

Package ‘gWidgets2tcltk’

May 8, 2026

Version 1.0-9

Title Toolkit Implementation of gWidgets2 for tcltk

Maintainer John Verzani <jverzani@gmail.com>

URL <https://github.com/gwidgets3/gWidgets2tcltk/>

Depends R (>= 2.12.0), methods, digest, memoise, tcltk(>= 2.7.0),
gWidgets2(>= 1.0.7)

Suggests testthat

Description Port of the 'gWidgets2' API for the 'tcltk' package.

License GPL (>= 2)

LazyLoad yes

Collate 'List.R' 'gWidgets2tcltk-package.R' 'misc.R' 'tcltk-misc.R'
'dnd.R' 'GComponent.R' 'GContainer.R' 'GWidget.R' 'dialogs.R'
'gmenu.R' 'gaction.R' 'gbutton.R' 'gcalendar.R' 'gcheckbox.R'
'gtable.R' 'gcheckboxgroup.R' 'gcombobox.R' 'tablelist.R'
'gdf.R' 'gedit.R' 'gexpandgroup.R' 'gfile.R' 'gformlayout.R'
'ggroup.R' 'gframe.R' 'gimage.R' 'glabel.R' 'glayout.R'
'gnotebook.R' 'gpanedgroup.R' 'gprogressbar.R' 'gradio.R'
'gseparator.R' 'gslider.R' 'gspinbutton.R' 'gstackwidget.R'
'gstatusbar.R' 'gtext.R' 'gtimer.R' 'gtoolbar.R' 'gtree.R'
'gvarbrowser.R' 'gwindow.R' 'icons.R' 'tk2tip.R' 'zzz.R'

RoxygenNote 6.1.1

NeedsCompilation no

Author John Verzani [aut, cre]

Repository CRAN

Date/Publication 2025-06-02 20:50:06 UTC

Contents

gWidgets2tcltk-package	2
.gmessage.guiWidgetsToolkittcltk	4
GComponentObservable	12

GEdit-class	13
getWidget.tkwin	13
GMenuBar	14
GSpinButton	15
GStatusBar	15
GToolBar-class	16
guiWidgetsToolkittcltk-class	16
gwidgets2_tcltk_column_alignment	17
gwidgets2_tcltk_format_to_char	17
List-class	18
makeCalendar	19

Index	20
--------------	-----------

gWidgets2tcltk-package

gWidgets2tcltk

Description

The **gWidgets2** package provides a programming interface for making graphical user interfaces within R. The package is a rewrite of the **gWidgets** package, introducing a few external changes but a significant number of internal ones. The package relies on one of several underlying toolkit packages providing access to the graphical libraries. This package provides the implementation to interface with the underlying **tcltk** package.

Drag and drop in **tcltk** is not supported by any underlying toolkit functionality. As such, in **gWidgets2tcltk** we roll our own. The result is a little limited: a) you can't drop values from other applications b) drop targets aren't allowed to be picky about what they receive (not by mime-type anyways).

GComponent is a parent class for both GContainer and GWidget and inherits its primary interface from gWidgets2::BasicToolkitInterface.

The Gdf class provides a means to edit a data frame. We use the add on TK code provided by tablelist as the underlying widget

The main reference methods GTimer are start_timer and stop_timer

Arguments

... passed to constructor

Details

To implement drag and drop, we bind to the toplevel window the events: button1, motion and button1 release. The binding occurs not to to widget, but to the toplevel window containing the widget. This has some advantages, most importantly it is unlikely the binding will be overwritten by usual gWidgets2tcltk programs. (Recall tkbind will only allow one binding per widget per signal).

The gWidgets2 way of doing drag and drop is implemented here. You add a drop source with a handler that returns the value of what you want to pass via the dnd process. Then you specify a

widget as a drop target and give a handler. This handler receives the data through the dropdata component of the "h" argument. Here, the value is generated when the drop occurs, not when the drag initiates. Not sure this makes any difference, but it might.

Simply click on a row and the editor pops up as a modal dialog. The shortcut Shift+Enter will go onto the next case, saving changes provided the auto save feature is employed.

There is no undo/redo support here. There is no support for editing rownames (just lazy at the moment, holler if you would like that). No support to change the dimensions of the data frame or edit factors, ...

