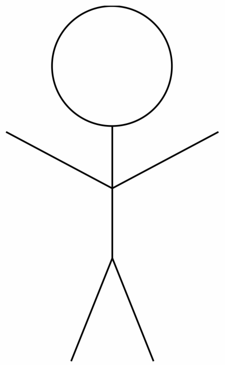
THE MOUSE IS LAVA
Change your habits, boost your productivity

Rayan Mac

with special thanks to Kamel Hacene
for his valuable advice

2019-10-09

This is Bob



Why reduce use of the mouse ?

- Gain in efficiency
- Best window management
- Mouse is not working / too far

Why reduce use of the mouse ?

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Goal : Complete everyday tasks only using keyboard

- Open and close apps quickly
- Switch between windows easily
- Share resources between windows
- Navigate the web

PART 1 : Adapt your environment

Outline

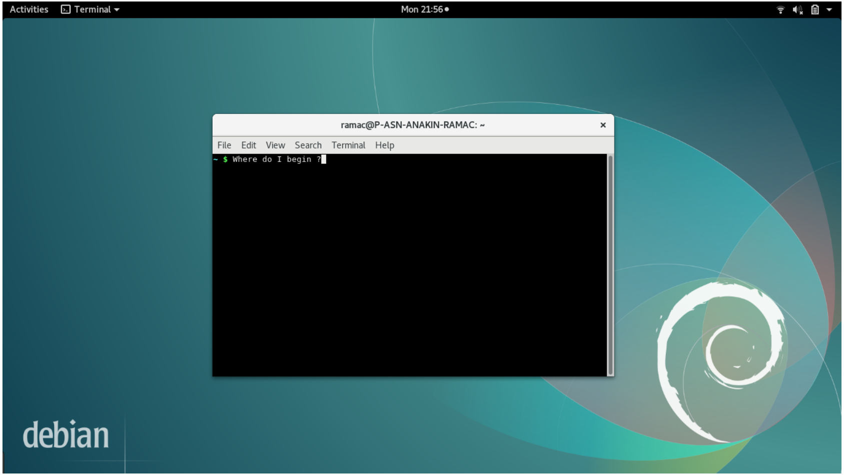
1 Shortcuts everywhere
   - Default and alternatives

2 Terminal multiplexers
   - Architecture
   - Features
   - Practical use

3 Go Tiling !
   - WMs and TWMs
   - Installation and configuration
   - Practical use

4 Useful tools
   - Clipboard managers

Starting point



```
~ $ Where do I begin ?
```

Shortcuts management

- Default shortcuts
- xbindkeys : /.xbindkeysrc
- sxhkd : /.sxhkdrc

```
# terminal emulator
super + Return
    urxvt
# focus the node for the given path jump
super + \{p,b,comma,period\}
    bspc node -f \@\{parent,brother,first,second\}

```

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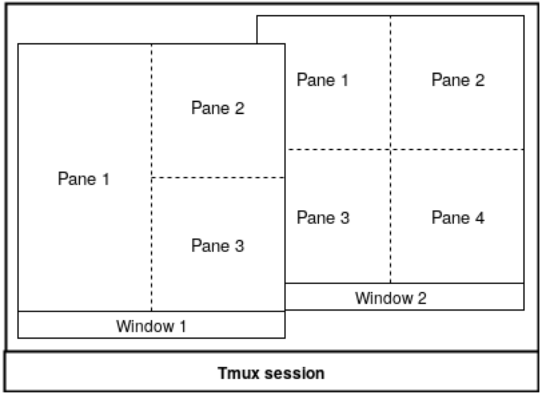
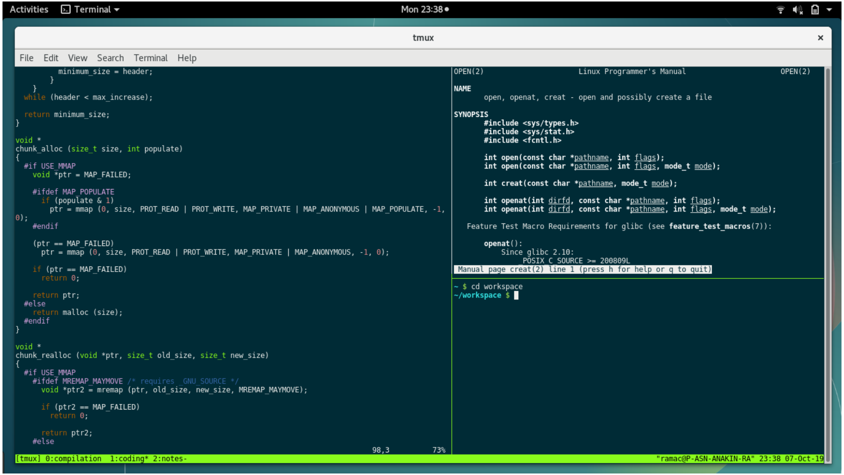
Definition

