

# How to do Everything in the Terminal

- Scale 22x

# Who Am I?



## Jared Bernard

Teach Linux Admin, Cybersecurity and  
Networking.

Metropolitan Community College – Omaha,  
NE

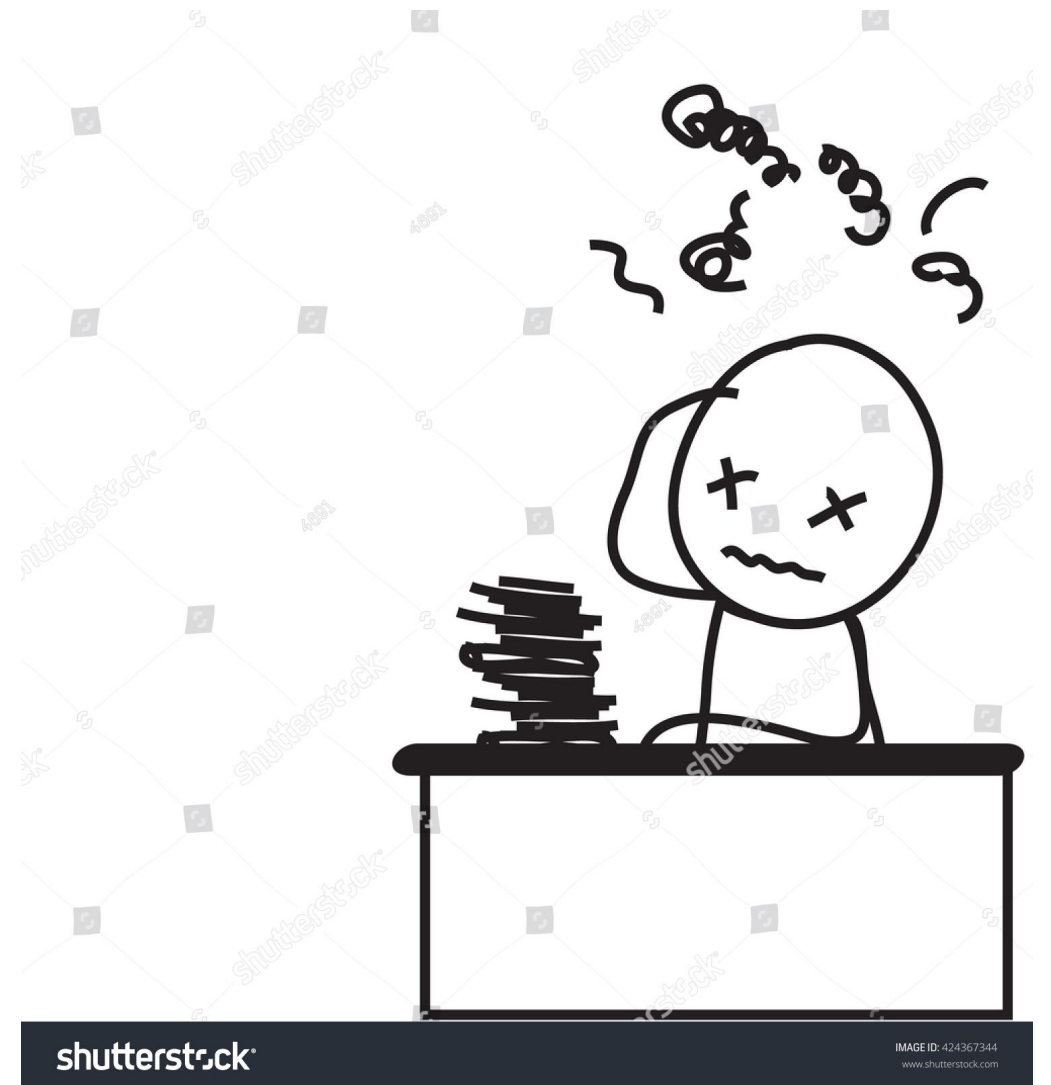
**YouTube** - <https://www.youtube.com/@LinuxClassroom>

