# Module harfbuzz

Lua bindings to Harfbuzz.

### Info:

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### **Functions**

| version ()                      | Wraps hb_version |
|---------------------------------|------------------|
| shape (font, buffer[, options]) | Wraps hb_shape.  |

### **Class Blob**

| Blob.new (data)               | Wraps hb_blob_create.           |
|-------------------------------|---------------------------------|
| Blob.new_from_file (filename) | Wraps hb_blob_create_from_file. |
| Blob:get_length ()            | Wraps hb_blob_get_length.       |
| Blob:get_data ()              | Wraps hb_blob_get_data.         |

### **Class Face**

| Face.new_from_blob (blob[, font_index=0]) | Wraps hb_face_create.                         |
|---|---|
| Face.new (file[, font_index=0])           | Create a new Face from a file.                |
| Face:collect_unicodes ()                  | Wraps hb_face_collect_unicodes.               |
| Face:get_glyph_count ()                   | Wraps hb_face_get_glyph_count.                |
| Face:get_table (tag)                      | Wraps hb_face_reference_table.                |
| Face:get_table_tags ()                    | Wraps hb_face_get_table_tags.                 |
| Face:get_upem ()                          | Wraps hb_face_get_upem.                       |
| Face:ot_color_has_palettes ()             | Wraps hb_ot_color_has_palettes.               |
| Face:ot_color_palette_get_count ()        | Wraps hb_ot_color_palette_get_count.          |
| Face:ot_color_palette_get_colors ()       | Wraps hb_ot_color_palette_get_colors.         |
| Face:ot_color_has_layers ()               | Wraps hb_ot_color_has_layers.                 |
| Face:ot_color_glyph_get_layers ()         | Wraps hb_ot_color_glyph_get_layers.           |
| Face:ot_color_has_png ()                  | Wraps hb_ot_color_has_png.                    |
| Face:ot_layout_get_script_tags ()         | Wraps hb_ot_layout_table_get_script_tags.     |
| Face:ot_layout_get_language_tags ()       | Wraps hb_ot_layout_script_get_language_tags.  |
| Face:ot_layout_get_feature_tags ()        | Wraps hb_ot_layout_language_get_feature_tags. |
| Face:ot_layout_find_script ()             | Wraps hb_ot_layout_table_find_script.         |
| Face:ot_layout_find_language ()           | Wraps hb_ot_layout_script_find_language.      |
| Face:ot_layout_find_feature ()            | Wraps hb_ot_layout_language_find_feature.     |

### **Class Font**

| Font.new (face)                   | Wraps hb_font_create, and sets up some defaults for scale and shaping functions. |
|-----------------------------------|--|
| Font:get_scale ()                 | Wraps hb_font_get_scale.   |
| Font:set_scale (x_scale, y_scale) | Wraps hb_font_set_scale.   |
| Font:get_h_extents ()             | Wraps hb_font_get_h_extents.   |
| Font:get_v_extents ()             | Wraps hb_font_get_v_extents.   |
| Font:get_glyph_extents (glyph)    | Wraps hb_font_get_glyph_extents.   |

| Font:get_glyph_name (glyph)         | Wraps hb_font_get_glyph_name.      |
|-------------------------------------|------------------------------------|
| Font:get_glyph_from_name (name)     | Wraps hb_font_get_glyph_from_name. |
| Font:get_glyph_h_advance (glyph)    | Wraps hb_font_get_glyph_h_advance. |
| Font:get_glyph_v_advance (glyph)    | Wraps hb_font_get_glyph_v_advance. |
| Font:get_nominal_glyph (codepoint.) | Wraps hb_font_get_nominal_glyph.   |
| Font:ot_color_glyph_get_png ()      | Wraps hb_ot_color_glyph_get_png.   |