A terminal multiplexer allows multiple sessions and applications to be displayed and managed on a single screen.



Architecture



```
        minimum_size = header;
      }
    }
  while (header < max_increase);

  return minimum_size;
}

void *
chunk_alloc (size_t size, int populate)
{
  #if USE_MMAP
    void *ptr = MAP_FAILED;

    #ifdef MAP_POPULATE
      if (populate & 1)
        ptr = mmap (0, size, PROT_READ | PROT_WRITE, MAP_PRIVATE | MAP_ANONYMOUS | MAP_POPULATE, -1,
0);
    #endif

    (ptr == MAP_FAILED)
      ptr = mmap (0, size, PROT_READ | PROT_WRITE, MAP_PRIVATE | MAP_ANONYMOUS, -1, 0);

    if (ptr == MAP_FAILED)
      return 0;

    return ptr;
  #else
    return malloc (size);
  #endif
}

void *
chunk_realloc (void *ptr, size_t old_size, size_t new_size)
{
  #if USE_MMAP
    #ifdef MREMAP_MAYMOVE /* requires _GNU_SOURCE */
      void *ptr2 = mremap (ptr, old_size, new_size, MREMAP_MAYMOVE);

      if (ptr2 == MAP_FAILED)
        return 0;

      return ptr2;
    #else
                                                                  98,3          73%
```

```
OPEN(2)                      Linux Programmer's Manual                      OPEN(2)

NAME
       open, openat, creat - open and possibly create a file

SYNOPSIS
       #include <sys/types.h>
       #include <sys/stat.h>
       #include <fcntl.h>

       int open(const char *pathname, int flags);
       int open(const char *pathname, int flags, mode_t mode);

       int creat(const char *pathname, mode_t mode);

       int openat(int dirfd, const char *pathname, int flags);
       int openat(int dirfd, const char *pathname, int flags, mode_t mode);

   Feature Test Macro Requirements for glibc (see feature_test_macros(7)):

       openat():
           Since glibc 2.10:
                _POSIX_C_SOURCE >= 200809L
 Manual page creat(2) line 1 (press h for help or q to quit)
```

```
~ $ cd workspace
~/workspace $
```

```
[tmux] 0:compilation  1:coding* 2:notes-                    "ramac@P-ASN-ANAKIN-RA" 23:38 07-Oct-19
```

Popular Terminal multiplexers

Historically, GNU Screen 1987

Nowadays:

- Terminator
- Screen
- Tmux
- Byobu

Practical use

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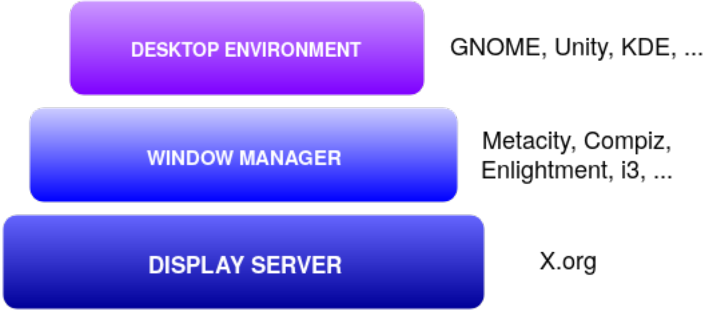
About windows manager

Window manager: A system software controlling the placement and appareance of windows inside a graphical user interface.



