

Package ‘sysfonts’

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Type Package

Title Loading system fonts into R

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Author Yixuan Qiu and authors/contributors of the included fonts. See file AUTHORS for details.

Maintainer Yixuan Qiu <yixuan.qiu@cos.name>

Description This package uses FreeType to load system fonts and Google Fonts(<https://www.google.com/fonts>) into R, mainly used to support other packages like R2SWF and showtext.

Suggests RCurl, jsonlite

Copyright see file COPYRIGHTS

SystemRequirements zlib, libpng, FreeType

URL <https://github.com/yixuan/sysfonts>

BugReports <https://github.com/yixuan/sysfonts/issues>

License GPL-2

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font.add	<i>Add new font families</i>
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Description

This function registers new font families that can be used by package **showtext** and the SWF device in package **R2SWF**. Currently supported formats include but not limited to TrueType fonts (*.ttf, *.ttc) and OpenType fonts (*.otf).

Usage

```
font.add(family, regular, bold = NULL, italic = NULL, bolditalic = NULL,
        symbol = NULL)
```

Arguments

family	a character string of maximum 200-byte size, indicating the family name of the fonts you want to add. See "Details" for further explanation.
regular	path of the font file for "regular" font face. This argument must be specified as a character string and cannot be missing.
bold	path of the font file for "bold" font face. If it is NULL, the function will use the value of argument regular.
italic, bolditalic, symbol	ditto

Details

In R graphics device, there are two parameters combined together to select a font to show text. `par("family")` is a character string giving a name to a **series** of font faces. Here **series** implies that there may be different fonts with the same family name, and actually they are distinguished by the parameter `par("font")`, indicating whether it is regular, bold or italic, etc. In R, `par("font")` is an integer from 1 to 5 representing regular, bold, italic, bold italic and symbol respectively.

In **sysfonts** package, there are three default font families, sans, serif and mono, along with those 5 font faces, that can be used immediately. If you want to use other font families, you could call `font.add()` to register new fonts. Notice that the `family` argument in this function can be an arbitrary string which doesn't need to be the real font name. You will use the specified family name in functions like `par(family = "myfont")` and `text("Some text", family = "myfont")`. The "Examples" section shows a complete demonstration of the usage.

To find the font file of argument `regular` (and the same for other font faces), this function will first check the existence of the specified path. If not found, file will be searched in the directories returned by `font.paths()` in turn. If the file cannot be found in any of the locations, an error will be issued.

Value

A character vector (invisible) of current available font family names

Author(s)

Yixuan Qiu <<http://yixuan.cos.name/>>

See Also

See `par()` for explanation of the parameters family and font

Examples

```
## Not run:
## Example: download the font file of WenQuanYi Micro Hei,
##          add it to SWF device, and use it to draw text in swf().
##          WenQuanYi Micro Hei is an open source and high quality
##          Chinese (and CJKV) font.

wd = setwd(tempdir())
ft.url = "http://sourceforge.net/projects/wqy/files/wqy-microhei"
ft.url = paste(ft.url, "0.2.0-beta/wqy-microhei-0.2.0-beta.tar.gz",
              sep = "/")
download.file(ft.url, basename(ft.url))

## Extract and add the directory to search path
untar(basename(ft.url), compressed = "gzip")
font.paths("wqy-microhei")

## Register this font file and assign the family name "wqy"
## Other font faces will be the same with regular by default
font.add("wqy", regular = "wqy-microhei.ttc")

## A more concise way to add font is to give the path directly,
## without calling font.paths()
# font.add("wqy", "wqy-microhei/wqy-microhei.ttc")

## List available font families
font.families()

if(require(R2SWF))
{
  ## Now it shows that we can use the family "wqy" in swf()
  swf("testfont.swf")

  ## Select font family globally
  op = par(family = "serif", font.lab = 2)
  ## Inline selecting font
  plot(1, type = "n")
  text(1, 1, intToUtf8(c(20013, 25991)), family = "wqy", font = 1, cex = 2)

  dev.off()
  swf2html("testfont.swf")
}

setwd(wd)
```

```
## End(Not run)
```

font.add.google	<i>Download and add Google Fonts</i>
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Description

This function will search the Google Fonts repository (<http://www.google.com/fonts>) for a specified family name, download the proper font files and then add them to R. This function requires **RCurl** and **jsonlite** packages.

