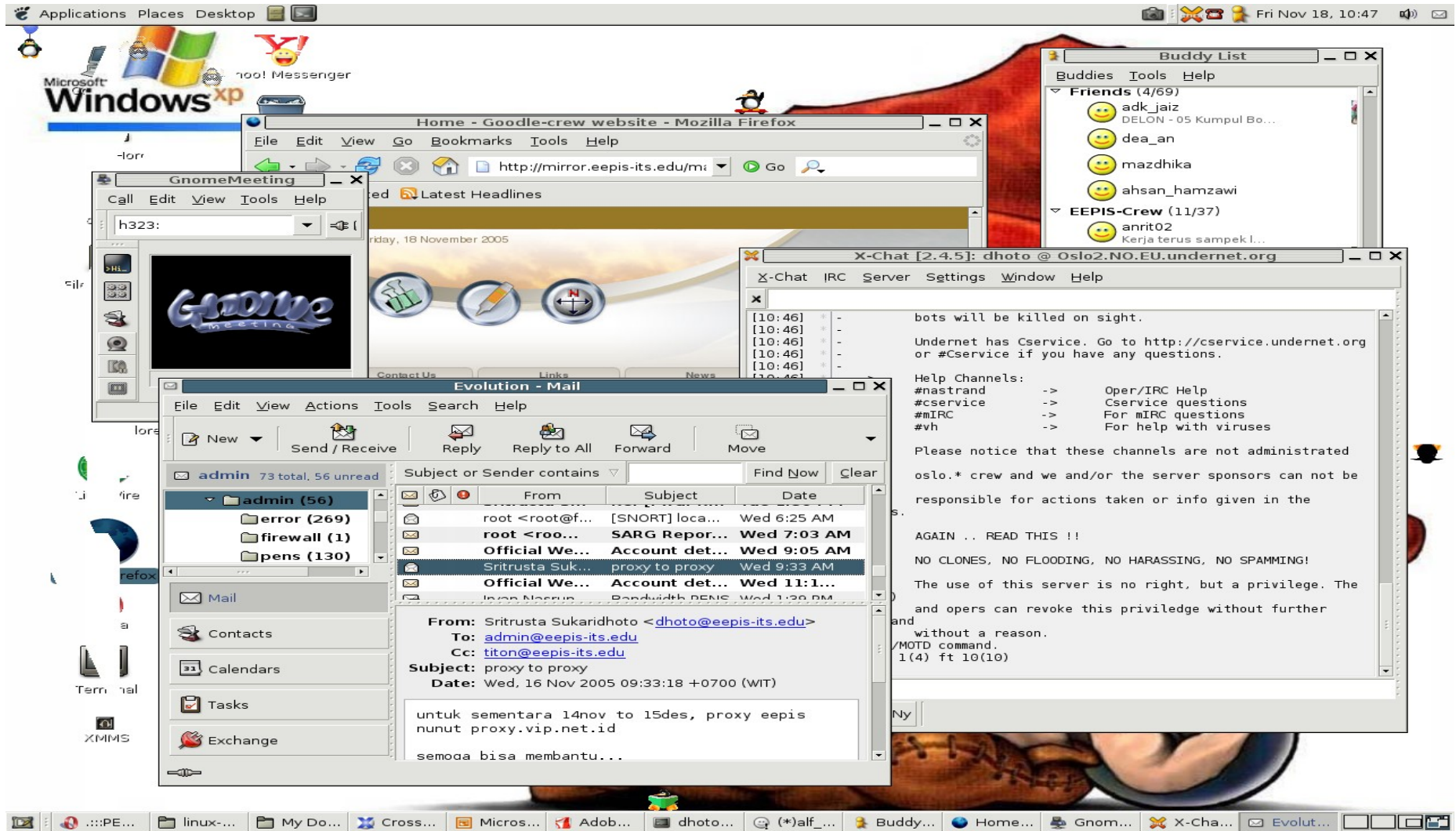
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Internet

- Browser
 - firefox, opera, lynx
- Mail
 - evolution, thunderbird
- chat
 - gaim, centericq
- VoIP
 - gnomemeeting, speakfreely

Internet



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