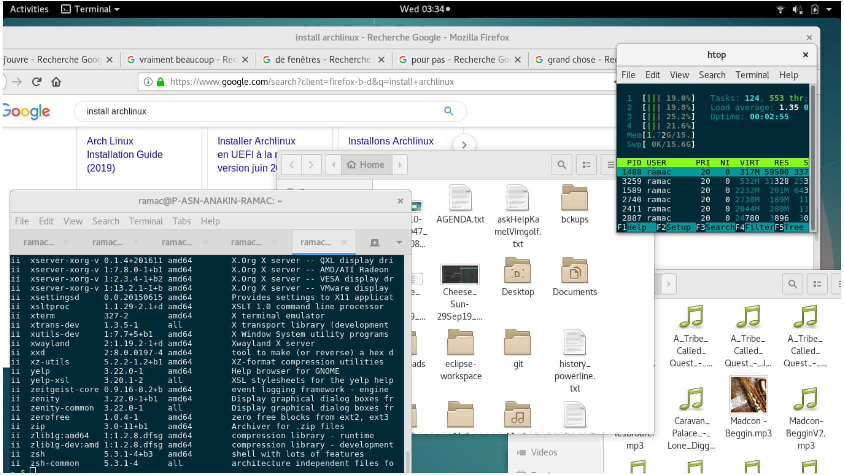
Tiling window managers

Organize windows automatically so that they don’t overlap, while maximizing the space use.

Benefits:

- Keep at sight the whole working environment
- Lighter and faster than usual WMs
- Built-in shortcuts optimized for keyboards

Struggling with windows arrangement: DAY 1

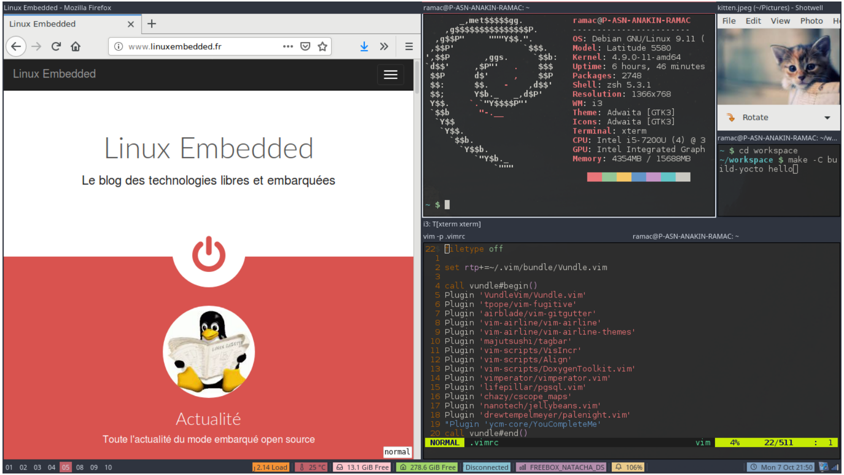


```
ii  xserver-xorg-v 0.1.4+201611 amd64        X.Org X server -- QXL display dri
ii  xserver-xorg-v 1:7.8.0-1+b1 amd64        X.Org X server -- AMD/ATI Radeon
ii  xserver-xorg-v 1:2.3.4-1+b2 amd64        X.Org X server -- VESA display dr
ii  xserver-xorg-v 1:13.2.1-1+b amd64        X.Org X server -- VMware display
ii  xsettingsd     0.0.20150615 amd64        Provides settings to X11 applicat
ii  xsltproc       1.1.29-2.1+d amd64        XSLT 1.0 command line processor
ii  xterm          327-2        amd64        X terminal emulator
ii  xtrans-dev     1.3.5-1      all          X transport library (development
ii  xutils-dev     1:7.7+5+b1   amd64        X Window System utility programs
ii  xwayland       2:1.19.2-1+d amd64        Xwayland X server
ii  xxd            2:8.0.0197-4 amd64        tool to make (or reverse) a hex d
ii  xz-utils       5.2.2-1.2+b1 amd64        XZ-format compression utilities
ii  yelp           3.22.0-1     amd64        Help browser for GNOME
ii  yelp-xsl       3.20.1-2     all          XSL stylesheets for the yelp help
ii  zeitgeist-core 0.9.16-0.2+b amd64        event logging framework - engine
ii  zenity         3.22.0-1+b1  amd64        Display graphical dialog boxes fr
ii  zenity-common  3.22.0-1     all          Display graphical dialog boxes fr
ii  zerofree       1.0.4-1      amd64        zero free blocks from ext2, ext3
ii  zip            3.0-11+b1    amd64        Archiver for .zip files
ii  zlib1g:amd64   1:1.2.8.dfsg amd64        compression library - runtime
ii  zlib1g-dev:amd 1:1.2.8.dfsg amd64        compression library - development
ii  zsh            5.3.1-4+b3   amd64        shell with lots of features
ii  zsh-common     5.3.1-4      all          architecture independent files fo
~ $
```

```
  1  [|||  19.0%]    Tasks: 124, 553 thr;
  2  [|||  19.8%]    Load average: 1.35 0
  3  [|||  25.2%]    Uptime: 00:02:55
  4  [|||  21.6%]
  Mem[1.72G/15.]
  Swp[  0K/15.6G]

  PID USER       PRI  NI  VIRT   RES   S
 1488 ramac       20   0  317M 59500 337
 3259 ramac       20   0  532M 31328 253
 1589 ramac       20   0 2232M  201M 643
 2740 ramac       20   0 2730M  189M  11
 2411 ramac       20   0 2844M  280M  13
 2887 ramac       20   0 24780  3896  30
F1Help  F2Setup  F3SearchF4FilterF5Tree
```