### **Class Buffer**

| Buffer.new ()   | Wraps hb_buffer_create.                      |
|---|--|
| Buffer:add_utf8 (text[, item_offset=0[, item_length=-1]])       | Wraps hb_buffer_add_utf8.                    |
| Buffer:add_codepoints (text[, item_offset=0[, item_length=-1]]) | Wraps hb_buffer_add_codepoints.              |
| Buffer:set_direction (dir)                                      | Wraps hb_buffer_set_direction.               |
| Buffer:get_direction ()   | Wraps hb_buffer_get_direction.               |
| Buffer:set_script (script)                                      | Wraps hb_buffer_set_script.                  |
| Buffer:get_script ()  | Wraps hb_buffer_get_script.                  |
| Buffer:set_language (lang)                                      | Wraps hb_buffer_set_language.                |
| Buffer:get_language ()  | Wraps hb_buffer_get_language.                |
| Buffer:reverse ()   | Wraps hb_buffer_reverse.                     |
| Buffer:get_length ()  | Wraps hb_buffer_get_length.                  |
| Buffer:get_cluster_level ()                                     | Wraps hb_buffer_get_cluster_level.           |
| Buffer:set_cluster_level (level)                                | Wraps hb_buffer_set_cluster_level.           |
| Buffer:guess_segment_properties ()                              | Wraps<br>hb_buffer_guess_segment_properties. |
| Buffer:get_glyphs ()  | Helper method to get shaped glyph data.      |

# **Cluster Levels**

| Buffer.CLUSTER_LEVEL_MONOTONE_GRAPHEMES  | Wraps HB_BUFFER_CLUSTER_LEVEL_MONOTONE_GRAPHEMES.  |
|--|--|
| Buffer.CLUSTER_LEVEL_MONOTONE_CHARACTERS | Wraps HB_BUFFER_CLUSTER_LEVEL_MONOTONE_CHARACTERS. |
| Buffer.CLUSTER_LEVEL_CHARACTERS          | Wraps HB_BUFFER_CLUSTER_LEVEL_CHARACTERS.          |
| Buffer.CLUSTER_LEVEL_DEFAULT             | Wraps HB_BUFFER_CLUSTER_LEVEL_DEFAULT.             |
| Buffer.GLYPH_FLAG_UNSAFE_TO_BREAK        | Wraps HB_GLYPH_FLAG_UNSAFE_TO_BREAK.               |
| Buffer.GLYPH_FLAG_DEFINED                | Wraps HB_GLYPH_FLAG_DEFINED.                       |

# **Class Feature**

| Feature.new (feature_string) | Wraps hb_feature_from_string |
|------------------------------|------------------------------|
| Feature:tostring()           | Wraps hb_feature_to_string.  |

# **Class Tag**

| Tag.new (string) | Wraps hb_tag_from_string.                               |
|------------------|---|
| Tag:to_string () | Wraps hb_tag_to_string.                                 |
| Tag:eq ()        | Enables equality comparisions with == between two tags. |

# **Class Script**

| Script.new (script)            | Wraps hb_script_from_string.      |
|--------------------------------|-----------------------------------|
| Script.from_iso15924_tag (tag) | Wraps hb_script_from_iso15924_tag |
|                                |                                   |

| Script:to_iso15924_tag () | Wraps hb_script_to_iso15924_tag.                           |
|---------------------------|--|
| Script:to_string ()       | Enable nice output with tostring()                         |
| Script:eq ()              | Enables equality comparisions with == between two scripts. |

# **Predefined Script Codes**

| Script.COMMON    | Wraps HB_SCRIPT_COMMON.    |
|------------------|----------------------------|
| Script.INHERITED | Wraps HB_SCRIPT_INHERITED. |
| Script.UNKNOWN   | Wraps HB_SCRIPT_UNKNOWN.   |
| Script.INVALID   | Wraps HB_SCRIPT_INVALID.   |