Usage

```
font.add.google(name, family = name, regular.wt = 400, bold.wt = 700)
```

Arguments

name	name of the font that will be searched in Google Fonts
family	family name of the font that will be used in R
regular.wt	font weight for the regular font face, usually 400
bold.wt	font weight for the bold font face, usually 700

Details

There are hundreds of open source fonts in the Google Fonts repository (<http://www.google.com/fonts>). This function will try to search the font family specified by the family argument, and then automatically download the font files for all possible font faces ("regular", "bold", "italic" and "bold italic", but no "symbol"). If fonts are found and downloaded successfully, they will be also added to R with the given family name.

Author(s)

Yixuan Qiu <<http://yixuan.cos.name/>>

See Also

[font.families.google\(\)](#)

Examples

```
## Not run:
font.add.google("Alegreya Sans", "aleg");

if(require(showtext))
{
  wd = setwd(tempdir());
  pdf("google-fonts-ex.pdf");
  showtext.begin();

  par(family = "aleg");
  plot(0:5,0:5, type="n");
  text(1:4, 1:4, "Alegreya Sans", font=1:4, cex = 2);

  showtext.end();
  dev.off();
  setwd(wd);
}

## End(Not run)
```

font.families

List available font families loaded by sysfonts

Description

This function lists font families currently available that can be used by **R2SWF** and **showtext** packages.

Usage

```
font.families()
```

Details

By default there are three font families loaded automatically, i.e., "sans", "serif" and "mono". If you want to use other ones, you need to call `font.add()` to register new fonts by specifying a family name and corresponding font file paths. See `font.add()` for details about what's the meaning of "family name" in this context, as well as a complete example of registering and using a new font.

Value

A character vector of available font family names

Author(s)

Yixuan Qiu <<http://yixuan.cos.name/>>

See Also[font.add\(\)](#)**Examples**

```
font.families()
```

```
font.families.google
```

List available fonts in Google Fonts

Description

This function lists family names of the fonts that are currently available in Google Fonts. When running this function for the first time, it may take a few seconds to fetch the font information database. This function requires **RCurl** and **jsonlite** packages.

Usage

```
font.families.google()
```

Value

A character vector of available font family names in Google Fonts

Author(s)

Yixuan Qiu <<http://yixuan.cos.name/>>

See Also[font.add.google\(\)](#)**Examples**

```
## Not run:  
font.families.google()  
  
## End(Not run)
```

`font.files`*List available font files in the search path*

Description

This function lists font files in the search path that can be loaded by `font.add()`. Currently supported formats are TrueType fonts (*.ttf, *.ttc) and OpenType fonts (*.otf).

Usage

```
font.files()
```

Value

A character vector of available font filenames

Author(s)

Yixuan Qiu <<http://yixuan.cos.name/>>

See Also

`font.paths()`, `font.add()`

Examples

```
font.files()
```

`font.paths`*Get/Set font search paths*

Description

This function gets/sets the search paths for font files.

Usage

```
font.paths(new)
```

Arguments

`new` a character vector indicating the search paths to be prepended. If the argument is missing, the function will return the current search paths.

Details

Default search paths will be assigned when package is loaded:

- For Windows, it is %windir%\Fonts, usually expanded into C:\Windows\Fonts
- For Mac OS, default paths are /Library/Fonts and ~/Library/Fonts and their subdirectories
- For Linux and other Unix-like OS, /usr/share/fonts, /usr/local/share/fonts, ~/.fonts, and their subdirectories

Value

The updated search paths

Author(s)

Yixuan Qiu <<http://yixuan.cos.name/>>

See Also

See [font.add\(\)](#) for details about how **sysfonts** looks for font files. There is also a complete example showing the usage of these functions in the help page of [font.add\(\)](#).

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