

# Methods Training

## Scholarship, Posters and Thesis

(English)

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Day	Date	Session	Topic
1	13-02-2019	Morning (9:00 – 12:00)	Introduction
1	13-02-2019	Morning	Scholarship and research
1	13-02-2019	Morning	Taking notes
1	13-02-2019	Afternoon (13:00 – 15:30)	Posters
1	13-02-2019	Afternoon	Intro to Linux, desktop, command line
1	13-02-2019	Afternoon (15:30 – 18:00)	Personal working time (poster)
2	14-02-2019	Morning	Citations
2	14-02-2019	Morning	Literature searching and bibtex files
2	14-02-2019	Morning	Reference management (Citavi and Jabref)
2	14-02-2019	Afternoon	Inkscape & (Python3 ?)
2	14-02-2019	Afternoon	Personal working time (poster)
3	15-02-2019	Morning	Research questions and hypotheses
3	15-02-2019	Morning	Writing your thesis and personal time line
3	15-02-2019	Morning	FAQ thesis, L <sup>A</sup> T <sub>E</sub> X
3	15-02-2019	Afternoon	Personal working time (poster)
	17-02-2019	Night (21:00)	Final PDF uploaded to LEA
4	18-02-2019	Morning 9:00	Poster PDF must be delivered to printshop
4	18-02-2019	Morning (1 hr)	Git
4	18-02-2019	Morning 10:00	Library seminar
4	18-02-2019	Afternoon	Significant figures and rounding
4	18-02-2019	Afternoon	Personal working time
5	19-02-2019	Morning	Ethics
5	19-02-2019	Morning	Course evaluations
5	19-02-2019	Afternoon	Poster presentation
	??-??-2019	08:00-11:00	Poster Session at the Niehl training center

# Questions or comments from last lecture(s)?

## German and English Thesis Examples and Template:

[https://gitlab.com/k.n.kirschner/H-BRS\\_Thesis\\_Template.git](https://gitlab.com/k.n.kirschner/H-BRS_Thesis_Template.git)

## FAQ About Thesis:

LEA → EMT-Studieninfos → Prüfungen → FAQ →  
Häufige Fragen zu Prüfungsangelegenheiten →  
Prüfungsinformationen für alle EMT-Studiengänge: →  
Fragen zur Abschlusssarbeit und zum Kolloquim

Bib-Cloud – <https://www.h-brs.de/en/bib/cloud-storage-keep-your-files-safe-bibcloud>

**Linux**

# AN UPDATE IS AVAILABLE FOR YOUR COMPUTER

stickychomics.com

COOL, MORE  
FREE STUFF!



linux

NOT AGAIN!



windows

OOH, ONLY  
\$99!



mac

<http://hypertechtronium.com/es-gibt-ein-update-linux-vs-windows-vs-mac-co/>

- Linux is an operating system
- Shell and a Desktop environment (e.g. GNOME, KDE)
- September 17, 1991 by Linus Torvalds
- Android is based on Linux

<https://en.wikipedia.org/wiki/Linux>

# Linux Distro



# Advantages and Disadvantages

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## Advantages:

- Free and open-sourced software
- Very stable
- Less vulnerable to malware
  - Not targeted
  - Security is already build into the OS
- Does not slow down over time

## Disadvantages:

- MS software often won't run
- Small selection of peripheral hardware drivers (best to use hardware that has been out for a while)
- Learning curve



## Software

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Software Type	Windows/Mac	Linux
Writing	Microsoft Word	LibreOffice Writer, Latex & Kile
Presentation	Microsoft PowerPoint	LibreOffice Impress
Spreadsheet	Microsoft Excel	LibreOffice Calc
Statistical/plotting	Matlab, R	R, Gnuplot, python (w/ matplotlib)
Raster graphics	Adobe Photoshop	GIMP
Vector graphics	Corel Draw	Inkscape
Video Editor	Various	Mplayer/Mencoder
References	EndNote, Citavi	Jabref, Zotero