# **Class Direction**

| Direction.new (dir)        | Wraps hb_direction_from_string.                               |
|----------------------------|---|
| Direction:to_string ()     | Wraps hb_direction_to_string.                                 |
| Direction:eq ()            | Enables equality comparisions with == between two directions. |
| Direction:is_valid ()      | Wraps HB_DIRECTION_IS_VALID.                                  |
| Direction:is_horizontal () | Wraps HB_DIRECTION_IS_HORIZONTAL.                             |
| Direction:is_vertical ()   | Wraps HB_DIRECTION_IS_VERTICAL.                               |
| Direction:is_forward ()    | Wraps HB_DIRECTION_IS_FORWARD.                                |
| Direction:is_backward ()   | Wraps HB_DIRECTION_IS_BACKWARD.                               |

# **Predefined directions**

| Direction.LTR | Wraps HB_DIRECTION_LTR. |
|---------------|-------------------------|
| Direction.RTL | Wraps HB_DIRECTION_RTL. |
| Direction.TTB | Wraps HB_DIRECTION_TTB. |
| Direction.BTT | Wraps HB_DIRECTION_LTR. |

# **Class Language**

| Language.new (lang)  | Wraps hb_language_from_string.                               |  |
|----------------------|--|--|
| Language:to_string() | Wraps hb_language_to_string.                                 |  |
| Language:eq ()       | Enables equality comparisions with == between two languages. |  |

# **Predefined languages**

| Language.INVALID | Wraps HB_LANGUAGE_INVALID. |  |
|------------------|----------------------------|--|
|------------------|----------------------------|--|

# **Unicode functions**

| unicode.script (char) | Wraps hb unicode script               |
|-----------------------|---------------------------------------|
|                       | , , , , , , , , , , , , , , , , , , , |

# **Predefined Name IDs**

| ot.NAME_ID_COPYRIGHT       | Wraps HB_OT_NAME_ID_COPYRIGHT       |
|----------------------------|-------------------------------------|
| ot.NAME_ID_FONT_FAMILY     | Wraps HB_OT_NAME_ID_FONT_FAMILY     |
| ot.NAME_ID_FONT_SUBFAMILY  | Wraps HB_OT_NAME_ID_FONT_SUBFAMILY  |
| ot.NAME_ID_UNIQUE_ID       | Wraps HB_OT_NAME_ID_UNIQUE_ID       |
| ot.NAME_ID_FULL_NAME       | Wraps HB_OT_NAME_ID_FULL_NAME       |
| ot.NAME_ID_VERSION_STRING  | Wraps HB_OT_NAME_ID_VERSION_STRING  |
| ot.NAME_ID_POSTSCRIPT_NAME | Wraps HB_OT_NAME_ID_POSTSCRIPT_NAME |
| ot.NAME_ID_TRADEMARK       | Wraps HB_0T_NAME_ID_TRADEMARK       |
| ot.NAME_ID_MANUFACTURER    | Wraps HB_OT_NAME_ID_MANUFACTURER    |
|                            |                                     |

