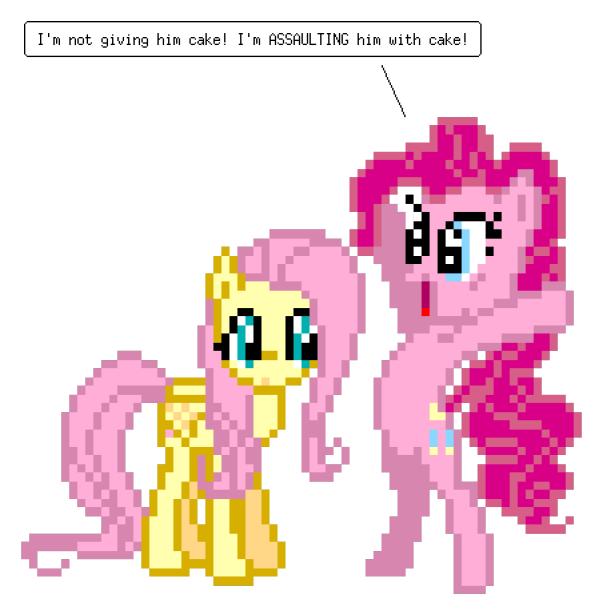
# Ponysay

Infesting your terminal with ponies. Covers ponysay version 2.5.



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This manual is for ponysay (version 2.5),

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'For me! For my friends! For EQUESTRIA!'

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## 1 Overview

**ponysay** displays an image of a My Little Pony pony saying a message provided by the user in a terminal, or a quote from the show My Little Pony: Friendship is Magic (MLP:FiM). Historically **ponysay** was a wrapper for cowsay, but has since version 2.1 become an independent reimplementation of **cowsay**.

If a message is not provided, e.g. by piping, it accepts standard input. The pony quoting the given message is printed on standard output.

ponythink is to ponysay as cowthink is to cowsay.

ponysay is generally used to decorate your terminal with a random pony, when you start the terminal. But if you know anypony how does like ponies [fat chance] you can always make screen-shots of ponysay -q executions and communication that way over e-mail.

## 2 Invoking ponysay

The format for running the ponysay program is:

```
ponysay [option...] [--] [message]
ponythink [option...] [--] [message]
```

Running ponysay will print a speech balloon, ponythink will print a thought balloon. Otherwise ponysay and ponythink is the same thing.

ponysay supports the following options:

·\_\_, Parse the following arguments as parts of message. '-h' '--help' Show summary of options. '-w''--verion' Show version of program. '-f PONY' '--file PONY' '--pony PONY' Specify the pony that should printed, this can either be a file name or a pony name printed by ponysay -1. This option can be used multiple times to specify a set of ponies from which one will be selected randomly. If no pony is specified one will be selected randomly. If you have util-say installed, you can use .png-files as the arguments for this options. In versions earlier than version 2.0, the if the pony were a file name it had to include a '/'. This is not longer required and any existing pony name supersedes file names. '-F' '++file PONY' '++pony PONY' Just as '-F', but it uses extra (non-MLP:FiM) ponies instead of standard (MLP:FiM) ponies '-b STYLE' '--bubble STYLE' '--balloon STYLE' Specify the balloon style that should used, this can either be a file name or a balloon name printed by 'ponysay -B'. This option can be used multiple times to specify a set of styles from which one will be selected randomly. If no balloon style is specified a fallback style will be used. '-q [PONY...]' '--quote [PONY...]' By using this option, a pony will be printed with quotes from her in My Little Pony: Friendship is Magic. The pony will be selected randomly, unless at least one pony is added as an argument after '-q'. If one or more ponies are added after '-q', the pony will be selected randomly from that set of ponies. This option requires the extension ponyquotes4ponysay, which is included by default since version 1.2. The argument can be a file name, but only if it ends with '.pony'.

#### '-W COLUMN'

#### '--wrap COLUMN'

Specify the screen column where the message should be wrapped, this is by default 40, as with cowsay.

#### '-c'

#### '--compress'

Compress the message in the same way cowsay does, that is basically without multiple spaces, and only paragraphs separations. Using this options will mean that you cannot display figlet and TOIlet style messages.

```
'-l'
```

'--list' Lists all installed ponies. The ponies which have quotes, i.e. can be used with the '-q' option, will be marked by being printed in bold or bright (depending on the terminal.)

#### '-L'

#### '--altlist'

'--symlist'

Lists all installed ponies. The ponies which have quotes, i.e. can be used with the '-q' option, will be marked by being printed in bold or bright (depending on the terminal.) This options differs from '-1' by printing alternative names (symbolic links) inside brackets after their target ponies.

#### '**+**1'

'++list' Just as '-1', except it lists extra (non-MLP:FiM) ponies instead of standard (MLP:FiM) ponies.

#### '+L'

```
'++symlist'
```

#### '++altlist'

Just as '-L', except it lists extra (non-MLP:FiM) ponies instead of standard (MLP:FiM) ponies.

#### '-B'

#### '--balloonlist'

Prints a list of all balloon styles.

If neither '-q' is used nor any message is specified, ponysay will read the message from stdin (standard input); however, if no arguments are used and nothing is piped to stdin, a help message will be printed. If you want to use ponysay without arguments and enter the message by hand, you can run cat | ponysay.

If no pony is selected, ponysay will look for a 'best.pony' file, this file should be a symbolic link to the pony you want as a default. If it is not a symbolic link, '-q' cannot determine which quotes to use.

## 3 Advanced usage of ponysay.

#### 3.1 Fortune cookies

If you have fortune installed – this program may be named fortune-mod in your GNU/Linux distributions package repository – you can run fortune | ponysay to get a random pony reading a random fortune cookie.

By adding fortune | ponysay to the end [easiest way] of your '~/.bashrc' – or equivalent for your shell if you do not use GNU Bash (standard shell for most distributions now a days) – you will get the effect described in the previous paragraph every time you open a terminal.

