

Cuti Demo & Doc

Introduction

Cuti is a package designed for simulating fake bold / fake italic.

Demo

Part 1: font: ("Times New Roman", "SimSun")

Regular: 你说得对，但是《Cuti》是一个用于伪粗体和伪斜体的包。
Bold(Font Only): 你说得对，但是《**Cuti**》是一个用于伪粗体和伪斜体的包。
Bold(Fake Only): 你说得对，但是《**Cuti**》是一个用于伪粗体和伪斜体的包。
Bold(Fake+Font): 你说得对，但是《**Cuti**》是一个用于伪粗体和伪斜体的包。
Italic(Font Only): 你说得对，但是《*Cuti*》是一个用于伪粗体和伪斜体的包。
Italic(Fake Only): 你说得对，但是《*Cuti*》是一个用于伪粗体和伪斜体的包。
Italic(Fake+Font): 你说得对，但是《*Cuti*》是一个用于伪粗体和伪斜体的包。

Part 2: font: "Source Han Serif SC"

Regular: 前面忘了。同时，逐步发掘「Typst」的奥妙。
Bold(Font Only): 前面忘了。同时，逐步发掘「**Typst**」的奥妙。
Bold(Fake Only): 前面忘了。同时，逐步发掘「**Typst**」的奥妙。
Bold(Fake+Font): 前面忘了。同时，逐步发掘「**Typst**」的奥妙。

Fake Bold

Cuti simulates fake bold by utilizing the stroke attribute of text. This package is typically used on fonts that do not have a bold weight, such as “SimSun”. This package uses 0.02857em as the parameter for stroke. In Microsoft Office software, enabling fake bold will apply a border of about 0.02857em to characters. This is where the value of 0.02857em is derived from. (In fact, the exact value may be $\frac{1}{35}$.)

fakebold

#fakebold[] with no parameter will apply the **fakebold** effect to characters.

```
1 - Fakebold: #fakebold[#lorem(5)]
2 - Bold: #text(weight: "bold", lorem(5))
3 - Bold + Fakebold: #fakebold[#text(weight: "bold", lorem(5))]
```

- Fakebold: **Lorem ipsum dolor sit amet.**
- Bold: **Lorem ipsum dolor sit amet.**
- Bold + Fakebold: **Lorem ipsum dolor sit amet.**

#fakebold[] can accept the same parameters as #text. In particular, if the weight parameter is specified, it can be used to outline based on a certain font weight. If weight is not specified, the baseline font weight will be inherited from the context. Specifying the stroke parameter will be ignored.

```
1 - Bold + Fakebold: #fakebold(weight: "bold")[#lorem(5)]
2 - Bold + Fakebold: #set text(weight: "bold"); #fakebold[#lorem(5)]
```

- Bold + Fakebold: **Lorem ipsum dolor sit amet.**
- Bold + Fakebold: **Lorem ipsum dolor sit amet.**

Note: The base-weight parameter used by cuti:0.2.0 is still retained to ensure compatibility.

regex-fakebold

The #regex-fakebold is designed to be used in multilingual and multi-font scenarios. It allows the use of a RegExp string as the reg-exp parameter to match characters that will have the fake bold effect applied. It can also accept the same parameters as #text.

```
1 + RegExp `[a-o]`: #regex-fakebold(reg-exp: "[a-o]")[#lorem(5)]
2 + RegExp `\p{script=Han}`: #regex-fakebold(reg-exp: "\p{script=Han}")[衬衫的价格是 9 磅 15 便士。]
3 + RegExp `\p{script=Han}`: #set text(weight: "bold"); #regex-fakebold(reg-exp: "\p{script=Han}")[衬衫的价格是 9 磅 15 便士。]
```

1. RegExp [a-o]: **Lorem ipsum dolor sit amet.**
2. RegExp \p{script=Han}: **衬衫的价格是 9 磅 15 便士。**
3. RegExp \p{script=Han}: **衬衫的价格是 9 磅 15 便士。**

In Example #3, 9 and 15 are the real bold characters from the font file, while the other characters are simulated as “fake bold” based on the regular weight.

If the fill parameter of #text is set to a specific color or gradient, the fake bold outline will also change to the corresponding color.

```
1 - Blue + Fakebold: #fakebold(fill: blue)[花生瓜子八宝粥，啤酒饮料矿泉水。#lorem(5)]
2 - Gradient + Fakebold: #set text(fill: gradient.conic(..color.map.rainbow));
  #fakebold[花生瓜子八宝粥，啤酒饮料矿泉水。#lorem(5)]
```

- Blue + Fakebold: 花生瓜子八宝粥，啤酒饮料矿泉水。Lorem ipsum dolor sit amet.
- Gradient + Fakebold: 花生瓜子八宝粥，啤酒饮料矿泉水。Lorem ipsum dolor sit amet.

show-fakebold

In multilingual and multi-font scenarios, different languages often utilize their own fonts, but not all fonts contain the bold weight. It can be inconvenient to use #fakebold or #regex-fakebold each time we require strong or bold effects. Therefore, the #show-fakebold function is introduced for show rule.

