ansicolortags Documentation

Release public

Lilian Besson

07/06/2016, 07h:38m:10s

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Welcome to the documentation for ansicolortags, a Python 2 or 3 module to use ANSI colors in a terminal.

- This project is open-source here on BitBucket.
- This project is also available from Pypi, so a quick overview and the last release can be downloaded from Pypi: https://pypi.python.org/pypi/ansicolortags!

1 Installation

1.1 Dependencies

The project is entirely written in pure Python, supporting both version 2 (2.7+) and version 3 (3.1+). For more details about the Python language, see its official website.

1.2 How to install it?

There is three different ways:

1. Directly, with pip

The preferred way is to install ansicolortags directly with pip (what is pip?):

```
pip install ansicolortags
```

On GNU/Linux, it might be necessary to give it sudo rights:

```
sudo pip install ansicolortags
```

2. Download, extract, and use setup.py

Or you can also:

- 1. download the file, from PyPi;
- 2. extract it (with tar xzfv, or a graphical solution, like File Roller);
- 3. then go in the subdirectory (cd ansicolortags-v0.3/);
- 4. and finally with Python distutils setup tool:

```
$ python setup.py install
```

Or maybe with sudo rights, if the first try did not work:

```
$ sudo python setup.py install
```

3. Without installing it

Note that installation *is not mandatory*: a third solution is to simply include JUST the file ansicolortags.py, and embed it in your own projects. The project can be used without installing *anything elsewhere*.

2 Examples

2.1 The function printc

The main function of this module is printc, e.g. printc("my string") This function works exactly like print("my string").

For instance, a quick description of super hero's costumes can be done like this:

```
>>> printc("<reset><white>Batman's costume is <black>black<white>, Aquaman's costume is <blue>blue<white> Batman's costume is black, Aquaman's costume is blue and green, and Superman's costume is red and blue
```

(Sorry, but it is hard to embed colors in the output of a Python command in a Sphinx generated web-pages.)

2.2 python -m ansicolortags --help

This command shows the help of the script, colored with the tools defined in the script:

```
Terminal -159bash "(lum, juin 66 -1009-33) (lilan@jarvis=C-publis/ansicolortags.py) (bashv4.3)"

usage: ansicolortags.py | -h| [--version] (--noMSI] [--MSI] [-t] [-t]

ANSI Colors utility module and script (ansicolortags.py).

optional arguments:
-h, -help show this help message and exit
-no-ston show program arguments (and color tags.py).

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-h, -help show this help message and exit
-no-ston show program arguments (and color tags.py).
-h, -help show this compact, ANSI capec code from ansicolortags are 'forced' to be printed (even if the output is detected to be a pipe).
-t, -test Launch a complete test of all ANSI (colors code defined here.

Generation of a GNU Bash color aliases file:
-g, -generate Print all ANSI (colors as 'export name - value')
-f FILE, -file FILE If present, and with -generate option, don't print the values, but export them in the file FILE (e.g. FILE = -/.color.sh)

Use this file -/.color.sh with other GNU Bash scripts, simply by sourcing him with:
-source -/.color.sh with other GNU Bash scripts, simply by sourcing him with:
-source -/.color.sh with the stone starting with a grant and scripts are starting with a grant and scripts are starting with B' is for color -without bold** (example 'yellow'),
-the name starting with B' is for color -without bold** (example 'yellow'),
-the name starting with B' is for color -without bold** (example 'yellow'),
-the name starting with B' is for color -without bold** (example 'yellow'),
-the name starting with B' is for color -without bold** (example 'yellow'),
-the name starting with B' is for color -without bold** (example 'yellow'),
-the name starting with B' is for color -without bold** (example 'yellow'),
-the name starting with B' is for color -without bold** (example
```

2.3 python -m ansicolortags --test

This command shows a complete test of all tags defined in the module:

```
The clar spectral is published to a spectral published to a spectral published by a spectrum published
```