#### 3.2 Ponification

You can ponify messages (i.e. replaces words search as 'everyone' with 'everypony') by using fortune | ponypipe instead of using fortune. ponypipe can be downloaded from https://github.com/maandree/ponypipe. Alternatively you can use pinkie (or pinkiepie), which can be downloaded from https://github.com/maandree/pinkie-pie, which is just fortune | ponypipe. There is also a large sed script, similar to ponypipe: http://www.reddit.com/r/mylittlelinux/comments/srixi/using\_ponysay\_with\_a\_ponified\_fortune\_warning/ However I think ponypipe as better at replacing words than the sed script, but I haven't used the script so I wouldn't know for sure.

### 3.3 Running on TTY

If you use TTY and have a custom colour palette, you should also add to your '~/.bashrc', before fortune | ponysay:

You should read more about this in Section 5.1 [KMS ponies], page 6.

### 3.4 Running on screen

screen will adapt ANSI colour escape sequences to your terminal's capabilities. This means that if your terminal reports itself as xterm in \$TERM ponies will lose their colours; they will only use the lower 16 colours instead of the top 240 colours. By default, almost all X terminals, including xterm and mate-terminal reports themselves as xterm in \$TERM, and some reports their actual name in \$COLORTERM. So before opening screen you use set \$TERM to xterm-256color, if you are using a terminal with support for xterm's 256 colours; this can be done by adding to your '~/.bashrc':

```
[ "$TERM" = "xterm" ] &&
function screen
{ export TERM="xterm-256color"
        exec screen "$@"
}
```

## 4 Environment variables

ponysay supports the follow environment variables:

#### PONYSAY\_BOTTOM

Under TTY (Linux VT), if the output is larger the the screen's height, only the beginning is printed, leaving two blank lines. If you want the bottom to be printed rather the the beginning you can export PONYSAY\_BOTTOM with the value yes, y or 1.

#### PONYSAY\_SHELL\_LINES

Under TTY (Linux VT), if the output is larger than the screen's height, two lines are left blank. If you want more, or less, blank lines you can export PONYSAY\_SHELL\_LINES with the value of how many blank lines you want. Naturally this takes effect even if the output is not actually larger than the screen.

#### PONYSAY\_FULL\_WIDTH

You can export PONYSAY\_FULL\_WIDTH with the value yes, y or 1, if you do not want the output to be truncated on the width to fit the terminal.

#### PONYSAY\_TRUNCATE\_HEIGHT

Export PONYSAY\_TRUNCATE\_HEIGHT with the value yes, y or 1, if you want to truncate the output on the height even if you are not running ponysay under TTY.

PONYSAY\_UCS\_ME

Export PONYSAY\_UCS\_ME with the value yes, y or 1, if you want [simulated] symlink to pony files using Universal Character Set in their names. Otherwise pony files uses only ASCII. If you want to remove the ASCII:ised names export PONYSAY\_UCS\_ME with the value harder, h or 2 instead.

If you have not enabled this, UCS names are not usable, suggested or listed. If you use **yes** UCS names will be usable, suggested and listed. If you use **harder** ASCII:ised names will not be suggested or listed, but they will still be usable.

#### PONYSAY\_KMS\_PALETTE

#### PONYSAY\_KMS\_PALETTE\_CMD

PONYSAY\_KMS\_PALETTE or PONYSAY\_KMS\_PALETTE\_CMD is used to tell ponysay how your TTY palette looks, this feature lets you get the best images in TTY if you have Kernel Mode Setting (KMS) support.

See Section 5.1 [KMS ponies], page 6 for information on how to use this.

## **5** Optional features

### 5.1 KMS ponies

KMS ponies is an optional feature that required that you have util-say>=2 (util-say<2 for ponysay<2.1) installed. It lets TTY users that have a custom TTY colour palette and KMS support get best TTY images that can be display at the current state of the art. KMS is supported on most computers, but due to lack of published specifications Nvidia drivers does not support KMS. util-say can be downloaded at https://github.com/maandree/util-say.

To use this feature your '~/.bashrc' (or equivalent for your shell) must keep track of your colour palette; it is not possible for a program to ask to terminal. Either the shell should export a palette string to \$PONYSAY\_KMS\_PALETTE or you should export a command to can get the palette string to \$PONYSAY\_KMS\_PALETTE\_CMD. The palette string should be the stream which sets the colour palette to the terminal when echo:ed; preferably, to increase speed and reduce cache usage, it should be consistent every time it is exported for every colours palette. So you may want to keep it sorted, always be in either upper case or lower case, and not contain an character that is not used to set the colour palette.

Assuming you have a function in your '~/.bashrc', to reset the colour palette to what you set it to last time in the terminal, named reset-palette, your '~/.bashrc' should, for example, contain:

```
[ "$TERM" = "linux" ] &&
function ponysay
{ export PONYSAY_KMS_PALETTE="$(reset-palette)"
        exec ponysay "$@"
}
```

KMS ponies uses '/var/cache/ponysay/' or, if missing, '~/.cache/ponysay/' for cache space.

## 6 Limitations

### 6.1 Terminals

Ponysay works perfectly on xterm, xterm like terminals including putty, settings may however need to be customised for Unicode Character Set (UCS) support, but less well, depending on font, on VTE based terminals including mate-terminal.

On Linux's native terminal Linux VT (TTY) it works less well, and not good at all without Kernel Mode Setting (KMS) support. See https://github.com/erkin/ponysay/issues/1 for more information. ponysay clears the screen before printing to TTY, this is because if your graphics driver supports KMS, the colours will be messed by when the ponies position moves on the screen, this is also reason why the output is truncated on the height in TTY by default.

Most terminals have support for 256 colours, we do however only use the top 240 colours; this is because the lower 16 colours are usually, in contrast to the top 240, customised. We assume that the top 240 colours have their standard values. In TTY with KMS support we dot have any actual limit (except for  $2^{24}$  + full transparency.)

ponysay works perfectly on xterm, urxvt and putty, but rxvt, mrxvt and Eterm do not have UTF-8 support and are currently not supported. Additionally aterm have neither UTF-8 support nor 256 colour support, and is therefore not yet supported.

Due to extreme limitations in 9term ponysay will never be able to run on it.

#### 6.2 Cowsay

This section describes the limitation of cowsay, but since version 2.1 cowsay is no longer used because of it. So none of the following limitations are present anymore.

When cowsay determines the length of a word it measures in number of bytes (in UTF-8), therefore non-ASCII words will malformat the balloon with the message.