| ot.NAME_ID_DESIGNER              | Wraps HB_OT_NAME_ID_DESIGNER              |
|----------------------------------|---|
| ot.NAME_ID_DESCRIPTION           | Wraps HB_OT_NAME_ID_DESCRIPTION           |
| ot.NAME_ID_VENDOR_URL            | Wraps HB_OT_NAME_ID_VENDOR_URL            |
| ot.NAME_ID_DESIGNER_URL          | Wraps HB_OT_NAME_ID_DESIGNER_URL          |
| ot.NAME_ID_LICENSE               | Wraps HB_OT_NAME_ID_LICENSE               |
| ot.NAME_ID_LICENSE_URL           | Wraps HB_OT_NAME_ID_LICENSE_URL           |
| ot.NAME_ID_TYPOGRAPHIC_FAMILY    | Wraps HB_OT_NAME_ID_TYPOGRAPHIC_FAMILY    |
| ot.NAME_ID_TYPOGRAPHIC_SUBFAMILY | Wraps HB_OT_NAME_ID_TYPOGRAPHIC_SUBFAMILY |
| ot.NAME_ID_MAC_FULL_NAME         | Wraps HB_OT_NAME_ID_MAC_FULL_NAME         |
| ot.NAME_ID_SAMPLE_TEXT           | Wraps HB_OT_NAME_ID_SAMPLE_TEXT           |
| ot.NAME_ID_CID_FINDFONT_NAME     | Wraps HB_OT_NAME_ID_CID_FINDFONT_NAME     |
| ot.NAME_ID_WWS_FAMILY            | Wraps HB_OT_NAME_ID_WWS_FAMILY            |
| ot.NAME_ID_WWS_SUBFAMILY         | Wraps HB_OT_NAME_ID_WWS_SUBFAMILY         |
| ot.NAME_ID_LIGHT_BACKGROUND      | Wraps HB_OT_NAME_ID_LIGHT_BACKGROUND      |
| ot.NAME_ID_DARK_BACKGROUND       | Wraps HB_OT_NAME_ID_DARK_BACKGROUND       |
| ot.NAME_ID_VARIATIONS_PS_PREFIX  | Wraps HB_OT_NAME_ID_VARIATIONS_PS_PREFIX  |
| ot.NAME_ID_INVALID               | Wraps HB_OT_NAME_ID_INVALID               |
| ot.LAYOUT_NO_SCRIPT_INDEX        | Wraps HB_0T_LAY0UT_N0_SCRIPT_INDEX        |
| ot.LAYOUT_NO_FEATURE_INDEX       | Wraps HB_0T_LAY0UT_N0_FEATURE_INDEX       |
| ot.LAYOUT_DEFAULT_LANGUAGE_INDEX | Wraps HB_0T_LAY0UT_DEFAULT_LANGUAGE_INDEX |
| ot.LAYOUT_NO_VARIATIONS_INDEX    | Wraps HB_OT_LAYOUT_NO_VARIATIONS_INDEX    |

### **Functions**

version ()

Wraps hb\_version

### shape (font, buffer[, options])

Wraps hb\_shape.

### **Parameters:**

- font: Font to use for shaping
- buffer: Buffer to shape
- options:

table containing one or more supported options:

- direction: A Direction object representing the object.
- script: A Script object representing the script.
- language: A Language object representing the language.
- features: features to enable, specified as either of the following.
  - comma-separated list of features. See feature string syntax reference
  - table of Feature objects

(optional)

### **Class Blob**

Lua wrapper for hb\_blob\_t type

### Blob.new (data)

Wraps hb\_blob\_create. Initializes a new hb\_blob\_t.

### **Parameters:**

• data: lua string containing binary or character data.

### Blob.new from file (filename)

Wraps hb\_blob\_create\_from\_file. Initializes a new hb\_blob\_t.

### **Parameters:**

filename: lua string.

### Blob:get\_length ()

Wraps hb\_blob\_get\_length.

### Blob:get\_data()

Wraps hb blob get data.

### **Class Face**

Lua wrapper for hb\_face\_t type

### Face.new from blob (blob[, font index=0])

Wraps hb\_face\_create. Initializes a new hb\_face\_t from a Blob object.

### **Parameters:**

- blob: Blob to read the font from.
- font\_index: index of font to read. (default 0)

### Face.new (file[, font\_index=0])

Create a new Face from a file. Makes a call to Face: new\_from\_blob after creating a Blob from the file contents.

### Parameters:

- file: path to font file.
- font\_index: index of font to read. (default 0)

### Face:collect\_unicodes ()

Wraps hb\_face\_collect\_unicodes.

### **Returns:**

table of codepoints supported by the face.

### Face:get\_glyph\_count()

Wraps hb\_face\_get\_glyph\_count.

### Face:get table (tag)

Wraps hb face reference table.

### **Parameters:**

• tag: Tag object of the table.