2.4 -- ANSI or -- no ANSI option

You can force to use ANSI codes (even if they appear to not be supported be the output, e.g. a pipe) with the --ANSI flag option, or force to disable them with the --noANSI flag option:

```
Torminal - 19tansicolortags.py - (lin. juin 06 - 10.16:57) dilian@jarvisf-(-/publis/ansicolortags.py) - (bashv4.3)*

10.16:51) lilian@jarvisf-04 (-/publis/ansicolortags.py) - (bashv4.3)*

10.16:51) lilian@jarvisf-04 (-/publis/ansicolortags.py) - (bashv4.3)*

ANSI Colors utility module and script (ansicolortags.py).

optional arguments:

-h, -help show this help message and exit
--version show program's version number and exit
--version show program's version number and exit
--vol81 If present, ANSI escape code from ansicolortags are *disabled*.
--vol821 | from the first of the first
```

```
Terminal - 194 and color as py = (lum juin 66 = 10 1625) clillane jarvis (-jpublis/ansicolor tags, py) - (bashv43)*

(16.16:221lilanejarvis#) [-/publis/ansicolor tags, py) + pubma, 5 / Ansicolor tags, py - help --noANSI

usage: ansicolor tags, py [-h] [-version] [-neANSI] [-t] [-t] [-t]

ANSI (clors utility module and script (ansicolor tags, py).

optional arguments:
-h, -help
show this help message and exit
-version
-h, -help
-version
-how help
-version
-noANSI if present, ANSI escape code from ansicolor tags are "disabled",
-volum if present, ANSI escape code from ansicolor tags are "forced" to be printed (even if the output is detected to be a pipe).
-t, -test
-version
-versi
```

2.5 python -m ansicolortags --generate

This command can be used to generate a .color.sh file, to be used in any GNU Bash script:

3 Complete documentation

And, a detailed description of every function is available on the documentation of the module ansicolortags.

4 Author

Hi, I am Lilian Besson, a French student at ÉNS de Cachan, in Mathematics and computer science (CS).

If needed, feel free to contact me:

- 1. either with this web page;
- 2. or via my bitbucket account lbesson;
- 3. or via email here (remove the [] and change DOT to . and AT to @.

You can use this form to inform me of a bug on ansicolortags.py: https://bitbucket.org/lbesson/ansicolortags.py/issues?status=new&status=open!

5 Index and tables

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6 Table of contents

6.1 Installation

Dependencies

The project is entirely written in pure Python, supporting both version 2 (2.7+) and version 3 (3.1+). For more details about the Python language, see its official website.

How to install it?

There is three different ways:

1. Directly, with pip

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pip install ansicolortags
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On GNU/Linux, it might be necessary to give it sudo rights:

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2. Download, extract, and use setup.py

Or you can also:

1. download the file, from PyPi;

- 2. extract it (with tar xzfv, or a graphical solution, like File Roller);
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- 4. and finally with Python distutils setup tool:

```
$ python setup.py install
```

Or maybe with sudo rights, if the first try did not work:

```
$ sudo python setup.py install
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3. Without installing it

Note that installation *is not mandatory*: a third solution is to simply include JUST the file ansicolortags.py, and embed it in your own projects. The project can be used without installing *anything elsewhere*.

6.2 ansicolortags module

An efficient and simple ANSI colors module (and also a powerful script), with functions to print text using colors. https://bitbucket.org/lbesson/ansicolortags.py

The names of the colors follow these conventions:

- for the eight ANSI colors (black, red, green, yellow, blue, magenta, cyan, white):
 - the name in minuscule is for color with bold (example 'yellow'),
 - the name starting with 'B' is for color without bold (example 'Byellow'),
 - the name starting with a **capital** letter is for the background color (example 'Yellow').
- for the special effects (blink, *italic*, **bold**, underline, negative), they might not always be supported, but they usually are:
 - the name in minuscule is used to turn on the effect (example 'i' to turn on italic),
 - the name starting in capital letter is used to turn down the effect (example 'I' to turn off italic).
- for the other special effects (nocolors, default, Default, clear, el), the effect is **immediate** (and seems to be well supported).

List of functions

To print a string

- sprint () (page 9): give a string,
- printc() (page 9): like print(), but with interpreting tags to put colors. This is the most useful function in this module!
- writec() (page 10): like printc, but using any file object (and no new line added at the end of the string).

To clean the terminal or the line

- erase () (page 9): erase all ANSI colors tags in the string (like sprint, but erasing and not interpreting color tags),
- clearLine() (page 9), clearScreen() (page 9): to clear the current line or screen,
- Reset () (page 9): to return to default foreground and background, and stopping all *fancy* effects (like blinking or reverse video).

Others functions

- notify() (page 9): try to display a system notification. Only on GNU/Linux with notify-send installed.
- xtitle() (page 11): try to set the title of the terminal. Warning: not always supported.

Example of use (module)

To store a string, use *sprint()* (page 9) (i.e. print to a string, *sprint*), like this:

```
>>> example = sprint("France flag is <blue>blue<white>white<red>red<white>, Italy flag have <green>g
```

The string example can then be printed, with colors, with:

```
>>> print(example) # Sorry, but in the documentation it is hard to show colors :)
France flag is bluewhitered, Italy flag have green on it.
```

To directly print a string colored by tags, use printc() (page 9):

```
>>> printc("Batman's costum is <black>black<white>, Aquaman's costum is <blue>blue<white> and <green
```

See also:

This is the most useful function. To do the same, but on any file, use writec() (page 10).

Moreover, the function erase () (page 9) can also be useful to simply delete all valid color tags

```
>>> print(erase("Batman's costum is <black>black>black<white>, Aquaman's costum is <blue>blue<white> and <<br/>Batman's costum is black, Aquaman's costum is blue and green, and this is a non-valid <tag>, so it is
```

In this last example, an <el> tag (el) is used to erase the current content of the line, useful to make a *dynamical* print

```
>>> writec("<red>Computing <u>len(str(2**562016))<reset>...."); tmp = len(str(2**562016)); writec("<<u>len(str(2**562016)); writec("<u)len(str(2**562016)); wr
```

The first part of the line 'Computing len(str(2**562016))...' have disappeared after the computation! (which takes about one second).

Example of use (script)

- To show the help \$ ansicolortags.py --help;
- To run a test \$ ansicolortags.py --test;
- To produce a GNU Bash color aliases file \$ ansicolortags.py --generate --file ~/.color_aliases.sh.

Auto detection

This script can normally detect if ANSI codes are supported:

- 1. \$ ansicolortags.py --help: will print with colors if colors seems to be supported;
- 2. \$ ansicolortags.py --help --noANSI: will print without any colors, even if it is possible;
- 3. \$ ansicolortags.py --help --ANSI: will force the use of colors, even if they seems to be not supported.

And, the module part behaves exactly like the script part.

About

This project can be found on-line:

- here on BitBucket;
- here on PyPi.
- The reference page for ANSI code is : here on Wikipedia.
- The reference page for XTitle escape code is : here.

Complete documentation

The doc is available on-line, on Read the Docs: http://ansicolortags.readthedocs.io/!

Copyrigth

```
© Lilian Besson, 2012-2016.
```

```
ansicolortags. Reset () \rightarrow unit
```

Try to reset the current ANSI codes buffer, using reset.

```
ansicolortags.clearLine() \rightarrow unit
```

Try to clear the current line using ANSI code el.

```
\verb"ansicolortags.clearScreem"() \to \verb"unit"
```

Try to clear the screen using ANSI code clear.

```
ansicolortags.erase (chainWithTags, left='<', right='>', verbose=False) → string
```

Parse a string containing color tags, when color is one of the previous define name, and then return it, with color tags **erased**.

Example:

```
>>> print(erase("<blue>This is blue.<white> And <this> is white.<red> Now this is red because I This is blue. And <this> is white. Now this is red because I am <angray>!
```

This example seems exactly the same that the previous one in the documentation, but it's not (it is impossible to put color in the output of a Python example in Sphinx documentation, so there is **no color in output** in the examples... but be sure there is the real output!).

ansicolortags.notify (msg='', obj='Notification sent by ansicolortags.notify', icon=None, $verb=False) \rightarrow bool$

Notification using subprocess and notify-send (GNU/Linux command-line program). Also print the informations directly to the screen (only if verb=True).

Warning: This does not use any *ANSI escape* codes, but the common *notify-send* GNU/Linux command line program. It will probably fail (but cleanly) on Windows or Mac OS X.

- •Return True if and only if the title have been correctly changed.
- •Fails simply if notify-send is not found.

```
ansicolortags.printc(chainWithTags, left='<', right='>', **kw) → unit
```

A shortcut to print (sprint (chainWithTags)): analyze all tags (convert the tags like <red> to their ANSI code value, like red), and print the result.

This is the more useful function in this package.

Hint: I suggest to use ansicolortags.py in your own project with the following piece of code:

```
try:
    from ansicolortags import printc
except ImportError:
    print("WARNING: ansicolortags was not found, disabling colors instead.\nPlease install it widef print(*a, **kw):
        print(*a, **kw)
```

Hint: During the last 4 years, a lot of the small Python scripts I wrote try to use this module to add some colors: for example, FreeSMS.py, plotnotes.py, strapdown2html.py, calc_interets.py...