Further, cowsay does not recognise ANSI escape sequences, therefore, using colours and text styling in messages will also malformat the balloon with the message.

cowsay does not support balloon, including the link between the message and the pony, customisation, other than using cowthink. However you can modify cowsay (written Perl, so you can edit the installed files) to make the balloon look different, maybe using box drawing characters.

cowsay does not support setting the minimum size of the balloon, both directions on the balloon–pony links. or any other placement of the balloon than at the top to the left.

## 7 Problems and requests

## 7.1 Reporting bugs

If you find a bug in ponysay, install the last version from https://github.com/erkin/ ponysay, and if it is still present, please report it at https://github.com/erkin/ponysay/ issues. Please be as descriptive as possible, as it will help us verify it solve it faster.

### 7.2 Requesting ponies

If you want I specific pony added, ask us at https://github.com/erkin/ponysay/issues and we will add it. To speed the up the process, if possible, supply good pictures. Full visibly, transparent background, and pixelated are the properties that makes a picture good.

## 8 Dependencies

We have provided a script that should run one most, if not all shells, named './dependency-test.sh' that will help you track down any missing package.

### 8.1 Required runtime dependencies

coreutils

stty is used to determine the size of the terminal.

python>=3

ponysay is written in pure Python 3.

### 8.2 Optional runtime dependencies

util-say>=2

For improved TTY support for user with custom colour palette and KMS support. It can be downloaded at https://github.com/maandree/util-say.

For the purpose of simplifying for pony contributors, **ponysay** supports using .pngimages (note that the file must not miss the '.**png**' at the end of the file name) in addition to .pony-files or pony names.

### 8.3 Package building dependencies

python>=3	
	Required to run the './setup.py' file, which is also invoked from the make script.
gzip	Used for compressing manuals. (Optional, standard)
xz	Used for compressing manuals. (Optional, non-standard)
texinfo	Used to compile this info manual. (Optional, standard)
info	Used to install this info manual with install-info. (Optional, standard)
make	Required to run the make script. (Optional)
sh	Required to run the ./configure script. (Optional)
sed	Used in the ./configure script. (Optional)

## 8.4 Dependencies for pony providers

bash Required to run dev/dist.sh.

coreutils

ln and readlink are used in the ttyponies subscript of dev/dist.sh.

util-say>=2

Used by dev/dist.sh ttyponies to build ttyponies from xterm ponies. It can be downloaded at https://github.com/maandree/util-say.

## 9 Installing

### 9.1 From upstream

#### 9.1.1 Installations basics

Before installing **ponysay**, make sure your system have the packages listed under Section 8.1 [Required runtime dependencies], page 9 and Section 8.3 [Package building dependencies], page 9 installed.

Tarballs can be downloaded at https://github.com/erkin/ponysay/tarball/master for bleeding edge, or from https://github.com/erkin/ponysay/tags for releases.

If you have git you can clone the project URL https://github.com/erkin/ponysay.git.

In the terminal, cd into the ponysay directory and execute ./configure && make install. This will install ponysay into '/usr', normally meaning you need to run make install as root, e.g. by running sudo make install.

Now you will be to use ponysay, run: ponysay "I am just the cutest pony!", or if have a specific pony in your mind: ponysay -f pinkie "Partay!~".

ponysay comes with this info manual and a manpage in section 6, man 6 ponysay (or just man ponysay). The manpage is also available in Spanish: man -L es 6 ponysay. To install the Spanish manual add the option '--with-man-es' when running ./configure.

If your system does not have sh, make or sed or can use ./setup.py OPTIONS VERB or python3 setup.py OPTIONS VERB (or python instead of python3) instead of ./configure OPTIONS && make VERB. ./setup.py recognised ./setup.py version and ./setup.py help, which is not supported by make or ./configure.

### 9.1.2 Custom installations

./configure and ./setup.py and recognises the same options. Whether the exception for with '--with-everything' and '--with-nothing', every option that starts with '--with-' or '--without-' exists in both variants. '--with-' options install parts of the package. '--without-' options skipps installation of parts of the packages. With the same exception, '--without-' options take not arguments and '--with-' optionally takes an argument, if no argument is provided a default argument is implied.

The configuration script recognised the following options, the default values for options with arguments are written after the equality sign (=) in the option:

```
'--everything'
```

'--with-everything'

Install everything that is not explicitly excluded.

'--minimal'

Install only the essentials. Note that this can vary depending on version. Currently this means that the commands, xterm ponies and legal documents is installed.

'--nothing'

'--with-nothing'

Install nothing, except legal documents, that is not explicitly included.

'--with-ponysay=/usr/bin/ponysay'

Install the ponysay command, and set file name. (Default)

### '--with-ponythink=/usr/bin/ponythink'

Install the ponythink command, and set file name. (Default)

#### '--with-shared-cache=/var/cache/ponysay'

Install a user shared cache, this is only used by KMS ponies so far. (Default)

#### '--with-bash=/usr/share/bash-completion/completions/ponysay'

Install auto-completion for installed commands in GNU Bash. Select the file name for the installed script for the ponysay command, the other commands modifies this file name. (Default)

#### '--with-fish=/usr/share/fish/completions/ponysay.fish'

Install auto-completion for installed commands in Friendly interactive shell. Select the file name for the installed script for the ponysay command, the other commands modifies this file name. (Default)

#### '--with-zsh=/usr/share/zsh/site-functions/\_ponysay'

Install auto-completion for installed commands in the zsh shell. Select the file name for the installed script for the ponysay command, the other commands modifies this file name. (Default)

#### '--with-shell=/usr/share'

Macro for '--with-bash', '--with-fish' and '--with-zsh'. The argument is the used share/ directory that all shells have in common.

#### '--with-pdf=/usr/doc'

Install PDF manual, and select directory for it.

#### '--with-pdf-compression=gz'

Compress PDF manual, select compression by file name extension. This option does not imply '--with-pdf'. (Default)

#### '--with-info=/usr/share/info'

Install info manual, and select directory for it. (Default)

#### '--with-info-install=My Little Ponies for your terminal'

Use install-info when installing info manual. Set the description for the manual. This option does not imply '--with-info'. (Default)

#### '--with-info-compression=gz'

Compress info manual, select compression by file name extension. This option does not imply '--with-info'. (Default)

#### '--with-man-en=/usr/share/man'

Install English man manual. Set directory for man manuals. (Default)

#### '--with-man-es=/usr/share/man'

Install Spanish man manual. Set directory for man manuals.