**Website** - <http://moriancu.sdf.org/>

**Email** - [moriancu@sdf.org](mailto:moriancu@sdf.org)

# How I Got Here

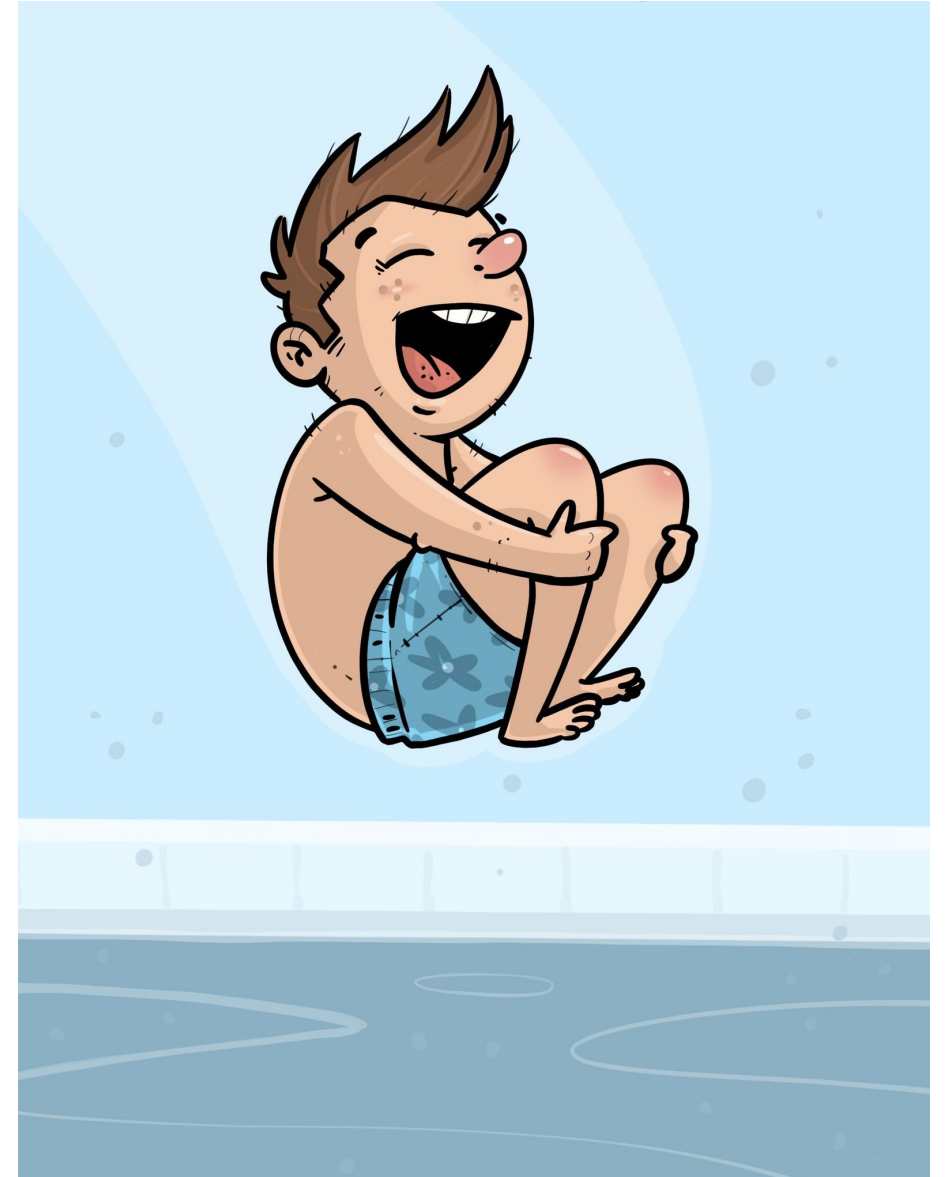
- First Linux install 2001.
- Bored at work.
- Tried completing desktop tasks through ssh.



# What to Expect

- Focus on common desktop tasks.
- All applications are found in most Linux repos
- Provided links to all applications
- Some example commands to use
- Will not distinguish between Command Line, Shell, Terminal.
- Hopefully you will learn 1 or 2 new tools to move your workflow into the Terminal.

# Let's Dive In

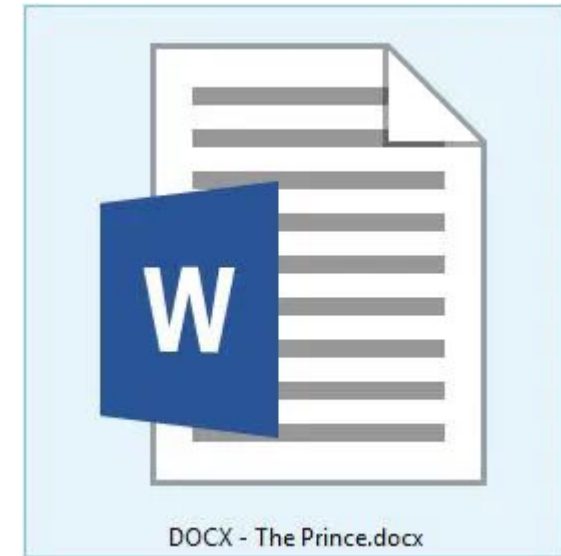


# Word Processing

- What is a .docx file?