### **Returns:**

Blob object for the face table of tag.

```
Face:get_table_tags ()
  Wraps hb_face_get_table_tags.
  Returns:
  table of Tags representing face table tags.
Face:get upem ()
  Wraps hb face get upem.
Face:ot_color_has_palettes ()
  Wraps hb ot color has palettes.
Face:ot color palette get count ()
  Wraps hb_ot_color_palette_get_count.
Face:ot_color_palette_get_colors ()
  Wraps hb_ot_color_palette_get_colors.
Face:ot_color_has_layers ()
  Wraps hb ot color has layers.
Face:ot_color_glyph_get_layers()
  Wraps hb ot color glyph get layers.
Face:ot_color_has_png()
  Wraps hb ot color has png.
Face: ot layout get script tags ()
  Wraps hb_ot_layout_table_get_script_tags.
Face:ot_layout_get_language_tags ()
  Wraps hb_ot_layout_script_get_language_tags.
Face:ot layout get feature tags ()
  Wraps hb_ot_layout_language_get_feature_tags.
Face:ot_layout_find_script()
  Wraps hb_ot_layout_table_find_script.
Face:ot_layout_find_language()
  Wraps hb_ot_layout_script_find_language.
Face: ot layout find feature ()
  Wraps hb_ot_layout_language_find_feature.
```

### **Class Font**

Lua wrapper for hb font type

### Font.new (face)

Wraps hb\_font\_create, and sets up some defaults for scale and shaping functions. Initializes a new hb\_font\_t from a Face object. Sets the default scale to the face's upem value, and sets the font shaping functions by calling hb\_ot\_font\_set\_funcs on it.

### **Parameters:**

• face: Face object.

### Font:get scale ()

Wraps hb\_font\_get\_scale.

### **Returns:**

two values for the x-scale and y-scale of the font.

### Font:set scale (x scale, y scale)

Wraps hb font set scale.

### **Parameters:**

- x scale: desired x-scale of font.
- y\_scale: desired y-scale of font.

### Font:get h extents ()

Wraps hb\_font\_get\_h\_extents.

### Returns

font extents table for horizontal direction, contains the following or nil flarfBuzz fails to load font extents:

- ascender: typographic ascender.
- descender: typographic descender.
- line\_gap: line spacing gap.

### Font:get\_v\_extents()

Wraps hb font get v extents.

### Returns:

font extents table for vertical direction, similar to  $Font:get_h_extents$ , or nil if HarfBuzz fails to load font extents:

### Font:get glyph extents (glyph)

Wraps hb\_font\_get\_glyph\_extents.

### **Parameters:**

• glyph: index inside the font.

### **Returns:**

extents table contains the following or nil if HarfBuzz fails to load glyph extents:

- x\_bearing: left side of glyph from origin.
- y\_bearing: top side of glyph from origin.
- width: distance from left to right side.
- height: distance from top to bottom side.

### Font:get\_glyph\_name (glyph)

Wraps hb font get glyph name.

### **Parameters:**

• glyph: index inside the font.

### **Returns:**

name of the glyph or nil.

### Font:get\_glyph\_from\_name (name)

Wraps hb\_font\_get\_glyph\_from\_name.

### **Parameters:**

• name: of the glyph.

### **Returns:**

glyph index inside the font or nil.

### Font:get\_glyph\_h\_advance (glyph)

Wraps hb\_font\_get\_glyph\_h\_advance.

### **Parameters:**

• glyph: index inside the font.

### Returns:

advance glyph advance of the glyph in horizontal direction.

### Font:get\_glyph\_v\_advance (glyph)

Wraps hb\_font\_get\_glyph\_v\_advance.

### **Parameters:**

• glyph: index inside the font.

### **Returns:**

advance glyph advance of the glyph in vertical direction.

### Font:get nominal glyph (codepoint.)

Wraps hb\_font\_get\_nominal\_glyph.

### **Parameters:**

• codepoint.:

### **Returns:**

glyph index or nil if codepoint is not supported by the font.

### Font:ot\_color\_glyph\_get\_png()

Wraps hb\_ot\_color\_glyph\_get\_png.

### **Class Buffer**

Lua wrapper for hb\_buffer\_t type.

### Buffer.new ()

Wraps hb buffer create.

### Buffer:add utf8 (text[, item offset=0[, item length=-1]])

Wraps hb\_buffer\_add\_utf8.