#### '--with-man'

Macro for all '--with-man-LANG'.

#### '--with-man-en-compression=gz'

Compress English man manual, select compression by file name extension. This option does not imply '--with-man-en'. (Default)

#### '--with-man-es-compression=gz'

Compress Spanish man manual, select compression by file name extension. This option does not imply '--with-man-es'. (Default)

#### '--with-man-compression'

Macro for all '--with-man-LANG-compression'.

#### '--man-section-ponysay=6'

Change the section for the ponysay manpage.

'man-sec	tion-cowsay=1' Change the section for the cowsay manpage.
'man-sec	tion-fortune=6'
	Change the section for the fortune manpage.
'with-po	nies=/usr/share/ponysay/ponies' Install standard xterm ponies, and select installation directory for them. (Default)
'with-tt	yponies=/usr/share/ponysay/ttyponies' Install standard tty ponies, and select installation directory for them. (Default)
'with-ex	traponies=/usr/share/ponysay/extraponies' Install extra xterm ponies, and select installation directory for them. (Default)
'with-ex	trattyponies=/usr/share/ponysay/extrattyponies' Install extra tty ponies, and select installation directory for them. (Default)
'with-qu	otes=/usr/share/ponysay/quotes' Install pony quotes, and select installation directory for them. (Default)
'with-ba	lloons=/usr/share/ponysay/balloons' Install balloon styles, and select installation directory for them. (Default)
'with-uc	s=/usr/share/ponysay/ucsmap' Install UCS pony names, and select installation file name for the map. (Default)
'without	-custom-env-python' Let the installer set the env name for python in 'ponysay'. (Default)
'with-cu	stom-env-python=python3' Set the env name for python in 'ponysay'.
'prefix=	/usr' Set a prefix to all implicit directories.
'private	,
-	Change all implicit configurations to fit local user a installation for the current user.
'opt'	Change all implicit directories to fit installation to '/opt'.
'bin-dir	=/usr/bin' Set the system's directory for command executables.
'lib-dir	=/usr/lib/ponysay' Set the system's directory for non-command executables. Currently their is not non- command executables, so this options has no effect, but bleeding edge distributors should specify it if it differs from prefered.
'share-d	ir=/usr/share' Set the system's directory for resource files.
'cache-d	ir=/var/cache' Set the system's directory for cache directories.
'dest-di	r=' Set off environment for installation.
'linking	

Recognised compressions are 'gz' which uses 'gzip -9', and 'xz' which uses 'xz -9e'. 'xz' is still exotic to bost programs, use using it is not recommended. Distributors are strongly disencouraged to compression for the PDF manual and should use '--without-pdf-compression'.

You can run ./configure [OPTIONS] view to make sure everything is correct before building and installing.

### 9.2 Package repositories

### 9.2.1 Arch Linux

The official Arch Linux package repositories contains ponysay as community/ponysay. The Arch Linux User Repository (AUR) contains a bleeding edge git version of ponysay as ponysay-git.

### 9.2.2 Gentoo Linux

Gentoo users can use the overlay https://github.com/etu/aidstu-overlay, which contains ponysay as games-misc/ponysay.

### 9.2.3 Debian GNU/Linux and Ubuntu

A .deb file is available at http://roryholland.co.uk/misc.html#ponysay, and a PPA can be found at https://launchpad.net/~blazemore/+archive/ponysay.

### 9.3 Uninstalling

If you did not install **ponysay** with a package manager, but rather manually from the upstream, you can uninstall it by running **make uninstall**.

Well written package manages will uninstall files that the package is no longer using, i.e. if deleted, moved or renamed. To uninstall files that are not longer used, by the currently installed version you will need that versions 'Makefile'. To perform an uninstallation of old files run make uninstall-old.

## 10 Inner workings

#### 10.1 Pony anatomy

The pony files are simple raw output data that can be printed to the terminal, except it contains scalar variables. The pony images consists of white space, lower half blocks [U+2584], upper half blocks [U+2580] and ANSI colour sequences (CSI m), and, in TTY, colour value change sequences (OSI P).

Variables are recalled by putting the variable's name between two dollar signs (\$var\$), and are stored by putting the variable's name followed by the value between two dollar signs and with a equality sign between the name and the value (\$var=value\$). Variable names cannot include equality signs, but the value can; dollar signs can be used by placing an ESC character before the dollar sign.

There are three predefined variables: \$\$ (empty variable name), \$\\$ and \$/\$. \$\$ has a dollar sign (\$) as its value, while \$\\$ and \$/\$ contains the characters for the link to the balloon directed in the same direction as the variable name's slash.

Variables whose name begin with balloon are parsed as balloon inserts, it can be either balloon, balloonX, balloon,Y or balloonX,Y, whether X is the minimum width of the balloon and Y is the minimum height of the balloon.

Prior to version 2.1 the pony files were cow files used by cowsay, they are partial Perl-scripts that assign a value to a scalar variable named  $the_cow$ . Cow files use a predefined scalar variable named thoughts, these are used to create a link between the message and the pony. The message (and the balloon) itself was printed by cowsay and is not defined in the cow files.

#### 10.2 Pony quote infrastructure

When compiling, pony quotes are built to 'quotes/', the file names are lists of ponies joined with plus signs (+) – the pony names are the same as the pony files, except they do not end with '.pony' – with a index at the end, and a full stop (.) before the index.

The source files are located in 'ponyquotes/', where their is a file named 'ponies'. This file is called the pony map, and is the basis for how the compiled files are named. In the ponymap ponies with the same quotes are on the same line join together with plus signs (+), if the lines because too long for file names the line is split into multiple lines with the first pony in common.

In 'ponyquotes/' there are also quote files, each contain just one quote, just as when compiled to 'quotes/'. The source quote files are identical to the compiled quote files, except that their name contains just the first pony.

#### 10.3 Balloon style files

Balloon style files are located in the directory 'balloons/', the ones ending with '.say' applies to ponysay and the ones ending with '.think' applies to ponythink.