## What his available

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### **Summary of Linux OS software:**

<http://distrowatch.com/dwres.php?resource=major>

### **Debian software available:**

<https://packages.debian.org/stable/>

## General Linux things

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- Windows 10 has Linux built in  
(Windows Subsystem for Linux...Debianish...but does do GUI easily)
- desktop environment - KDE and Gnome most popular
- bash shell
- autocompletion using Tab key
- hidden files

## Basic commands (& Codecademy)

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- <https://www.codecademy.com/catalog/language/bash>

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- ls – list directory content
  - pwd – print working directory
  - cd DIR\_NAME – change directory to “DIR\_NAME”
  - cd .. – change directory back one
  - mkdir DIR\_NAME – make directory whose name is “DIR\_NAME”
  - touch FILE\_NAME – create an empty file whose name is “FILE\_NAME”

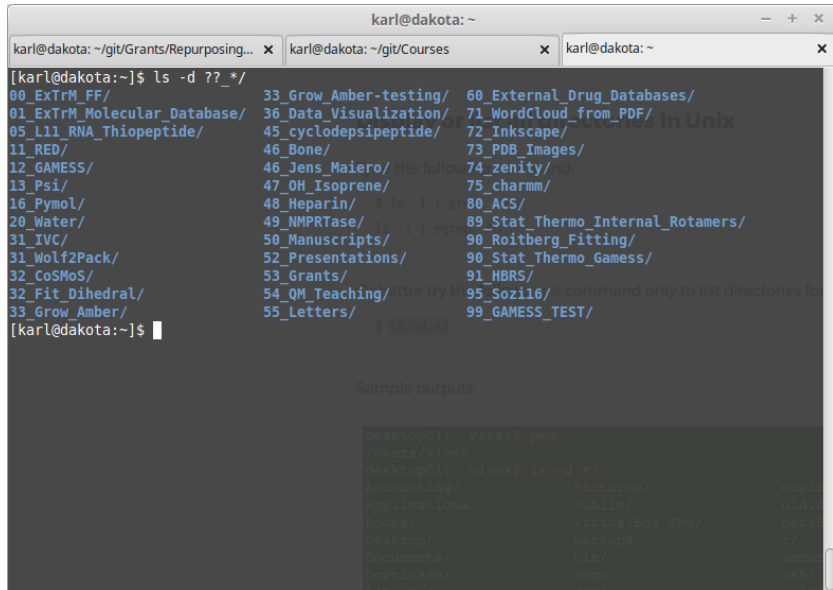
## More helpful line commands

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- `rm FILE_NAME` – removes a file
- `rm -r DIR_NAME` – removes a directory
- `rm --help` – information on command usage
  
- `cp FILE_NAME NEW_FILE_NAME` – copy file
- `cp -r DIR_NAME NEW_DIR_NAME` – copy directory
  
- `mv FILE_NAME NEW_FILE_NAME` – renames a file (i.e. moves it)
  
- `top` and `ps (-ef)` – running processes
- `kill #####`
  
- `grep PATTERN` – search for pattern occurrence

Go online and Google “Linux cheat sheet”