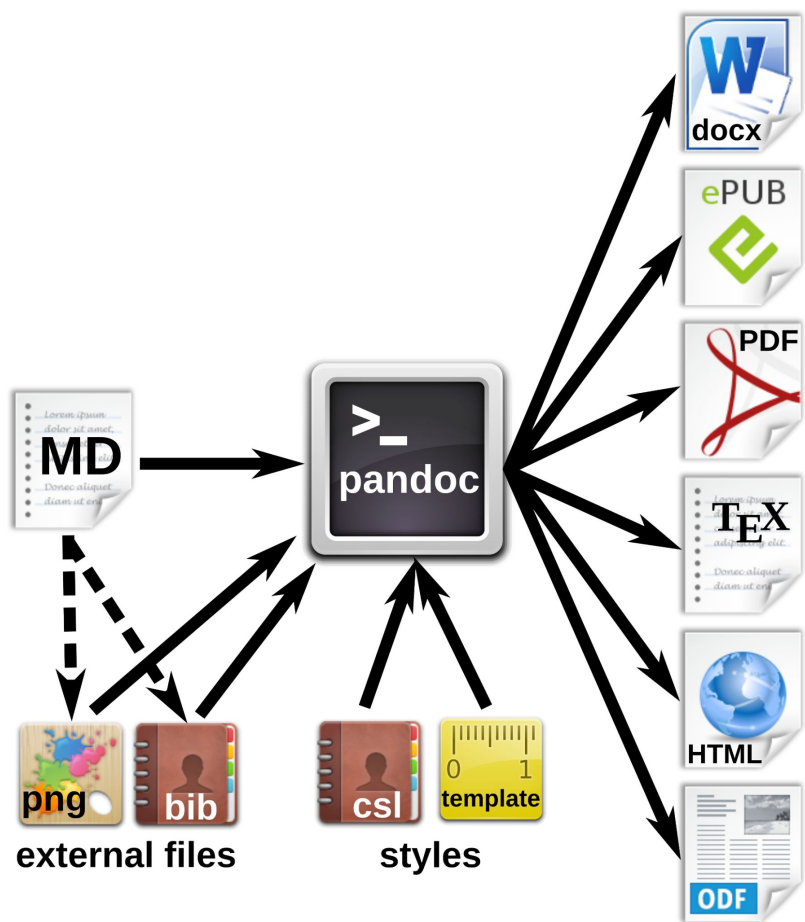
## Steps

1. Unzip .docx file.
2. Edit document.xml
3. Zip files to .docx.



This gets messy on complex documents.

# Word Processing



Use pandoc to convert to Markdown.

<https://pandoc.org/>

1. Convert to markdown  
`pandoc -s file.docx -t markdown -o file.md`
2. Edit File
3. Convert back to docx  
`pandoc -s file.md -o file-edited.docx`

# Word Processing

## Latex

LaTeX is a document preparation system for high-quality typesetting

<https://www.latex-project.org/>

Convert to .docx

```
pandoc -s optical.tex -o test.docx
```

Convert to pdf

```
pdflatex -no-shell-escape optical.tex
```





# Word Processing

Latex

latex - Overleaf latex templates.

<https://www.overleaf.com/latex/templates>



# Word Processing

LibreOffice --headless  
Not a lot of online documentation



convert to pdf, odt, html, docbook (xml), text (view text only)

```
libreoffice --headless --invisible --convert-to pdf "test.docx"
```

```
libreoffice --headless --invisible --convert-to html "test.docx"
```