Balloon style consists of 20 strings. Each string is defined on separate lines, by their name and their value separated with a colon (name:value), if the name is empty it continues the last one on a new line in the value. Only 10 of the strings may be multi-lined: nw, nnw, n, nne, ne, sw, ssw, s, sse and se.

The following strings are used, and must be defined in the files:

- $\$  The character for the link to the balloon directed as  $\$ .
- / The character for the link to the balloon directed as /.
- ww The beginning of the balloon's line where the message is located if and only if the message contains only one line.

ee	The end of the balloon's line where the message is located if and only if the message contains only one line.
nw	The top left corner of the balloon.
nnw	If both this string and the <i>nne</i> string fits between the top corners, this is printed directly to the right of the top left corner.
n	The top edge of the balloon.
nne	If both this string and the <i>nnw</i> string fits between the top corners, this is printed directly to the right of the top left corner.
ne	The top right corner of the balloon.
nee	The end of the balloon's line where the message's first line is located if and only if the message contains more than one line.
e	The right edge of the balloon.
see	The end of the balloon's line where the message's last line is located if and only if the message contains more than one line.
se	The bottom right corner of the balloon.
sse	If both this string and the <i>ssw</i> string fits between the bottom corners, this is printed directly to the left of the bottom right corner.
S	The bottom edge of the balloon.
SSW	If both this string and the <i>sse</i> string fits between the bottom corners, this is printed directly to the right of the bottom left corner.
SW	The bottom left corner of the balloon.
SWW	The beginning of the balloon's line where the message's last line is located if and only if the message contains more than one line.
W	The left edge of the balloon.
nww	The beginning of the balloon's line where the message's first line is located if and only if the message contains more than one line.

## 10.4 Printing in TTY with KMS

Since Linux VT (TTY) does not have capabilities for returning the position of the cursor, the screen must always be cleared before printing the ponies to make sure the pony's colours is not lost, i.e. reduced to mare 16 colours, during print. The colours are reduced if the pony's position on the screen is changed. This is only relevant with KMS support. The clear the screen we print "\e[H\e[2J" (\e is ESC) in at beginning. "\e[H" places the cursor at the beginning of the screen, and "\e[2J" clears everything on the screen after, and including at, the cursor. If we would use "\ec" (that is a reset), we would also turn off num. lock and caps. lock.

### 10.5 Truncation

Ponysay supports three type of output truncations, cutting away overflow on the right and truncation the height by either keeping the bottom or keeping the top. By default the latest is enabled under TTY, cutting away overflow on the right is always enabled by default.

Truncating the height in TTY is required under Kernel Mode Setting (KMS) support to keep the colours from being messed up when the ponies is moved in the screen during print. Prior to version 2.0 this was done either by piping to head (keeps the top) or by piping to tail (keeps the bottom.) head and tail takes as argument the number of lines to keep at most. The size of the terminal, measured in characters, is fetched from stty size, which returns HEIGHT WIDTH, and cut it the used to get either the height or the width. This requires only GNU Coreutils; earlier tput rows and tput cols were used, this however required, the only de facto standard, package ncurses, some shells have environment variables for this.

Since version 2.1 truncation is done internally in the Python script, before that it was done in a custom C program truncater, that was installed to '/usr/lib/ponysay/truncater'. It recognised UTF-8 ANSI escape sequences, including OSI P and CSI m, which is essential for the truncation to be correct. It also expands tabs to every eighth column and resets the background colour when needed, and writes ANSI escape sequences that are on the left side of the truncation. The truncater stops CSI sequences on the first ASCII letter ([a-zA-Z]), but also stops escape sequences after the first character after the initial escape if it is not either [ (CSI) or ] (OSI). In the previous, C, program it supported UTF-8 by assuming that bytes do not match 10xxxxxx and only those bytes were visible. This now fixed internally in Python, but has also been improved to exclude combining characters from the set of visible characters. Another difference is that the background colours are not reset, instead ANSI colours after the truncation point are still printed.

#### 10.6 Languages

Before version 2.0 ponysay was written primarily in GNU Bash script; the truncater was however written in C, because it is simple, fast, does not pose addition dependencies, and is easy to do byte hacking in.

Sometimes shell is too slow, in these cases Perl was used; Perl was already required by cowsay, it is also similar to shell, but also supports hash tables.

However since version 2.0 we were trying to move from all there languages and only use Python 3, which as been accomplished in version 2.1.

#### 10.7 Shell auto-completion

To make it easier to write auto-completion for shells, ponysay supports the two options '--onelist', '++onelist' and '--quoters', which has no short versions.

Executing ponysay --onelist will list every available standard (MLP:FiM) pony, independent of where it is located, the output is a sorted and consists only of one pony per line.

Executing ponysay ++onelist will list every available extra (non-MLP:FiM) pony, independent of where it is located, the output is a sorted and consists only of one pony per line.

ponysay --quoters work just as ponysay --onelist, excepts it limits the ponies to those that have quotes. Ponies that have quotes, but does not exist, i.e. does not have a .pony-file, are not listed.

Auto-completion scripts should not suggest these options.

### 10.8 Universal Character Set

In earlier versions of **ponysay** only the output truncation supported Universal Character Set, though handcoded UTF-8 character counting. Now **ponysay** lets Python decode the data, Python store all 31 bits of a character in as one character, not in UTF-16 as some other languages does, this means that the code is agnostic to the character encoding. However in Unicode 6.1 their are four ranges of combining characters, these do not take up any width in proper terminal, we therefore have a class in the code named UCS that help us take them into consideration when determine the length of a string.

Some ponies have names that contain non-ASCII characters, read about it in Chapter 4 [Environment variables], page 5. The UCS names are stored in the file 'share/ucsmap', in it

lines that are not empty and does not start with a hash (#) are parsed, and contains a UCS name and a ASCII:ised name. The UCS name comes first, followed by the ASCII:ised name that the UCS name should replace or link towards. The two names are separated by and simple left to right arrow character [U+2192], optionally with surrounding white space.

## 11 Contributing

### 11.1 Providing ponies

Most pony images are browser ponies or desktop ponies, browser ponies is a port of desktop ponies, implementing it in JavaScript. Browser ponies are available at https://github. com/panzi/Browser-Ponies. Desktop ponies are available at http://desktop-pony-team. deviantart.com/.

