Ponysay

A cowsay wrapper for ponies. Covers ponysay version 1.2.

by Mattias Andrée (maandree)

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1 Overview

ponysay displays an image of a My Little Pony pony saying some text provided by the user in a terminal. It is a wrapper for cowsay. If message is not provided, e.g. by piping, it accepts standard input. The pony saying the given message is printed on standard output.

ponythink is to ponysay as cowthink is to cowsay.

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:

'-h' Show summary of options.

'-v' Show version of program.

'-f PONY' Specify the pony that should printed, this can either be a file name or a pony name printed by ponysay -1. If it is a file name with a relative path and does not include a '/', it must begin with './', this is a cowsay issue. 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.

'-q [PONY...]'

By using this option, a pony will be printed with quotes from her in My Litte 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.

'-W COLUMN'

Specify the screen column where the message should be wrapped, this is by default 40, which is inherited from cowsay.

- '-1' Lists all installed ponies. If the extension ponyquotes4ponysay is installed the ponies which have quotes, i.e. can be used with the -q option, will be mark by being printed in bold or bright (depending on the terminal.)
- '-L' Lists all installed ponies. If the extension ponyquotes4ponysay is installed the ponies which have quotes, i.e. can be used with the -q option, will be mark by being printed in bold or bright (depending on the terminal.) This options differs from -1 by printed symonym ponies (symbolic links) inside brackes after their target ponies.

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 that 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.

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 reposity – 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 use do not use GNU Bash (standard shell for most distributions now adays) – you will get the effect described in the previous paragraph every time you open a terminal.

3.2 Ponification

You can ponify text (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 use 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/

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:

```
[[ "$TERM" = "linux" ]] &&
  function ponysay
  {   exec ponysay "$@"
      #RESET PALETTE HERE
}
```

3.4 Running on screen

screen will adapt ASNI colour escape sequencies to your terminal's capabilities. This means that is your terminal reports itself as xterm in \$TERM it ponies will lose colours; they will only use the lower 16 colours instread of the top 240 colours. By default, almost all X terminal, including xterm and mate-terminal reports themself as xterm in \$TERM, and some reports their actual name in \$COLORTERM. So before openning 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 "$0"
}
```

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 buttom 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 the 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 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_COWSAY'

'PONYSAY_COWTHINK'

If you want to use another program than cowsay (the first cowsay found in \$PATH), you can export PONYSAY_COWSAY with the value of that program. If, and only if, PONYSAY_COWSAY does not have any value, cowsay is patch with use utf8; to the beginning. The use utf8; patch is introduced to make it easier to customise cowsay. PONYSAY_COWTHINK will be used instead of PONYSAY_COWSAY if you run ponythink.

See Section 9.2 [kmsponies4ponysay], page 9 for additional environment variabled used by the extension kmsponies4ponysay.

5 Limitations

5.1 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 with Kernal Mode Settings (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.

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

Most terminals have support for 256 colours, we do however only use the top 240 colours; this is because the lower 16 colours are usally, 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 (except for 2^{24} + full transparency.)

5.2 Cowsay

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 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.

cowsay's word wrapping handles single line breaks as normal blankspaces, this messes up messaged created with programs seach as figlet and TOIlet.

6 Problems and requests

6.1 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.

6.2 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.

7 Dependencies

7.1 Required runtime dependencies

'bash' Required for the main script [file: ponysay].

'cowsay' This is a wrapper for cowsay.

'coreutils'

The main script [file: ponysay] uses stty, cut, ls, cat, sort, readlink, pwd, head and tail

'sed' Used to remove .pony from pony names when running ponysay -1 and ponysay -L.

'perl' Required to run ponysay -1 and ponysay -L.

7.2 Optional runtime dependencies

'ponyquotes4ponysay'

For support of My Little Pony quotes with associated pony: the -q option. It can be downloaded at https://github.com/maandree/ponyquotes4ponysay.

Since version 1.2, this module is included in ponysay. You can edit ponysay's Makefile to remove it.

'kmsponies4ponysay'

For improved TTY support for user with custom colour palette and KMS support. It can be downloaded at https://github.com/maandree/kmsponies4ponysay.

7.3 Package building dependencies

'gcc' Used for compiling ponysaytruncater.c.

'gzip' Used for compressing manpages.

'make' Required to run the make script.

'coreutils'

The make script uses install, unlink, rm, ln, mkdir and cp.

'git' Required for submodules.

7.4 Dependencies for pony providers

'make' Required to run make -B ttyponies'.

'coreutils'

In and readlink are used in the ttyponies subscript.

'bash' Used in the ttyponies subscript.

'util-say'

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

8 Installing

8.1 From upstream

Before installing ponysay, make sure your system have the packages listed under Section 7.1 [Required runtime dependencies], page 7 and Section 7.3 [Package building dependencies], page 7 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 clone the project URL https://github.com/erkin/ponysay.git.

In the terminal,cd into the ponysay directory and execute make install. This will install ponysay into the /usr, meaning you may 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.

8.2 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.

8.3 Gentoo Linux

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

8.4 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 Extensions

Ponysay does not support extensions, per se, but rather have optional features that are enabled when other packages are installed.

9.1 ponyquotes4ponysay

ponyquotes4ponysay is a package that adds support for MLP:FiM quotes that are displayed with the associated ponies. See Chapter 2 [Invoking ponysay], page 2 for more information. ponyquotes4ponysay can be downloaded at https://github.com/maandree/ponyquotes4ponysay.

As of version 1.2 ponyquotes4ponysay is included in ponysay, but can easily be removed.

9.2 kmsponies4ponysay

kmsponies4ponysay is an extension for TTY users that have a custom TTY colour palette and KMS support. KMS is supported on must computers, but due to lack of published specifications Nvidea drivers does not support KMS. kmsponies4ponysay can be downloaded at https://github.com/maandree/kmsponies4ponysay.

To use this extension 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 everytime 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 "$0"
}
```