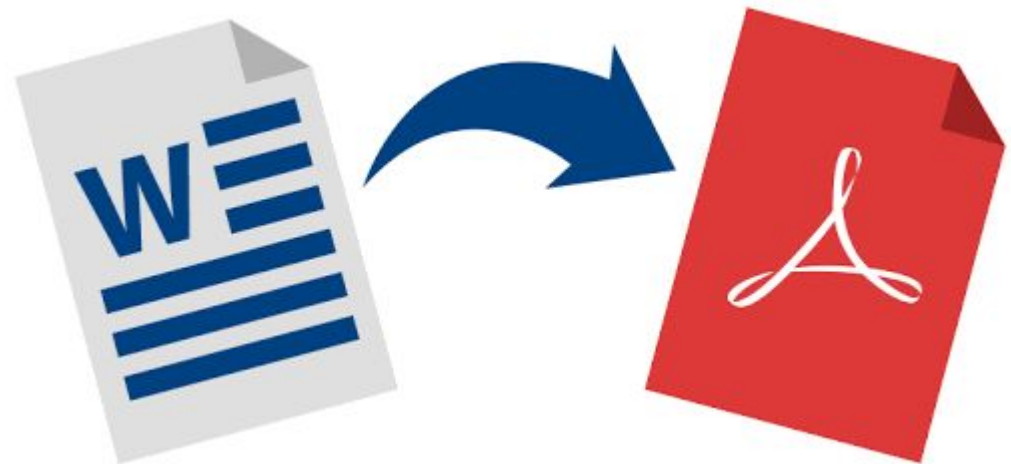
# Word Processing

unoconv

<https://github.com/unoconv/unoconv>

html, docx, pdf (possibly others.)

```
unoconv -f docx test-1.html
```



# Word Processing

## **docx2txt**

No images or graphs

Good if you only need to read the text



`docx2txt sample-report.docx test.txt`

## **pdftotext**

`pdftotext -layout file2open.pdf - | more`

# Word Processing

## Working with older file formats

catdoc, antiword (.doc only)  
wv tools (wvtext, wvpdf, wvhtml, ...)  
convert doc file various formats.



# Viewing Documents and Images

## Image Views

tiv

<https://github.com/stefanhaustein/TerminalImageViewer>

## kitty terminal

icat feature

```
icat --align center --place 60x60@0x0  
--scale-up image.jpg
```