### **Parameters:**

- text: UTF8 encoded string.
- item\_offset: 0-indexed offset in text, from where to start adding. (default 0)
- item length: length to add from item offset. -1 adds till end of text. (default -1)

### Buffer:add\_codepoints (text[, item\_offset=0[, item\_length=-1]])

Wraps hb\_buffer\_add\_codepoints.

### **Parameters:**

- text: table with codepoints as lua numbers.
- item\_offset: 0-indexed offset in text, from where to start adding. (default 0)
- item length: length to add from item offset. -1 adds till end of text. (default -1)

### Buffer:set\_direction (dir)

Wraps hb\_buffer\_set\_direction.

### **Parameters:**

• dir: A Direction object.

### **Buffer:get direction ()**

Wraps hb buffer get direction.

### Returns:

A Direction object.

### **Buffer:set script (script)**

Wraps hb\_buffer\_set\_script.

### Parameters:

• script: A Script object.

### Buffer:get script ()

Wraps hb\_buffer\_get\_script.

### **Returns:**

A Script object.

### Buffer:set\_language (lang)

Wraps hb\_buffer\_set\_language.

### **Parameters:**

• lang: A Language object

### Buffer:get\_language ()

Wraps hb buffer get language.

### **Returns:**

A Language object

### Buffer:reverse ()

Wraps hb\_buffer\_reverse.

### Buffer:get length ()

Wraps hb\_buffer\_get\_length.

### Buffer:get cluster level ()

Wraps hb\_buffer\_get\_cluster\_level.

### **Returns:**

see Cluster Levels

### Buffer:set cluster level (level)

Wraps hb buffer set cluster level.

### **Parameters:**

• level: see Cluster Levels

### **Buffer: guess segment properties ()**

Wraps hb\_buffer\_guess\_segment\_properties.

### Buffer:get\_glyphs ()

Helper method to get shaped glyph data. Calls hb\_buffer\_get\_glyph\_infos, hb\_buffer\_get\_glyph\_positions and hb\_glyph\_info\_get\_glyph\_flags, and assembles the data into a Lua table.

### Returns:

table containing data for each glyph, in a nested table. Each nested table contains the following:

- x\_advance: horizontal advance.
- y\_advance: vertical advance.
- x offset: horizontal displacement.
- y\_offset: vertical displacement.
- cluster: glyph cluster index within input.
- codepoint: glyph index inside the font (this field name is a bit misleading, but that's what Harfbuzz uses).
- flags: glyph flags

### **Cluster Levels**

See Harfbuzz docs for more details about what each of these levels mean.

### Buffer.CLUSTER\_LEVEL\_MONOTONE\_GRAPHEMES

Wraps HB BUFFER CLUSTER LEVEL MONOTONE GRAPHEMES.

### Buffer.CLUSTER\_LEVEL\_MONOTONE\_CHARACTERS

Wraps HB\_BUFFER\_CLUSTER\_LEVEL\_MONOTONE CHARACTERS.

### **Buffer.CLUSTER\_LEVEL\_CHARACTERS**

Wraps HB BUFFER CLUSTER LEVEL CHARACTERS.

### **Buffer.CLUSTER LEVEL DEFAULT**

Wraps HB BUFFER CLUSTER LEVEL DEFAULT.

### **Buffer.GLYPH FLAG UNSAFE TO BREAK**

Wraps HB\_GLYPH\_FLAG\_UNSAFE\_TO\_BREAK.

### **Buffer.GLYPH FLAG DEFINED**

Wraps HB GLYPH FLAG DEFINED.

### **Class Feature**

Lua wrapper for hb feature type

### Feature.new (feature\_string)

Wraps hb\_feature\_from\_string

### **Parameters:**

• feature\_string: See feature string syntax reference

### Feature: tostring ()

Wraps hb\_feature\_to\_string. Enables nice output with tostring(...).

### **Class Tag**

Lua wrapper for hb\_tag\_t type.

### Tag.new (string)

Wraps hb\_tag\_from\_string.

### **Parameters:**

• string: to be converted to a Tag object.

### **Returns:**

a Tag object.

### Tag:\_\_to\_string()

Wraps hb\_tag\_to\_string. Enable nice output with tostring(...).