## Hint: directory naming



The screenshot shows a terminal window with three tabs. The active tab is titled 'karl@dakota: ~'. The terminal content is as follows:

```
karl@dakota: ~/git/Grants/Repurposing... x karl@dakota: ~/git/Courses x karl@dakota: ~ x
[karl@dakota:~]$ ls -d ??_*/
00_ExTrM_FF/          33_Grow_Amber-testing/  60_External_Drug_Databases/
01_ExTrM_Molecular_Database/ 36_Data_Visualization/  71_WordCloud_from_PDF/
05_L11_RNA_Thiopeptide/    45_cyclodepsipeptide/  72_Inkscape/
11_RED/                  46_Bone/               73_PDB_Images/
12_GAMESS/              46_Jens_Maiero/ the follow 74_zenity/nd-
13_Psi/                 47_OH_Isoprene/       75_charmm/
16_Pymol/               48_Heparin/  $ ls -l | gr 80_ACS/
20_Water/              49_NMPRTase/  $ ls -l | egre 89_Stat_Thermo_Internal_Rotamers/
31_IVC/                50_Manuscripts/      90_Roitberg_Fitting/
31_Wolf2Pack/          52_Presentations/    90_Stat_Thermo_GameSS/
32_CoSMoS/             53_Grants/           91_HBRS/
32_Fit_Dihedral/       54_QM_Teaching/etter try th 95_Sozi16/ $ command only to list directories fo
33_Grow_Amber/         55_Letters/          99_GAMESS_TEST/
[karl@dakota:~]$
```

Below the terminal output, there is a section titled "Sample outputs:" which contains two terminal snippets:

```
desktop01:~ vivek$ pwd
/Users/vivek
desktop01:~ vivek$ ls -d */
Accounting/      Pictures/          music/
Applications/    Public/            old/
Books/           VirtualBox VMs/    perl/
Desktop/         backups/           r/
Documents/       bin/               secu
Downloads/       demo/              usb/
Images/          dev/               vms/
```

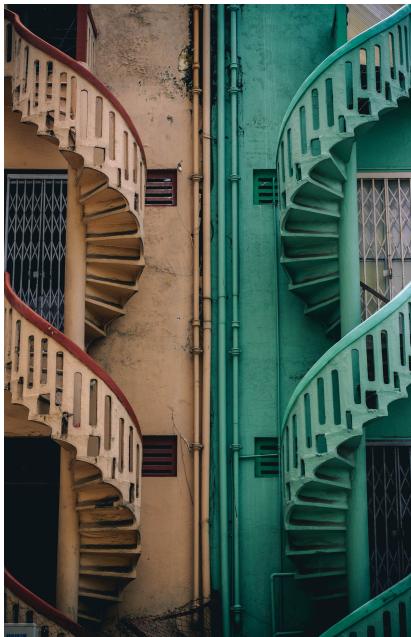


Photo by Greg Jeanneau on Unsplash

## Inkscape Intro

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- Home: <https://inkscape.org>
- Open-sourced vector graphics (i.e. scalable) - svg format
- Alternative to illustrator
- Linux, Windows, Macs
- Sources of open images: <https://commons.wikimedia.org>





### Zooming

- Quick zoom - position mouse on image → Strg + mouse wheel
- Zoom 1:1 – 1 key
- Zoom 1:2 – 2 key
- **Zoom to selection – 3 key**
- Zoom to drawing – 4 key
- **Zoom to page – 5 key**
- Zoom to page width – 6 key

### Coloring

- Color fill – select object → Strg + right mouse click on color
- Color stroke – select object → Shift + right mouse click on color
- Stroke line size – the number that is right of the stroke color
- Color pallets – small arrow to the right of the current color bar

### Moving things around (after selection)

- Raise selection one up – Bild Up key.
- Raise selection – Bild Down key.
- Raise selection to the top – Pos1 (Home) key.
- Raise selection to the bottom – Ende key.
- Arrow keys – nudge an object
- Shift+Arrow key – a big nudge
- Single click on object double arrows – change size (Strg and Shift)
- Double click on object double arrows – rotate (Strg)

### Misc

- Fill and Stroke – Strg-Shift-F (or right mouse click)  
(RGB: <http://paletton.com>)
- Bezier Tool (plus mode selection button) – curved and straight lines  
(also use Strg key)
- Duplicate object – Strg-D
- Group and ungroup objects – Strg-G and Strg-U
- Temporarity group/ungroup objects – Shift-right click
- Align and Distribute objects – Strg-Shift-A
- Page grids – # (i.e. Shift 3) or View → Page Grid
- Document Properties – Strg-Shift-D
- Save and Save As... – svg, pdf