Struggling with windows arrangement: DAY 2


Linux Embedded - Mozilla Firefox
Linux Embedded
www.linuxembedded.fr
Linux Embedded
Linux Embedded
Le blog des technologies libres et embarquées
Actualité
Toute l'actualité du mode embarqué open source
normal
kitten.jpeg (~/Pictures) - Shotwell
File
Edit
View
Photo
Rotate
ramac@P-ASN-ANAKIN-RAMAC: ~
ramac@P-ASN-ANAKIN-RAMAC: ~/w...
i3: T[xterm xterm]
vim -p .vimrc
ramac@P-ASN-ANAKIN-RAMAC: ~
01 02 03 04 05 08 09 10
2.14 Load
25 °C
13.1 GiB Free
278.6 GiB Free
Disconnected
FREEBOX_NATACHA_DS
106%
Mon 7 Oct 21:50

```
         _,met$$$$$gg.          ramac@P-ASN-ANAKIN-RAMAC
      ,g$$$$$$$$$$$$$$$P.       ------------------------
    ,g$$P"     """Y$$.".        OS: Debian GNU/Linux 9.11 (
   ,$$P'              `$$$.     Model: Latitude 5580
  ',$$P       ,ggs.     `$$b:   Kernel: 4.9.0-11-amd64
  `d$$'     ,$P"'   .    $$$    Uptime: 6 hours, 46 minutes
   $$P      d$'     ,    $$P    Packages: 2748
   $$:      $$.   -    ,d$$'    Shell: zsh 5.3.1
   $$;      Y$b._   _,d$P'      Resolution: 1366x768
   Y$$.    `.`"Y$$$$P"'         WM: i3
   `$$b      "-.__              Theme: Adwaita [GTK3]
    `Y$$                        Icons: Adwaita [GTK3]
     `Y$$.                      Terminal: xterm
       `$$b.                    CPU: Intel i5-7200U (4) @ 3
         `Y$$b.                 GPU: Intel Integrated Graph
            `"Y$b._             Memory: 4354MB / 15688MB
                `""""

~ $ 
```

```
~ $ cd workspace
~/workspace $ make -C bu
ild-yocto hello
```

```
filetype off

set rtp+=~/.vim/bundle/Vundle.vim

call vundle#begin()
Plugin 'VundleVim/Vundle.vim'
Plugin 'tpope/vim-fugitive'
Plugin 'airblade/vim-gitgutter'
Plugin 'vim-airline/vim-airline'
Plugin 'vim-airline/vim-airline-themes'
Plugin 'majutsushi/tagbar'
Plugin 'vim-scripts/VisIncr'
Plugin 'vim-scripts/Align'
Plugin 'vim-scripts/DoxygenToolkit.vim'
Plugin 'vimperator/vimperator.vim'
Plugin 'lifepillar/pgsql.vim'
Plugin 'chazy/cscope_maps'
Plugin 'nanotech/jellybeans.vim'
Plugin 'drewtempelmeyer/palenight.vim'
"Plugin 'ycm-core/YouCompleteMe'
call vundle#end()
NORMAL  .vimrc                                   vim   4%   22/511  :  1
```