### **Returns:**

Returns a string representation for the tag object.

### Tag: eq ()

Enables equality comparisions with == between two tags.

### **Returns:**

true or false depending on whether the two tags are equal.

### **Class Script**

Lua wrapper for hb\_script\_t type.

### Script.new (script)

Wraps hb\_script\_from\_string.

### **Parameters:**

• script: 4-letter script code according to the ISO 15924 standard.

### **Returns:**

a Script object.

### Script.from iso15924 tag (tag)

Wraps hb\_script\_from\_iso15924\_tag

### **Parameters:**

• tag: a Tag object representing a ISO 15924 script.

### Script:to iso15924 tag ()

Wraps hb\_script\_to\_iso15924\_tag.

### **Returns:**

a Tag object representing the script.

### Script:\_\_to\_string ()

Enable nice output with tostring(...)

### **Returns:**

Returns a 4-letter ISO 15924 script code for the script object.

### Script:\_\_eq()

Enables equality comparisions with == between two scripts.

### **Returns:**

true or false depending on whether the two scripts are equal.

### **Predefined Script Codes**

Predefined directions that correspond to their original definitions in Harfbuzz.

### Script.COMMON

Wraps HB SCRIPT COMMON.

### Script.INHERITED

Wraps HB\_SCRIPT\_INHERITED.

### Script.UNKNOWN

Wraps HB SCRIPT UNKNOWN.

### Script.INVALID

```
Wraps HB_SCRIPT_INVALID.
```

### **Class Direction**

Lua wrapper for hb\_direction\_t type.

### Direction.new (dir)

Wraps hb\_direction\_from\_string.

### **Parameters:**

• dir: can be one of ltr, rtl, ttb, btt or invalid.

### **Returns:**

a Direction object.

### Direction: to string ()

Wraps hb\_direction\_to\_string. Enable nice output with tostring(...).

### **Returns:**

Returns a string representation for direction.

### Direction: eq ()

Enables equality comparisions with == between two directions.

### **Returns:**

true or false depending on whether the two tags are equal.

### Direction: is valid ()

Wraps HB\_DIRECTION\_IS\_VALID.

### **Returns:**

a boolean value

### Direction:is\_horizontal()

Wraps HB DIRECTION IS HORIZONTAL.

### **Returns:**

a boolean value

### Direction:is\_vertical ()

Wraps HB DIRECTION IS VERTICAL.

### **Returns:**

a boolean value

### Direction:is\_forward()

Wraps HB\_DIRECTION\_IS\_FORWARD.

### **Returns:**

a boolean value

### Direction: is backward ()

```
Wraps HB DIRECTION IS BACKWARD.
```

### **Returns:**

a boolean value

### **Predefined directions**

Predefined directions that correspond to their original definitions in Harfbuzz.

### **Direction.LTR**

Wraps HB\_DIRECTION\_LTR.

### **Direction.RTL**

Wraps HB DIRECTION RTL.

### **Direction.TTB**

Wraps HB\_DIRECTION\_TTB.

### **Direction.BTT**

Wraps HB DIRECTION LTR.

### Class Language

Lua wrapper for hb\_language\_t type.

### Language.new (lang)

Wraps hb\_language\_from\_string.

### **Parameters:**

• lang: three-letter language tag to be converted to a Language object.

### **Returns:**

a Language object.

### Language: to string ()

Wraps hb\_language\_to\_string. Enable nice output with tostring(...).

### Returns

Returns a string representation for the language object.

### Language:\_\_eq()

Enables equality comparisions with == between two languages.

### Returns

true or false depending on whether the two languages are equal.

### Predefined languages

Predefined languages that correspond to their original definitions in Harfbuzz.

### Language.INVALID

Wraps HB\_LANGUAGE\_INVALID.

### **Unicode functions**

### unicode.script (char)

Wraps hb\_unicode\_script

### **Parameters:**

• char: Unicode codepoint

### **Returns:**

a Script object.