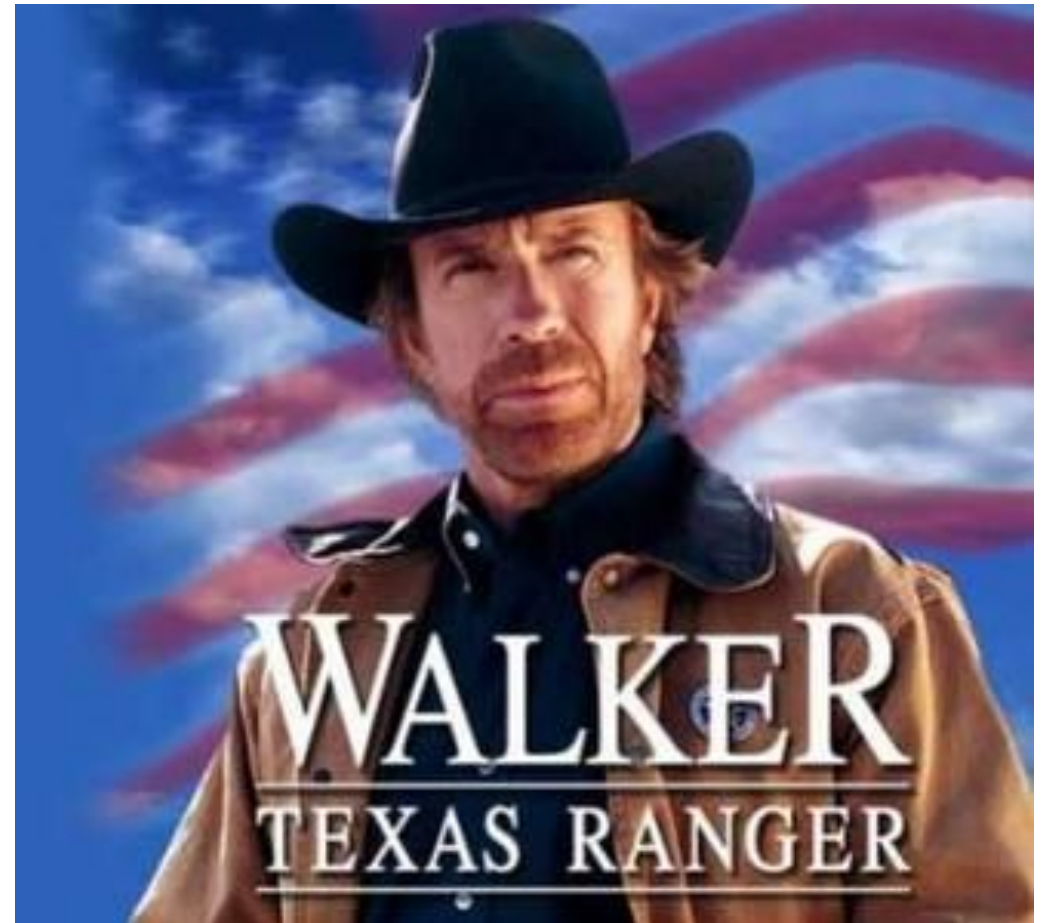


# Viewing Documents and Images

## Ranger

File Manager – File Preview

<https://github.com/ranger/ranger>

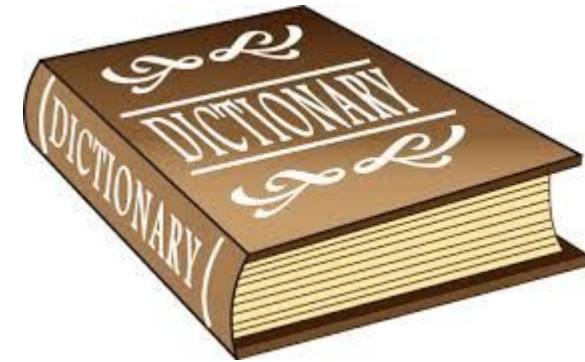


# Other Word Processing Tasks

## Dictionary

Wordnet

<https://wordnet.princeton.edu/>



## Spellcheck in vim

`:set spell` - will underline mis-spelled words.

Use the keys `]s` and `[s` to move between misspelled words

Type `z=` to see a list of suggestions for a highlighted word

Type `zg` to add a word to your dictionary

Type `zw` to remove a word from your dictionary



# Other Word Processing Tasks

## Other tools mentions

ispell and aspell

## Grammar Check

grammar

<https://caderek.github.io/grammar/>

```
./grammar check spell.txt
```



# Spreadsheets

## Create spreadsheets

**sc-im**(proved) (ncurses spreadsheet)

<https://github.com/andmarti1424/sc-im>

Supports import and export csv, xlsx, tsv

- Requires additional support applications

Uses vim keybindings



# Spreadsheets

## Spreadsheet Conversation Tools

libreoffice --headless

unoconv

xlsx2csv

Convert > Edit > Convert back

\*Mileage may vary



# Presentation Slides

## Create PDFs or Images

if possible if presenting only (others don't need to edit).

LaTeX - Overleaf latex templates (discussed previously)

- Use Ranger or kitty to view images



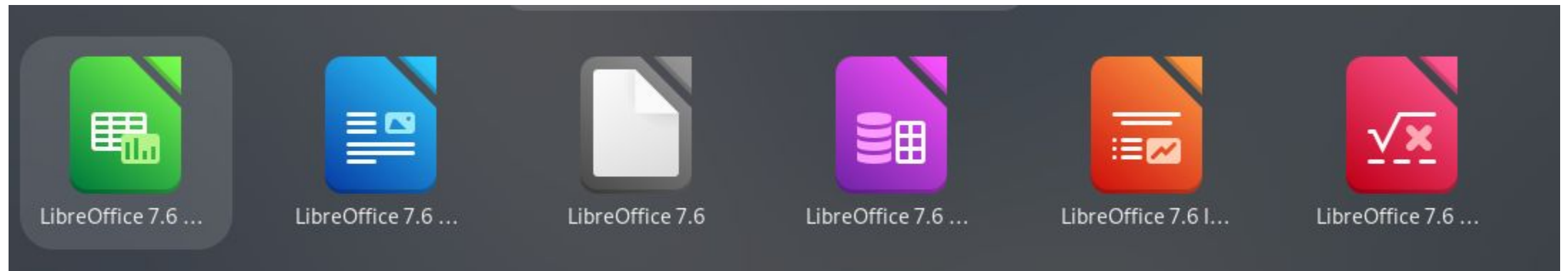
# Presentation Slides

## PPTX Conversion

libreoffice --headless

Pandoc (convert to images)

- Use Ranger or kitty to view images



# Presentation Slides

**Terminal Only Presentations (Does not support pptx)**  
**presenterm**

<https://github.com/mfontanini/presenterm>

\* Supports images

**Honorable Mentions**

**tpp**

<http://www.ngolde.de/tpp.html>

**sent**

<https://tools.suckless.org/sent/>

**mpd**

<https://github.com/visit1985/mdp>



**Column layouts**

Column layouts let you organize content into columns.