There is also a collection of ponies that are not yet pixelated in a Java reimplementation of the early Ponysay: https://github.com/maandree/unisay/tree/develop/dev/newponies

There is a checklist named 'pony-checklist' at the 'dev/' directory. You can use the check which ponies are added and which are not. Please update it when fit.

New ponies can be created from regular images by using util-say, which is available at https://github.com/maandree/util-say. Prior to version 2.1 of ponysay, img2xterm could be used, by since version 2.1 ponysay is using a new format that only util-say supports. img2xterm (https://github.com/rossy2401/img2xterm) was used in the early stage, but util-say tries to optimise the images in some aspects: as good as possible for low capability terminals, tries to place the pony-balloon link, displayed as good as possible when marked in the terminal (somewhat compromised by the first aspect,) and same width on all rows.

Using util-say:

```
img2ponysay -2 -- SOURCE_IMAGE > PONY_FILE
PONY_FILE should end with '.pony' and be localed in 'ponies/',
or 'extraponies/' if the pony is not a MLP:FiM pony.
Omit '-2' if the source image does not use double pixel size.
For more information see:
https://github.com/maandree/util-say/wiki/img2ponysay
```

If you have util-say installed, which is required to build ponies, you can use PNG files as argument the for ponysay -f, this requires that the file is named '.png' at the end.

The following **bash** code will print the palette the ponies (the terminals) use:

```
c=16
while ((c < 256)); do
    echo -en "\e[48;5;${c}m \e[49m"
    c=$(( $c + 1 ))
    if (( $(( c % 36 )) == 16 )); then
        echo
    fi
done; echo</pre>
```

For the palette to be correct, which is especially important when you draw ponies, you must not redefine the colours in the range 16 to 255 (inclusive).

When a pony is added please also add a ttypony version, i.e. the pony files used in TTY, but if you don't please state so in the pull request so we do not miss the create it; the simplest way to do this is to run dev/dist.sh ttyponies after adding the ponies to 'ponies/', running dev/dist.sh ttyponies will build (or rebuild) all ttyponies with a pony present in 'ponies/', and creates all needed symlinks.

To be able to run dev/dist.shttyponies you must have the packages listed under Section 8.4 [Dependencies for pony providers], page 9.

Also when adding new ponies, please map them up in the file 'ponyquotes/ponies'. If the pony is a new pony without any other alternative image just add it to a new line, without '.pony', preferably in its alphabetical position. If the file is a symlink add it to the same line as the target pony, and if the pony has and alternative image add it the the same line as that pony. Ponies on the same line are separated with a plus sign (+) without any white space. When a line is too long for a file name (this has happened to Pinkie Pie ['pinkie'],) it must be split into multiple lines, these lines should have their first pony file in common.

## 12 Distributing

If you are planning on maintaining ponysay in your favourite operating system you should first read Section 8.1 [Required runtime dependencies], page 9 and Section 8.2 [Optional runtime dependencies], page 9. If your OS does not follow Filesystem Hierarchy Standard (FHS), e.g. installing amusement binaries in '/usr/games' instead of '/usr/bin' or only supporting '/opt' equivalent directories you should read about configurations in Section 9.1.2 [Custom installations], page 10.

Apart from this, you should configure **ponysay** before building it with the option '--everything'. Otherwise only the **info** manual and the English manpage will be installed for documentation.

Please inform us about your distribution so we can list it so everypony can see it.

The following is a reference distribution written in Arch Linux's PKGBUILD format. It is not complete, proper, verbose enough or well written, it just contains the core of an stable git distribution.

```
pkgname=ponysay
pkgver=2.5
pkgrel=1
arch=(any)
pkgdesc="Cowsay reimplementation for ponies"
url="https://github.com/erkin/ponysay"
license=(WTFPL "GNU FDL v1.3")
depends=(python>=3 coreutils)
optdepends=("util-say>=2: Improved TTY support with KMS and PNG files")
makedepends=(git texinfo info gzip python>=3)
build()
{
    cd "$srcdir"; git clone git://github.com/erkin/ponysay.git ponysay
    cd ponysay ; git checkout "$pkgver"
    ./setup.py --everything --without-pdf-compression \
               --bin-dir=/usr/bin --dest-dir="$pkgdir" build
}
package()
    cd "$srcdir/ponysay"; ./setup.py prebuilt
{
}
```

## 13 Terminology

*MLP:FiM* The television show My Little Pony: Friendship is Magic.

#### My Little Pony

The successor to My Pretty Pony, the toy not the short story by Stephen King.

TTY

Linux VT Linux's native terminal emulator. The name TTY comes from the file names for the devices used for terminals by Linux VT, which is '/dev/tty\*'.

#### KMS

Kernel Mode Setting

A feature in Linux allowing mode setting in kernel-space, this gives the TTY, for example better colour support. I would go to Wikipedia for more information.

*ttyponies* Pony files used in TTY.

*kmsponies* Pony files generated for use in TTY with custom TTY colour palette and KMS support.

#### extraponies

extra ponies

Pony files of ponies that are not a part of MLP:FiM.

#### standard ponies

Pony files of ponies that are a part of MLP:FiM.

system ponies

sysponies Pony files located in '/usr/share/ponysay'.

#### homeponies

usrponies Pony files located in '~/.local/share/ponysay'.

#### browser ponies

A JavaScript program which is the source for most of our ponies. It is a port of *desktop ponies*.

#### ponification

The process of converting English text to Equestrian English.

Equestrian English

The English dialect spoken by the ponies in MLP:FiM, the basic role is that it is American English with as many words and parts of words as possible exchanged to words having to do with ponies, including the work 'pony' itself. This is normally the language we, the developers, write in, except we may use another English, e.g. British English, as the base language.

*best.pony* The pony you think is [the] best pony. It should be a symlink pony. It is a feature affecting the '-f', '-F' and '-q' options.

#### pony symlink

symlink pony

A pony file that is a symbolic link to another pony file. Symbolic links can be created with the command ln -s TARGET SYMLINK.

#### ponyquotes

A feature enabling ponies to quote them self from MLP:FiM.

#### environment variables

Variables stored to the environment with the command export VARIABLE=VALUE. The variable name is often written with the prefix \$ due to have they are read in shell, using the command echo \$VARIABLE.

