How to

print colorful text?

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二進制	十六進制	十進制
0	0	0
1	1	1
10	2	2
11	3	3
100	4	4
101	5	5
110	6	6
111	7	7
1000	8	8
1001	9	9
1010	A	10
1011	B	11
1100	C	12
1101	D	13
1110	E	14
1111	F	15

2 7 4

十進制

$4 \times 10^0 = 4$

$7 \times 10^1 = 70$

$2 \times 10^2 = 200$

274

1 1 0 1

二進制

$1 \times 2^0 = 1$

$0 \times 2^1 = 0$

$1 \times 2^2 = 4$

$1 \times 2^3 = 8$

13

1 B

十六進制

$11 \times 16^0 = 11$

$1 \times 16^1 = 16$

27

8 Colors

```
>>> print('\x1b[31m')
>>> print('abc')
```

Black	\x1b[30m
Red	\x1b[31m
Green	\x1b[32m
Yellow	\x1b[33m
Blue	\x1b[34m
Magenta	\x1b[35m
Cyan	\x1b[36m
White	\x1b[37m
Reset	\x1b[0m

經常打 `\x1b[..m` 好麻煩，可以怎辦？

color8.py

```
def escape(x):
    return '\x1b[%dm' % x

def red(s):
    return escape(31) + s + escape(0)

def green(s):
    return escape(32) + s + escape(0)

def yellow(s):
    return escape(33) + s + escape(0)


print(red('yellow'))
print(green('red'))
print(yellow('green'))
```

16 Colors

Bright Black	\x1b[30;1m
Bright Red	\x1b[31;1m
Bright Green	\x1b[32;1m
Bright Yellow	\x1b[33;1m
Bright Blue	\x1b[34;1m
Bright Magenta	\x1b[35;1m
Bright Cyan	\x1b[36;1m
Bright White	\x1b[37;1m
Reset	\x1b[0m

256 Colors

\x1b[38;5;${ID}m

color256.py

```
def escape(x):
    return '\x1b[38;5;%dm' % x

def reset():
    return '\x1b[0m'

def color(id, s):
    return escape(id) + s + reset()


print(color(0, '0'))
print(color(64, '64'))
print(color(128, '128'))
print(color(255, '255'))
```

color256_list.py

```
def escape(x):
    return '\x1b[38;5;%dm' % x

def reset():
    return '\x1b[0m'

def color(id, s):
    return escape(id) + s + reset()


for i in range(0, 256):
    print(color(i, str(i)), end=' ')
```

印得靚啲，例如一個 16x16 的方陣，得唔得？

color256_array.py

```
def escape(x):
    return '\x1b[38;5;%dm' % x

def reset():
    return '\x1b[0m'

def color(id, s):
    return escape(id) + s + reset()


for i in range(0, 16):
    for j in range(0, 16):
        id = i * 16 + j
        print(color(id, str(id)), end=' ')
    print()
```

對唔齊，怎辦？

color256_array_justify.py

```
def escape(x):
    return '\x1b[38;5;%dm' % x

def reset():
    return '\x1b[0m'

def color(id, s):
    return escape(id) + s + reset()


for i in range(0, 16):
    for j in range(0, 16):
        id = i * 16 + j
        print(color(id, str(id).rjust(3)), end=' ')
    print()
```