Here you can place code:

```
fn potato() -> u32 {  
    42  
}
```

Plus pretty much anything else:

- Bullet points.
- Images.
- *more!*

Picture by Alexis Bailey / CC BY-NC 4.0

Because we just reset the layout, this text is now below both of the columns. Code and any other element will now look like it usually does:

```
print("Hello world!")
```

# Online Documents

**rclone**

<https://rclone.org/>

Instructions for cloning to Google Drive

<https://rclone.org/drive/>

Supports Dropbox, Onedrive, S3, iCloud, NextCloud, etc (Over 70 Cloud services)



# Other Office Tasks

## Create Forms or Surveys

bashform

<https://github.com/devmegablaster/bashform>

No install, only uses ssh

Create form 2 question form call helloworld

```
ssh -t bashform.me create 2 helloworld`
```

Fill out the form

```
ssh -t bashform.me f helloworld
```





# Other Office Tasks

## Notes

Joplin

<https://joplinapp.org/help/apps/terminal/>

Uses markdown

jot (Obsidian)

<https://github.com/araekiel/jot>



# Other Office Tasks

## Calendar and Appointments

gcalcli (Google Cal)

<https://github.com/insanum/gcalcli>

## Calcourse

<https://calcourse.org/>

Calendar appointments and todo  
can import/export to ical and pcal format

**remind** - popup reminders

<https://dianne.skoll.ca/projects/remind/>



# Other Office Tasks

## Time Tracking

bartib - Time tracking

<https://github.com/nikolassv/bartib>

taskwarrior - Time Tracking and todo list management

<https://taskwarrior.org/>



# Internet

## Browsing

Browsh [firefox]

<https://www.brow.sh/>

- (supports HTML5, CSS3, JS, video, and even WebGL)

**chawan(cha)**

<https://sr.ht/~bptato/chawan/>

**carbonyl[chromium]**

<https://github.com/fathyb/carbonyl>

text only browsers

links2, lynx, w3m



# Internet

## Searching

dggr

<https://github.com/jarun/ddgr>

ggl (google stuff)

<https://github.com/taraqfarhan/ggl>



# Social Media

**Challenges:** Many are not friendly to 3rd party apps and constantly changing.

Reddit use newsboat (Read only)  
<https://newsboat.org/>



**Twitch** with curl magic  
curl twitch status  
curl -s https://decapi.me/twitch/uptime\?channel\=ninja

twitch-tui  
<https://github.com/Xithrius/twitch-tui>



# Social Media

**Discord**

Discordo

<https://github.com/ayn2op/discordo>

How to get discord token

<https://www.androidauthority.com/get-discord-token-3149920/>



# Email

**aerc**

<https://aerc-mail.org/>

Easy gmail and outlook setup

**tmpmail** - Temporary Email

<https://github.com/sdushantha/tmpmail>

**Honorable Mentions**

Alpine and mutt





# Playing Music



## **pyradio**

<https://github.com/coderholic/pyradio>

\* Requires mpv or vlc

## **Tizonia** (Streaming – Premium Paid tiers)

<https://github.com/tizonia/tizonia-openmax-il>

\* Support for Spotify, Google Play Music, YouTube, SoundCloud, TuneIn and iHeart Internet Radio

## **mpv** – Play from local device

<https://mpv.io/>

# YouTube

## Watch YouTube

yt-x (use kitty terminal) (main)

<https://github.com/Benex254/yt-x>

## Download Videos

yt-dpl

<https://github.com/yt-dlp/yt-dlp>



**Disclaimer:** Use to only download your own videos.

# Videos

timg

<https://github.com/hzeller/timg>

Use the **kitty** terminal



# Video Editing and Recording

**ffmpeg**

<https://www.ffmpeg.org/>



## **Record Desktop**

```
ffmpeg -f x11grab -i :0.0 -f v4l2 -i /dev/video0 -c:v libx264 -pix_fmt yuv420p output.mp4
```

## **Record from webcam**

```
ffmpeg -f pulse -ac 2 -i default -f v4l2 -i /dev/video0 -t 00:00:20 -vcodec libx264 record.mp4
```

# Remote Collaboration

Will need to use a combination of tools (Screen share, Communication, etc)