10 Inner workings

10.1 Pony anatomy

The pony files are cow files used by cowsay, they are partial Perl-scripts that assign a value to a scalar variable named \$the_cow. The files use a predefined scalar named variable named \$thoughts, these are used to create a link between the message and the pony. The message (and the balloon) it self is printed by cowsay and is not definied in the pony files.

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).

10.2 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.

10.3 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 Settings (KMS) support to keep the colours from being messed up ad the ponies is moved in the screen during print; this 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 required on 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.

For truncation the width, we have a custom program, named ponysaytruncater, that is 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 eight coloumn 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). For support UTF-8, to handles all bytes that do not match 10xxxxxx as beginning of a character.

10.4 Languages

Ponysay is written primarily in GNU Bash shell script (POSIX compliant); the truncater is 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 [that exist today] Perl is used; Perl is already required by cowsay, is similar to shell, but also supports hash tables. [maandree: I actually learned Perl just for this.]

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: https://github.com/maandree/unisay/tree/develop/dev/newponies

There is a checklist named "pony-checklist" at the top level of the project directory. You can use the check which ponies are added and which are not.

New ponies can be created from regular images by using util-say, which is available at https://github.com/maandree/util-say. img2xterm (https://github.com/rossy2401/img2xterm) was used earlier, but util-say tries do 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/
Omit -2 if the source image does not use double pixel size.
```

For more information see: https://github.com/maandree/util-say/wiki/img2ponysay

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 make -B ttyponies after adding the ponies to ponies/, running make -B ttyponies will build (or rebuild) all ttyponies with a pony present in ponies/, and creates all needed symlinks.

To be able to run make -B ttyponies you must have the packages listed under Section 7.4 [Dependencies for pony providers], page 7.

Appendix A Ponysay constributors

Active developers of ponysay:

- Erkin Batu Altunbaş
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- Kyah Rindlisbacher
- James Ross-Gowan
- Louis Taylor
- \bullet Jannis

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