### **Predefined Name IDs**

Predefined OpenType 'name' table name identifier.

### ot.NAME\_ID\_COPYRIGHT

Wraps HB\_OT\_NAME\_ID\_COPYRIGHT

### ot.NAME\_ID\_FONT\_FAMILY

Wraps HB\_OT\_NAME\_ID\_FONT\_FAMILY

### ot.NAME\_ID\_FONT\_SUBFAMILY

Wraps HB\_OT\_NAME\_ID\_FONT\_SUBFAMILY

### ot.NAME\_ID\_UNIQUE\_ID

Wraps HB\_OT\_NAME\_ID\_UNIQUE\_ID

### ot.NAME\_ID\_FULL\_NAME

Wraps HB\_OT\_NAME\_ID\_FULL\_NAME

### ot.NAME\_ID\_VERSION\_STRING

Wraps HB\_OT\_NAME\_ID\_VERSION\_STRING

### ot.NAME\_ID\_POSTSCRIPT\_NAME

Wraps HB OT NAME ID POSTSCRIPT NAME

### ot.NAME\_ID\_TRADEMARK

Wraps HB OT NAME ID TRADEMARK

### ot.NAME\_ID\_MANUFACTURER

Wraps HB\_OT\_NAME\_ID\_MANUFACTURER

### ot.NAME ID DESIGNER

Wraps HB\_OT\_NAME\_ID\_DESIGNER

### ot.NAME\_ID\_DESCRIPTION

Wraps HB\_OT\_NAME\_ID\_DESCRIPTION

# ot.NAME\_ID\_VENDOR\_URL Wraps HB OT NAME ID VENDOR URL ot.NAME ID DESIGNER URL Wraps HB\_OT\_NAME\_ID\_DESIGNER\_URL ot.NAME ID LICENSE Wraps HB OT NAME ID LICENSE ot.NAME ID LICENSE URL Wraps HB\_OT\_NAME\_ID\_LICENSE\_URL ot.NAME\_ID\_TYPOGRAPHIC\_FAMILY Wraps HB OT NAME ID TYPOGRAPHIC FAMILY ot.NAME\_ID\_TYPOGRAPHIC\_SUBFAMILY Wraps HB OT NAME ID TYPOGRAPHIC SUBFAMILY ot.NAME\_ID\_MAC\_FULL\_NAME Wraps HB OT NAME ID MAC FULL NAME ot.NAME\_ID\_SAMPLE\_TEXT Wraps HB OT NAME ID SAMPLE TEXT ot.NAME ID CID FINDFONT NAME Wraps HB\_OT\_NAME\_ID\_CID\_FINDFONT\_NAME ot.NAME\_ID\_WWS\_FAMILY Wraps HB OT NAME ID WWS FAMILY ot.NAME ID WWS SUBFAMILY Wraps HB OT NAME ID WWS SUBFAMILY ot.NAME\_ID\_LIGHT\_BACKGROUND Wraps HB\_OT\_NAME\_ID\_LIGHT\_BACKGROUND ot.NAME\_ID\_DARK\_BACKGROUND Wraps HB OT NAME ID DARK BACKGROUND ot.NAME\_ID\_VARIATIONS\_PS\_PREFIX Wraps HB OT NAME ID VARIATIONS PS PREFIX

ot.NAME\_ID\_INVALID

Wraps HB OT NAME ID INVALID

# ot.LAYOUT\_NO\_SCRIPT\_INDEX Wraps HB\_OT\_LAYOUT\_NO\_SCRIPT\_INDEX ot.LAYOUT\_NO\_FEATURE\_INDEX Wraps HB\_OT\_LAYOUT\_NO\_FEATURE\_INDEX ot.LAYOUT\_DEFAULT\_LANGUAGE\_INDEX Wraps HB\_OT\_LAYOUT\_DEFAULT\_LANGUAGE\_INDEX

 $ot. LAYOUT\_NO\_VARIATIONS\_INDEX$ 

Wraps HB\_OT\_LAYOUT\_NO\_VARIATIONS\_INDEX

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