## Screen Share

**tmux** (LAN only)

<https://github.com/tmux/tmux/wiki>



1. In the **first** terminal, start tmux with session name and socket name  
`tmux -S /tmp/shareds new -s shared`
2. Then chgrp the socket to a group that both users share in common.  
`chgrp joint /tmp/shareds`
3. In the **second** terminal attach using that socket and session.  
`tmux -S /tmp/shareds attach -t shared`
4. The session can be made read-only  
`tmux -S /tmp/shareds attach -t shared -r`

# Remote Collaboration

## Screen Share

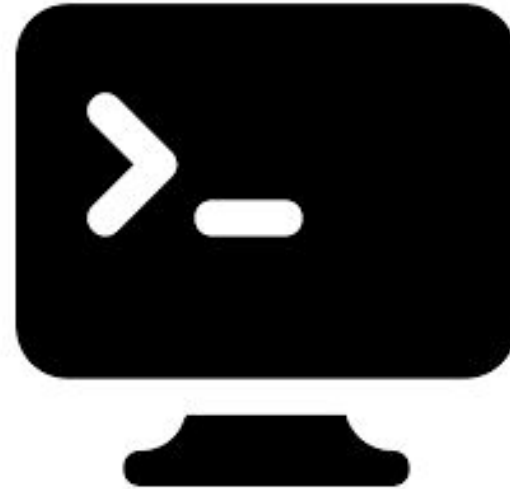
tmate (works over the Internet)

<https://tmate.io/>

## Voice

Twilio-cli

<https://www.twilio.com/docs/twilio-cli>



Instructions on how to make a phone call on the CLI

<https://www.twilio.com/en-us/blog/make-phone-call-command-line-twilio-cli>

- Cost for service

# Remote Collaboration

## Chat

\* irssi (irc)

<https://irssi.org/>

## Sharing files

gsocket (blitz)