The show-fakebold function shares the same parameters as regex-fakebold. By default, show-fakebold will apply the RegExp ".", which means all characters with the strong or weight: "bold" property will be fakebolded if the corresponding show rule has been set.

```
1 #show: show-fakebold
2 - Regular: #lorem(10)
3 - Bold: #text(weight: "bold")[#lorem(10)]
```

- Regular: Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do.
- Bold: **Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do.**

Typically, the combination of bold + fakebold is not the desired effect. It is usually necessary to specify the RegExp to indicate which characters should utilize the fakebold effect.

```
1 #show: show-fakebold.with(reg-exp: "\p{script=Han}")
2 - Regular: 我正在使用 Typst 排版。
3 - Strong: *我正在使用 Typst 排版。*
```

- Regular: 我正在使用 Typst 排版。
- Strong: 我正在使用 **Typst** 排版。

It can also accept the same parameters as #text.

cn-fakebold & show-cn-fakebold

cn-fakebold(`content`)

show-cn-fakebold(`content`)

cn-fakebold and show-cn-fakebold are encapsulations of the above regex-fakebold and show-fakebold, pre-configured for use with Chinese text. Please refer to the Chinese documentation for detailed usage instructions.

Fake Italic

The skew function used in cuti is from typst issue 2749 (<https://github.com/typst/typst/issues/2749>) by Enivex.

Cuti simulates fake italic by utilizing rotate and scale. This package uses -0.32175 as the default angle. In Microsoft Office software, enabling fake italic will apply a $\arctan(\frac{1}{3})$ skew effect to characters. Please note that due to different English fonts having varying skew angles, you may need to find a suitable angle on your own. If using Times New Roman alongside SimSun, the default angle is relatively appropriate.

fakeitalic

```
fakeitalic(  
  ang: angle default: -0.32175,  
  content  
)
```

#fakeitalic[] will apply the *fakeitalic* effect to characters.

```
1 - Regular: #lorem(5)  
2 - Italic: #text(style: "italic", lorem(5))  
3 - Fakeitalic: #fakeitalic[#lorem(5)]  
4 - Fakeitalic + Fakebold: #fakeitalic[#fakebold[#lorem(5)]]
```

- Regular: Lorem ipsum dolor sit amet.
- Italic: *Lorem ipsum dolor sit amet.*
- Fakeitalic: *Lorem ipsum dolor sit amet.*
- Fakeitalic + Fakebold: ***Lorem ipsum dolor sit amet.***

The angle of skew can be adjusted through the ang parameter.

```
1 - -10deg: #fakeitalic(ang: -10deg)[#lorem(5)]  
2 - -20deg: #fakeitalic(ang: -20deg)[#lorem(5)]  
3 - +20deg: #fakeitalic(ang: 20deg)[#lorem(5)]
```

- -10deg: *Lorem ipsum dolor sit amet.*
- -20deg: *Lorem ipsum dolor sit amet.*
- +20deg: *Lorem ipsum dolor sit amet.*

regex-fakeitalic

```
regex-fakeitalic(  
  reg-exp: str default: "[^ ]",  
  ang: angle ,  
  spacing: relative none default: none ,  
  content  
)
```

The #regex-fakeitalic is designed to be used in multilingual and multi-font scenarios. It allows the use of a RegEx string as the reg-exp parameter to match characters that will have the fake bold effect applied. It also accepts the ang parameter.

```
1 + RegExp `[a-o]`: #regex-fakeitalic(reg-exp: "[a-o]")[#lorem(5)]
2 + RegExp `p{script=Han}`: #regex-fakeitalic(reg-exp: "p{script=Han}")[衬衫的价格是
  9 磅 15 便士。]
3 + RegExp `p{script=Han}`: #set text(style: "italic"); #regex-fakeitalic(reg-exp:
  "p{script=Han}", ang: -10deg)[衬衫的价格是 9 磅 15 便士。]
```

1. RegExp [a-o]: *Lorem ipsum dolor sit amet.*
2. RegExp p{script=Han}: 衬衫的价格是 9 磅 15 便士。
3. RegExp p{script=Han}: 衬衫的价格是 9 磅 15 便士。

In Example #3, 9 and 15 are the real italic characters from the font file, while the other characters are simulated as “fake italic”.

Issues at hand

The current implementation of faux italics disrupts spacing, particularly the spacing between symbols and characters. This is especially evident in the demo.