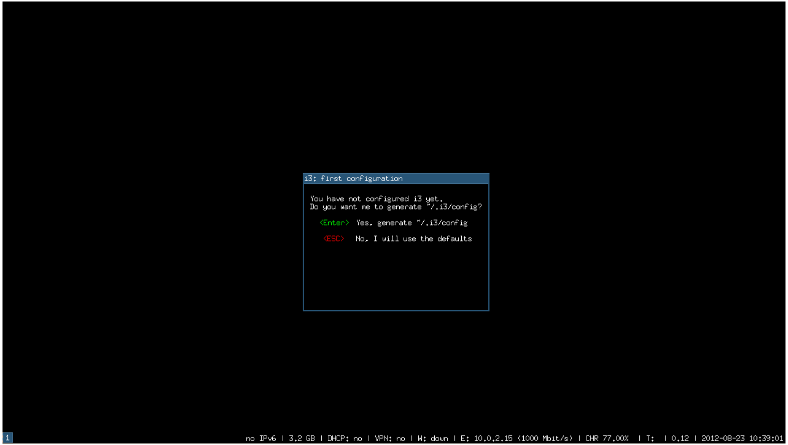
Popular TWMs

- i3 / sway : user friendly, huge community and great documentation
- Awesome (lua) : great mouse integration, highly configurable
- dwm (C), xmonad (haskell) : small, fast, simple
- bspwm : very light, high degree of customisation

...

Installation

Usually available in official repositories



```
i3: first configuration

You have not configured i3 yet.
Do you want me to generate ~/.i3/config?

  <Enter>  Yes, generate ~/.i3/config

    <ESC>  No, I will use the defaults
```

```
1      no IPv6 | 3.2 GB | DHCP: no | VPN: no | W: down | E: 10.0.2.15 (1000 Mbit/s) | CHR 77.00%  | T:  | 0.12 | 2012-08-23 10:39:01
```

Configuration (i3 example)

A single configuration file : /.config/i3/config

```
# enter fullscreen mode for the focused container
bindsym $mod+f fullscreen toggle

# colour of border, background, text, indicator, and child_border
client.focused              #bf616a #2f343f #d8dee8 #bf616a #d8dee8

# add network-manager status bar shortcut
exec --no-startup-id nm-applet

```

Make it look eye-candy : i3-starterpack

git clone https://github.com/ramacassis/confighamac.git

Practical use

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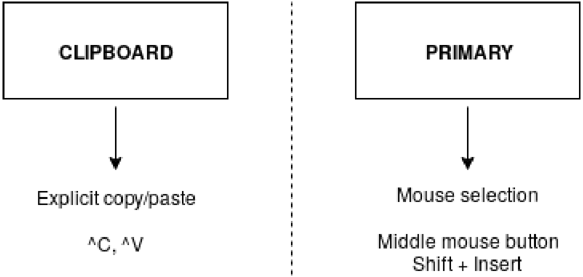
Linux clipboard



- Access clipboard in command line: xclip
- Other clipboard manager: clipit, copyq, [. . .]

PART 2: Expand to other apps !

Web navigation

General idea: use (vim) shortcuts as an interface to browser

Historically:

- Vimperator
- Pentadactyl

Nowadays:

- Tridactyl
- Vim-vixen
- cVim

…

All tools put together

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Conclusion

- Open and close apps quickly: shortcuts, TWM
- Switch between windows easily: terminal multiplexers, TWM
- Share resources between windows: clipboard, command history
- Navigate the web : browser plugins, CLI apps

What's next ?

Going further...

- Web: elinks, lynx
- Mail: mutt, neomutt, alpine
- Calendar: calcurse, remind
- Music: mpsyt, cmus

https://wiki.archlinux.org/index.php/list_of_applications
https://doc.ubuntu-fr.org/liste_des_applications_console

Find the compromise that suits your needs !

Thanks for your attention

Let’s share !