<https://www.gsocket.io/>

<https://www.kali.org/tools/gsocket/>





# Window Management

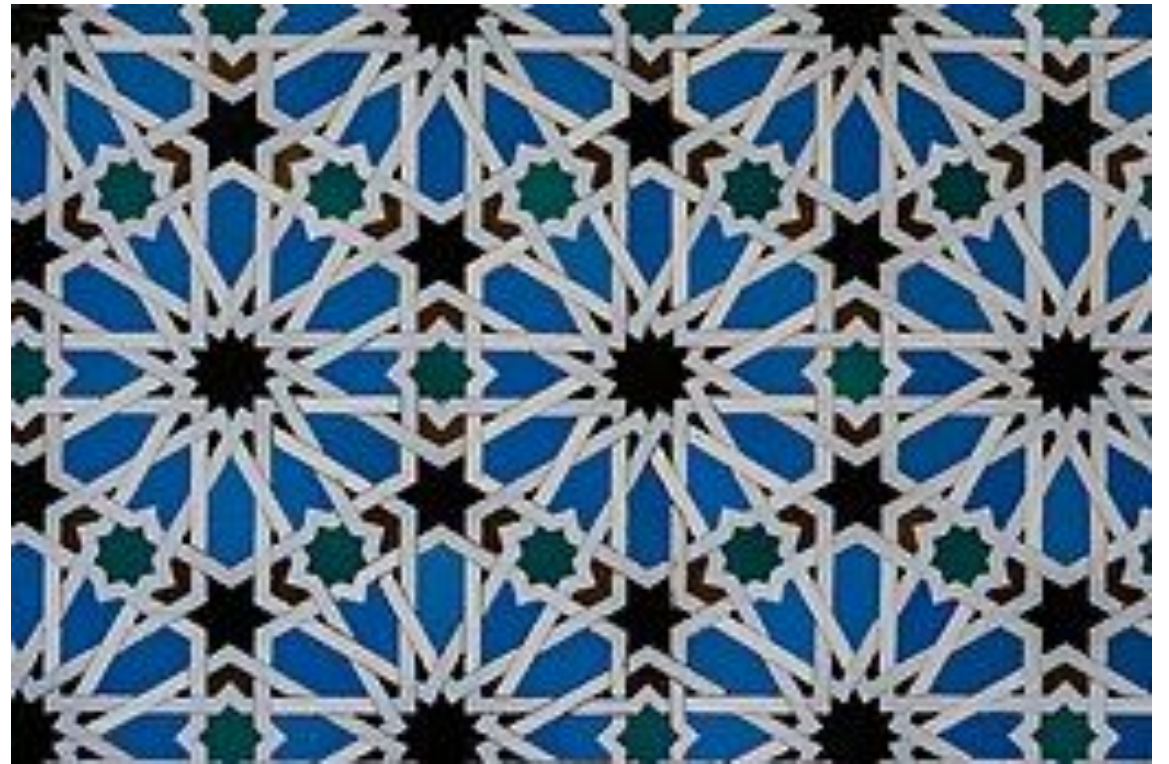
## Terminal Multiplexer

**zellij**

<https://github.com/zellij-org/zellij>

**tmux**

<https://github.com/tmux/tmux>





# Ebook Readers

esp - epub reader

<https://github.com/wustho/epy>

- Supports bookmarks (b)
- Shrink and enlarge text (-/+)

txt2epub

<https://github.com/k4yt3x/txt2epub>

novel-cli

<https://crates.io/crates/novel-cli>



# Containers and VMs

## Distrobox

<https://github.com/89luca89/distrobox>

## Qemu

<https://www.qemu.org/>



# Utilities

**weather** (curl tricks and tips)

curl <http://wtrr.in/pasadena/?u>

curl [wtrr.in/Moon](http://wtrr.in/Moon)

**Subnet Calculator**

sipcalc

**Calculator**

Python and bc



# Utilities

## System monitoring

bashtop and htop

## file managers

ranger, nnn, mc, vifm

## AI tools

llm-term

<https://github.com/juftin/llm-term>

AIChat

<https://github.com/sigoden/aichat>



# Utilities

**Password management**  
bitwarden

<https://bitwarden.com/help/cli/>

**Finance / Accounting**

Ledger <https://ledger-cli.org/>

hledger <https://hledger.org/>

invoice - <https://github.com/maaslalani/invoice>

**Packet Capture**

termshark - <https://termshark.io/>





# Fun

**cbonsai** (Bonsai Tree)

<https://gitlab.com/jallbrit/cbonsai>

**hollywood** (Fake Hollywood Desktop)

<https://github.com/dustinkirkland/hollywood>

**Holidays Displays**

<https://github.com/BryanLunduke/LundukeHoliday>

**Astronomy**

<https://github.com/da-luce/astroterm>



# Games

snake - nsnake

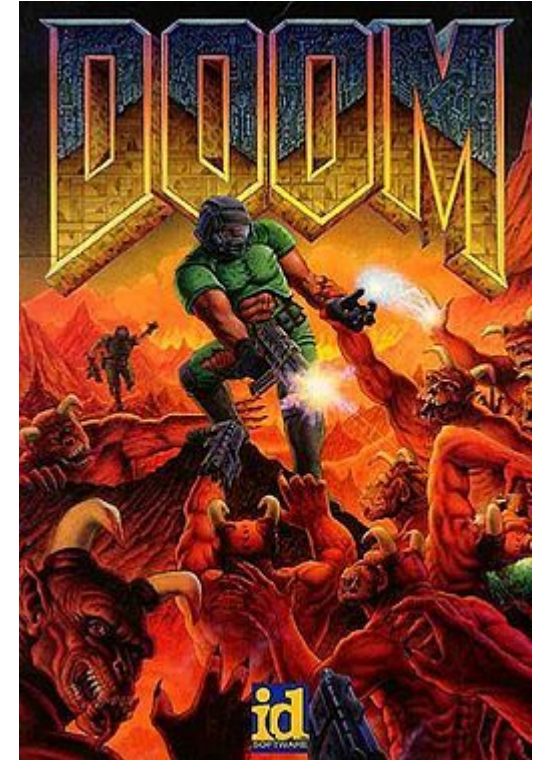
moon-buggy

**Doom**

DoomRL - <https://drl.chaosforge.org/>

<https://github.com/cryptocode/terminal-doom>

sudoku - nudoku







# Games

## Wordle-solver

<https://gitlab.com/christosangel/wordle-solver>

## chess-tui (box)

<https://github.com/thomas-mauran/chess-tui>

## More Games

<https://ligurio.github.io/awesome-ttygames/>



# Resources

<https://github.com/toolleeo/awesome-cli-apps-in-a-csv>





**Questions?**

# Jared Bernard

Website - <http://moriancu.sdf.org/>

YouTube - <https://www.youtube.com/@LinuxClassroom>

Email - [moriancu@sdf.org](mailto:moriancu@sdf.org)