#### UCS

#### Universal Character Set

The set of of character, develop by the Unicode Consortium. It defined a partially filled space of  $2^{31}$  characters, some of which are not glyphs.

#### combining characters

Character that have zero width and is used to compose characters with diacritical when there is no precomposed character to use.

#### ASCII

#### ASCII character

American Standard Code for Information Interchange (ASCII) defines 128 characters, some are not glyphs. It contains control characters, basic punctuation, the decimal digit, and lower case and upper case English alphabet characters a-z.

#### short options

Command line arguments starting with either exactly one hyphen (-) or exactly one plus sign (+), and have exactly one character beyond that. They may be argumentless, argumented, optionally argumented, or variadic (consumes are following arguments).

#### long options

Command line arguments starting with either at least two hyphens (-) or at least two plus signs (+), beyond that they have at least one character, but often at least one work. They by be argumentless, argumented, optionally argumented, or variadic (consumes are following arguments).

#### completion

auto-completion

#### shell completion

shell auto-completion

Provided by a shell dependent script, argument suggestion is provided of then by pressing the tab key.

#### ANSI escape sequences

escape sequences

Character sequences starting with a ESC character, with a special interpretation for terminals standardise by ANSI.

#### ANSI colour sequences

#### $ANSI\ colours$

#### colour sequences

ANSI escape sequences defining a colour or other formatting, known as CSI m, a sequence starting with CSI and ending with an m. This is extended to 256 colours, from 16 colours, by **xterm** which is de facto standardise.

- *CSI* The character combination ESC followed by [, used in standardised ANSI escape sequences.
- *OSI* The character combination ESC followed by ], used in non-standardised ANSI escape sequences.

## Appendix A Change log

## Version 2.5

Brand new highly configurable build system.

## Version 2.4

Nothing worth mentioning.

Note: Identifies itself as version 2.3

## Version 2.3

- Support for 'best.pony' file.
- '-q' accepts file names.
- Improved Unicode support: treats combining characters as invisible.
- Optional support for UCS pony names.
- Pony files and balloon style files can be pipes (as well as sockets, doors and as always regular files.)
- Support cowsay style message compression.
- New ponies: 'blaze'
- New extraponies: 'fyrefly' (Tumblr), 'surprise' (Tumblr), 'woona' (moonstuck), 'woonanohat' (moonstuck)
- Pony symlink added:
  - 'pinkieoink' → 'oinkoinkoink'
- Support for non-MLP:FiM ponies (known as extraponies). This is implemented with the options '-F', '+1', and '+L' corresponding to '-f', '-1', and '-L'.

## Version 2.2

- Full support for arbitrary positioning of balloon in pony files.
- ANSI colour sequences in pony files are applied only to the pony image, not the balloon link or the balloon itself.
- Support for colours in the message.
- Support custom balloon styles using the option '-b', '-B' will list all available. This list depends on whether you are invoking ponysay or ponythink

## Version 2.1.1

Nothing worth mentioning.

### Version 2.1

- 'applebumkin' is renamed to 'applebumpkin'.
- New ponies: 'owlowiscious', 'purplehaze'
- Cowsay has be reimplemented, and have full Unicode support and support for figlet style messages.
- Deleted environment variables: PONYSAY\_COWSAY, PONYSAY\_COWTHINK
- You will need Python 3, but not GNU Bash, Perl or Cowsay.
- New .pony file format is used: unisay's format instead of cowsay's Perl based format. This includes arbitrary position of balloon, mirrored balloon links, and minimum size of balloon.

### Version 2.0

- Makefile is generated by running ./configure.
- All Perl scripts and almost all Bash are reimplemented in one Python 3 script.
- kmsponies4ponysay is included.

## Version 1.4.1

• Code is repaired and more portable.

## Version 1.4

• Make file is improved.

**Note**: Identifies itself as version 1.3

## Version 1.3

- New ponies: 'forestspirit', 'hollydash', 'raggedy', 'rhyme'
- 'sindy' is renamed to 'powderrouge'. Pony symlink added:
  - 'sindy'  $\mapsto$  'powderrouge'
- 'PREFIX=/some-dir' can be used when invoking make, the default value is '/usr'

## Version 1.2

- ponyquotes4ponysay is included.
- Support for extension: kmsponies4ponysay.
- Pony symlinks added:
  - 'mrsparkle'  $\mapsto$  'nightlight'
  - 'elsie'  $\mapsto$  'prettyvision'
- New ponies: 'ace', 'blueblood', 'filthyrich', 'gingergold', 'hayfever', 'highscore', 'junebug', 'mrsparkle', 'persnickety', 'ponet', 'screwloose', 'tornadobolt'.
- 'elsie' is renamed to 'prettyvision'.
- Arbitrary spaces in '-f' argument is not longer accepted (it causes problems with file names including spaces.)

Note: Identifies itself as version 1.1

## Version 1.1

- Manpages are compressed before installation.
- info manual added.
- Shell completion for ponythink added, in addition to ponysay.
- fish completion added.
- '/usr/lib/ponysay' is used instead of '/usr/bin' for code used by the main script.
- '~/.local/share/ponysay' is used for private pony directories.
- ncurses is no longer needed for determining the screen's size, coreutils is used instead.
- Pony symlinks added:
  - 'amethyststar'  $\mapsto$  'sparkler'
  - 'berrypinch'  $\mapsto$  'ruby'
  - 'craftycrate'  $\mapsto$  'boxxy'

- 'magnum'  $\mapsto$  'raritysdad'
- 'pearl'  $\mapsto$  'raritysmom'
- 'powderrouge'  $\mapsto$  'sindy'
- 'royalribbo'  $\mapsto$  'violet'
- New ponies: 'blossomforth', 'bonvoyage', 'cadance', 'celestiasmall', 'changelingqueen', 'cherryberry', 'discordamused', 'discordpuppetmaster', 'fleurdelishair', 'fleurdelislay', 'owl', 'perrypierce', 'petunia', 'pinacolada', 'skyra', 'truffleshuffle'.
- Pony spelling removed: 'fillycadence'.
- Pony symlink change: 'perry'  $\mapsto$  {'pokey'  $\mapsto$  'perrypierce'}.
- Option '-L' added, lists ponies with symlink mapping.
- Support for extension: ponyquotes4ponysay.
- Accepts arbitrary spaces in '-f' argument.

