tvPlayer as digital props for film and TV

Fill a USB stick with video (or *image!*) files; plug it in; have a fake TV.
Channel number is shown when switching them, white noise is shown when nothing is available and the volume bar is there for you when you expect it.

Control it with a wireless keyboard and your actress ort actor can press what they want, you'll be sure they find their program as *per the script*.

This is basically a media player.
You can turn off the fancy effects. Power it and it will play the first image or video on the USB stick.
Disable the effects, have some arrow keys, now you have an interactive slideshow.

WIP.

things to do to get this up and running

1. Clone this repo `git clone https://github.com/falue/tvPlayer`
2. run the install script `sudo bash install.sh` to:
    - apt-get update
    - install dependencies (Packages: *mpv*, *socat*; Python: *pygame*, *natsort*)
    - auto-run `python3 tvPlayer.py` on autostart
    - ~~disable window "removable medium is inserted"~~ [BUG!]
    - create a desktop shortcut to the program
3. Disable (move/remove) **autostart file for Eddy-G** (if available) from folder `~/.config/autostart`
4. Set **audio output** to HDMI (right click on audio in toolbar,c hoose HDMI)
5. disable pop up window "**removable medium is inserted**": Open any folder > `Edit` > `Preferences` > `Volume Management` > uncheck `Show availabler options for removable media when they are inserted`
6. Insert USB.

MPV player: Playable media

The media player MPV (doc wiki) used here can play pretty much everything - *however*, filename-endings are fixed to work with `.mp4`, `.mkv`, `.avi`, `.mxf` and `.mov` (case insensitive).

it uses ffmpeg to decode, so the list of playable media is huge.
According to the mpv.io website:

> File Formats: mpv supports a wide variety of media formats, including popular video files (e.g., MP4, MKV), audio codecs (e.g., AAC, MP3), and subtitles.

Some cherry picked examples:

> - Containers: MP4, MKV, AVI, WebM, OGG, FLV, and more.
> - Video Codecs: H.264, HEVC, VP8, VP9, AV1, MPEG-4, MPEG-2, and others.

> - Audio Codecs: AAC, MP3, Vorbis, FLAC, Opus, AC3, and DTS.
>   Subtitle Formats: SRT, ASS, SSA, VTT, and embedded subtitle tracks in containers like MKV.

Manually tested:

- ☑ `.mp4` MPEG-4 AAC, H264
- ☑ `.avi` MPEG-4 mp3
- ☑ `.mkv` h264, yuv420p
- ☑ `.mxf` mpeg2video (4:2:2), yuv422p
- ☑ `.mp4` HEVC, H265
- ☑ `.mov` H264
- ☑ `.mkv` "4k UHD" h264 yuv420p works (but stuttering on raspberry pi4 @8gb)

Also works with *images*!

Filetypes for images: `.png`, `.gif`, `.tiff`, `.bmp`

> *NOTICE:* Does ***not*** work with `.jpg`!

Keyboard controls

Keypress	Action	Note
UP	next channel (next file)	
DOWN	prev channel (next file)	
LEFT	jump -5 seconds	
RIGHT	jump 5 seconds	
LEFT and SHIFT	pause and one frame backwards	
RIGHT and SHIFT	pause and one frame forwards	
p *or* space	toggle play / pause	
ESC	toggle fullscreen	
q	shutdown raspberry pi	
b	toggle black screen	
c	video fitting (contain, stretch or cover)	
i	set inpoint (where the file starts to play)	
I (i and SHIFT)	clear inpoint on this video	
a	toggle tv-animations (*pause in between channel changes*, *channel number*, *vol bars*)	

Keypress	Action	Note
w	if tv-animations: toggle color of pause in between channel changes: *white noise* or *black*	
,	reduce video brightness by 5%	
.	increase video brightness by 5%	
+	reduce volume by 10%	
-	increase volume by 10%	
number	go to channel nr	
else	ignored	