

Manipulate paths

```
$ basename /home/dds/photos/image0023.jpeg
image0023.jpeg
$ basename /home/dds/photos/image0023.jpeg .jpeg
image0023
$ dirname /home/dds/photos/image0023.jpeg
/home/dds/photos
$ readlink -f image0023.jpeg
/home/dds/photos/image0023.jpeg
$ ln -s /etc/motd daily-message
$ cat daily-message
```

The programs included with the Debian GNU/Linux system are free software; the exact distribution terms for each program are described in the individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent permitted by applicable law.

```
$ readlink daily-message
/etc/motd
$ f=$(readlink -f image0023.jpeg)
$ echo $(dirname $f)/$(basename $f .jpeg).png
/home/dds/photos/image0023.png
$
```

Process images with NetPBM

```
$ tiff2png image.tiff | pngout >image.png # Convert from TIFF to PNG
tiff2png: writing PPM file
$ for i in *.tiff ; do # For each TIFF file
> pngname=$(basename $i .tiff).png # Compute name of PNG file
> tiff2png $i | # Convert image to PNM
> pngout >$pngname # Convert and write to PNG file
> done
tiff2png: writing PPM file
tiff2png: writing PPM file
tiff2png: writing PPM file
$ tiff2png image.tiff | # Convert TIFF to PNM
> pnm2ppm -width=1024 | # Scale to 1024 pixels
> pngout >image.png # Write the result in PNG format
tiff2png: writing PPM file
$ jpeg2png plate.jpeg |
> pnm2ppm -r90 | # Rotate the image by 90 degrees
> pnm2ppm -width=1024 | # Scale to 1024 pixels
> pngout >rplate.jpeg # Write the result in JPEG format
jpeg2png: WRITING PPM FILE
$
```

Process sound files with Sox

```
$ play -q sox-orig.wav
$ sox sox-orig.wav sox-orig.mp3 # Convert between file formats
$ ls -lh sox-orig.*
-rw-r--r-- 1 dds dds 73K Apr 12 18:26 sox-orig.mp3
-rw-r--r-- 1 dds dds 789K Apr 12 16:49 sox-orig.wav
$ sox sox-orig.wav sox-low.wav pitch -600 # Lower pitch by 600 cents
$ play -q sox-low.wav
$ sox sox-orig.wav sox-fast.wav tempo 1.5 # Increase tempo by 50%
$ play -q sox-fast.wav
$ sox sox-orig.wav sox-chorus.wav chorus 0.5 0.9 50 0.4 0.25 2 -t \
> 60 0.32 0.4 2.3 -t 40 0.3 0.3 1.3 -s # Apply chorus effect
$ play -q sox-chorus.wav
$ wget -q -O persephone.mp3 \
> http://ccmixter.org/content/hansatom/hansatom_-_Persephone.mp3 # By Hans Atom (CC BY 2.5)
$ sox persephone.mp3 persephone-trimmed.mp3 fade 0 0:06 1 # Trim to 6s with 1s fade-out
```

```
$ play -q persephone-trimmed.mp3
$ sox --combine mix -v 0.2 persephone-trimmed.mp3 sox-orig.wav \
> sox-persephone.mp3 # Mix the two audio files
$ play -q sox-persephone.mp3
$
```