```
ansicolortags. \textbf{sprint} \ (\textit{chainWithTags}, \textit{left='<'}, \textit{right='>'}, \textit{verbose=False}) \ \rightarrow \textit{string}
```

Parse a string containing color tags, when color is one of the previous define name, and then return it, with color tags changed to concrete ANSI color codes.

Tags are delimited by left and right. By default, it's HTML / Pango style whit '<' and '>', but you can change them.

For example, a custom style even closer to HTML could be: left=' < span color=' and right = ' < / span >' is also possible.

Warning: It is more prudent to put nothing else than ANSI Colors (i.e. values in colorList) between '<' and '>' in chainWithTags. The behavior of the function in case of false tags is not perfect. Moreover, a good idea could be to try not to use '<' or '>' for anything else than tags. I know, it's not perfect. But, the syntax of color tags is so simple and so beautiful with this limitation that you will surely forgive me this, won't you;)?

Example:

```
>>> print(sprint("<blue>This is blue.<white> And <this> is white.<red> Now this is red because I am <angry> !
```

This function is used in all the following, so all other function can also use ``left`` and ``ri

```
ansicolortags.tocolor(mystring) \rightarrow string
```

Convert a string to a color. mystring have to be in colorDict to be recognized (and interpreted). Default value if mystring is not one of the color name is "" the empty string.

ansicolortags.writec(chainWithTags="", out=sys.stdout, left='<', right='>', flush=True) \rightarrow unit Useful to print colored text to a file, represented by the object out. Also useful to print colored text, but without any trailing 'n' character.

Example:

In this example, before the long computation begin, it prints 'Computing $2^{**}(2^{**}(2^{**}4))$', and when the computation is done, erases the current line (with <e1> tag, e1), and prints 'Done!' in green, and the result of the computation:

```
>>> writec("<red>Computing<reset> 2**(2**(2**4))....."); tmp = 2**(2**(2**4)); writec("<el><green
```

This example show how to use this module to write colored data in a file. Be aware that this file now contains ANSI escape sequences. For example, \$ cat /tmp/colored-text.txt will well print the colors, but editing the file will show *hard values* of escape code:

```
>>> my_file = open('/tmp/colored-text.txt', mode = 'w') # Opens an random file.
>>> write("<blue>this is blue.<white>And <this> is white.<red>Now this is red because I am <angra>
```

Remark: Can also be used to simply reinitialize the ANSI colors buffer, but the function Reset () (page 9) is here for this:

```
>>> writec("<reset>")
```

Warning: The file out will be flushed by this function if flush is set to True (this is default behavior). If you prefer no to, use flush=False option:

```
>>> writec(chainWithTags_1, out=my_file, flush=False)
>>> # many things...
>>> writec(chainWithTags_n, out=my_file, flush=False)
>>> my_file.flush() # only flush here!
```

```
ansicolortags.xtitle (new\_title=""", verb=False) \rightarrow 0 or 1
```

Modify the current terminal title. Returns 0 if one of the two solutions worked, 1 otherwise.

An experimental try is with **ANSI escape code**, if the simple way by calling the xtitle program does not work (or if it is not installed).

Note: The second solution simply uses the two *ANSI* Tags <title> (title) and <bell> (bell). So, you can also do it with:

```
>>> ansicolortags.writec("<title>This is the new title of the terminal<bell>")
```

But this function xtitle is better: it tries two ways, and returns a signal to inform about his success.

6.3 TODOs for ansicolortags package

Other changes

- 1. Improve support of Windows.
- 2. Add automated tests.

3. Durty to use all these exec (), should be avoided... Find something cleaner!

This project is currently in version 0.1, release public. Last update of this doc was made 07/06/2016, 07h:38m:10s.

Note: This project is based on my old ANSIColors-balises project, which was only for Python 2.7.

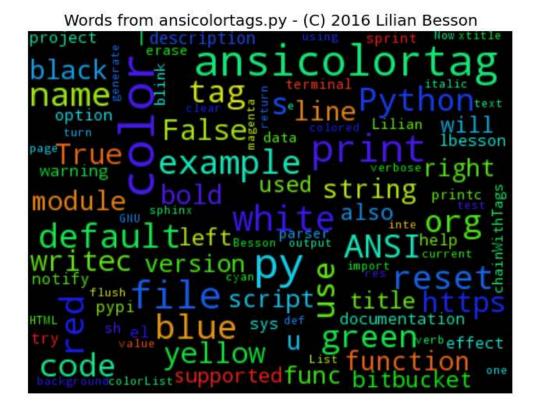
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