## Version 1.0

- Spanish translation of the manpage is added.
- 'applecore', • New ponies: 'applejackscarecrow', 'bonbonstand', 'changeling', 'fillycadence', 'chrysalis', 'cottoncloudy', 'diamondmint', 'discord', 'fluttershyshy', 'flam', 'fleurdelis', 'flim', 'fluttershystare', 'lyrasit', 'oinkoinkoink' (is pinkie), 'philomenaphoenix', 'pinkiecannon', 'pinkiecannonfront', 'pinkiecannonhappy', 'pinkiegummy', 'pinkiehugfluttershy', 'pinkiehugsfluttershy', 'pinkieprincess', 'pinkiepartycannon', 'pinkiesilly', 'pinkietongue', 'pinkiewhoops', 'pinkiewhoopseat', 'pinkiewhoopsout', 'rainbowdrag', 'rainbowsalute', 'rainbowshine', 'raritydrama', 'shiningarmor', 'shiningarmorguard', 'spikemustache', 'stevenmagnet', 'snowflake'. 'stevenmagnettrue', 'twilightcrazyfromball', 'twilightrage', 'twilightzero', 'wildfire'.
- Pony symlinks added:
  - 'djpon-3'  $\mapsto$  'vinyl'
  - 'fillycadance'  $\mapsto$  'fillycadence'
  - 'horsepower'  $\mapsto$  'snowflake'
- Improved TTY support: ponies have low colours resolution, instead of monochrome, when the high colour resolution is not available.

## Version 0.10

- Manpage manual added.
- The directories for pony directories are changed from '/usr/share' to '/usr/share/ponysay' and '~' to '~/.ponysay'.
- Pony symlinks added:
  - 'carrottop'  $\mapsto$  'carrot'
  - 'goldenharvest'  $\mapsto$  'carrot'
  - 'harpass'  $\mapsto$  'lyra'
  - 'heartstrings'  $\mapsto$  'lyra'
  - 'lulamoon'  $\mapsto$  'trixie'
  - 'minuette'  $\mapsto$  'colgate'
  - 'noteworthy'  $\mapsto$  'blues'

- 'perry'  $\mapsto$  'pokey'
- 'pokeypierce'  $\mapsto$  'pokey'
- 'timeturner'  $\mapsto$  'doctornohat'
- 'trixielulamoon'  $\mapsto$  'trixie'
- 'twilightvelvet'  $\mapsto$  'mrssparkle'
- Support for truncating output on height, enabled by default under TTY.
- Environment variables added: PONYSAY\_FULL\_WIDTH, PONYSAY\_SHELL\_LINES, PONYSAY\_ TRUNCATE\_HEIGHT, PONYSAY\_BOTTOM.

#### Version 0.9

- Output truncated on width to fit screen.
- Support for TTY (Linux VT).
- bash completion added.
- zsh completion added.
- New ponies: 'allie', 'archer', 'boxxy', 'carecake', 'cupcake', 'daringdo', 'davenport', 'fancypants', 'ironwillwalk', 'lily', 'lunafly', 'maredowellfly', 'maredowellgallop', 'master', 'mjolna', 'orange', 'raritysdad', 'raritysmom', 'royalnightguard', 'ruby', 'sparkler', 'violet'.

### Version 0.8

New ponies: 'aloe', 'angle', 'applebloom', 'applebumkin', 'applefritter', 'berrypunch', 'bigmac', 'blinkie', 'blues', 'braeburn', 'caesar', 'candymane', 'caramel', 'cheerilee', 'cheerilee80', 'clyde', 'colgate', 'colton', 'daisy', 'derpystand', 'derpystandwing', 'diamondtiara', 'dinky', 'doctornohat', 'elsie', 'fido', 'fillycelestia', 'fillydash', 'fillydashfly', 'fillyjack', 'fillyjacktravel', 'fillypinkie', 'fillypinkiecurly', 'fillyrarity', 'fillyshy', 'fluttershygala', 'gilda', 'gildastand', 'granny', 'grannychair', 'grannysleep', 'gummy', 'hoity', 'horte', 'inky', 'laflour', 'lightning', 'lintsalot', 'lotus', 'mayor', 'mrssparkle', 'nightmare', 'opal', 'parasprite', 'philomena', 'photofinish', 'pinkamina', 'pinkiebounce', 'pinkiechicken', 'pinkiegala', 'pipsqueak', 'pokey', 'rainbowfly', 'rainbowgala', 'rainbowsleep', 'raindrops', 'rarityfly', 'raritygala', 'rarityponder', 'redheart', 'rocky', 'silverspoon', 'silverstar', 'sindy', 'snails', 'snips', 'soarin', 'soigne', 'spike', 'spikefloat', 'spikelove', 'spot', 'stella', 'strongheart', 'sue', 'suedance', 'tank', 'trixiestage', 'trixiestand', 'turnip', 'twist', 'winona'.

Note: Identifies itself as version 0.7

### Version 0.7

- New ponies: 'carrot', 'octavia', 'trixie', 'vinyl', 'zecora'.
- Support for listing ponies with '-1' option.

#### Version 0.6

- New ponies: 'bonbon', 'celestia', 'doctor', 'fillistia', 'spitfire', 'woona' (not moon-stuck).
- Dropping usage of utility which, using hash instead.

Note: Identifies itself as version 0.5

### Version 0.5

• Using utility which to determine existence of cowsay.

### Version 0.4

- '.cow' files are removed.
- Support for '-W' option.
- Select random pony if not specified.
- '-f' supports file names, and not only pony names.

### Version 0.3

• Fixed use of '.pony' files.

### Version 0.2

- Pony files end with '.pony' instead of '.cow'.
- 'lyrasleep' is renamed to 'lyra'.
- '.cow' files are kept but not used.
- '-h' prints proper help.

## Version 0.1

First release.

• Includes the ponies: 'applejack', 'derpy', 'derpysit', 'fluttershy', 'luna', 'lyrasleep', 'pinkie', 'rainbow', 'rarity', 'sweetie', 'twilight'.

## Appendix B Ponysay contributors

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Version 1.3, 3 November 2008

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