Methods

is_watching() Are we watching for a drag?

add_drag_motion(handler, action = NULL, ...) Called when motion over widget occurs

add_to_parent(parent, child, expand = NULL, fill = NULL, anchor = NULL, ...) Add a child to parent if it is a container and non null. Dispatches to add_child method of parent

get_block() Return surround block

get_enabled() is widget sensitive to user input

get_index(drop = NULL, ...) svalue; index=TRUE

get_tk_id() Return tk ID

get_toplevel_tk_id() return id of toplevel

get_value(drop = NULL, ...) Get main value of widget. From 'svalue' when index = FALSE or NULL

get_widget() Return widget (not block)

is_tkwidget() Is widget older style widget

is_ttkwidget() Is widget new style widget?. Override in subclass if not

set_enabled(value, ...) specify with logical if widget is sensitive to user input

set_size(value, ...) Set widget size (size request), value=c(width=-1, height=-1)

set_value(value, ..., drop = NULL) for 'svalue<-' when index = FALSE or NULL

add(...) add is just add_child

child_bookkeeping(child) Update parent property of child and children property of parent container

get_widget() Return widget (not block)

connect_to_toolkit_signal(signal, decorator, emitter = handler_widget(), ...) Connect signal of toolkit to notify observer

remove_border() Remove border by setting relief to none

get_length(...) Get length of object. Needed for supply.

save_data(nm, where) Save data set

set_interval(ms) Set the interval. Need to stop and start active timer to implement.

start_timer() Start the timer

stop_timer() stop the timer

Author(s)

John Verzani <jverzani@gmail.com>

Maintainer: John Verzani <jverzani@gmail.com>

.gmessage.guiWidgetsToolkittcltk

toolkit implementation for gmessage

Description

toolkit implementation for gmessage

toolkit implementation for gconfirm

toolkit implmentation of ginput

toolkit implementation

toolkit implementation of galert

Toolkit constructor

Toolkit constructor

Toolkit constructor

Toolkit constructor

Toolkit XXX constructor

Toolkit constructor

Toolkit constructor

Toolkit constructor

Toolkit constructor

Toolkit gedit constructor

toolkit constructor

Toolkit implementation

Toolkit constructor

Toolkit constructor

toolkit constructor for ggroup

gframe constructor

Toolkit constructor

Toolkit label constructor

Toolkit constructor

Toolkit constructor

Toolkit constructor

Toolkit constructor

Toolkit constructor
Toolkit constructor
Toolkit constructor
Toolkit XXX constructor
Toolkit constructor
Toolkit constructor
toolkit implementation of gtext
S3 method for gtimer
Toolkit constructor
Toolkit constructor
toolkit constructor for gwindow
add stock icons
Returns list of stock ids
return stock id
return stock id from object

Usage

```
## S3 method for class 'guiWidgetsToolkittcltk'  
.gmessage(toolkit, msg,  
  title = "message", icon = c("info", "warning", "error", "question"),  
  parent = NULL, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.gconfirm(toolkit, msg,  
  title = "Confirm", icon = c("info", "warning", "error", "question"),  
  parent = NULL, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.ginput(toolkit, msg, text = "",  
  title = "Input", icon = c("info", "warning", "error", "question"),  
  parent = NULL, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.gbasicdialog(toolkit, title = "Dialog",  
  parent = NULL, do.buttons = TRUE, handler = NULL, action = NULL,  
  ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.galert(toolkit, msg, title = "message",  
  delay = 3, parent = NULL, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.gmenu(toolkit, menu.list = list(),
```

```
popup = FALSE, container = NULL, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.gaction(toolkit, label, tooltip = NULL,  
  icon = NULL, key.accel = NULL, handler = NULL, action = NULL,  
  parent = NULL, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.gbutton(toolkit, text, handler, action,  
  container, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.gcalendar(toolkit, text = "",  
  format = "%Y-%m-%d", handler = NULL, action = NULL,  
  container = NULL, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.gcheckbox(toolkit, text,  
  checked = FALSE, use.togglebutton = FALSE, handler = NULL,  
  action = NULL, container = NULL, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.gtable(toolkit, items,  
  multiple = FALSE, chosen.col = 1, icon.col = NULL,  
  tooltip.col = NULL, handler = NULL, action = NULL,  
  container = NULL, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.gcheckboxgroup(toolkit=NULL, items, checked = FALSE, horizontal = FALSE,  
  use.table = FALSE, handler = NULL, action = NULL, container = NULL, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.gcombobox(toolkit, items, selected = 1,  
  editable = FALSE, coerce.with = NULL, handler = NULL,  
  action = NULL, container = NULL, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.gdf(toolkit, items = NULL,  
  handler = NULL, action = NULL, container = NULL, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.gedit(toolkit, text = "", width = 25,  
  coerce.with = NULL, initial.msg = initial.msg, handler = NULL,  
  action = NULL, container = NULL, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.gexpandgroup(toolkit, text, markup,  
  horizontal = TRUE, handler = NULL, action = NULL,
```

```
    container = NULL, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.gfile(toolkit, text = "",  
       type = c("open", "save", "selectdir"), initial.filename = NULL,  
       initial.dir = getwd(), filter = list(), multi = FALSE, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.gfilebrowse(toolkit, text = "",  
            type = c("open", "save", "selectdir"), initial.filename = NULL,  
            initial.dir = getwd(), filter = list(), quote = TRUE,  
            handler = NULL, action = NULL, container = NULL, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.gformlayout(toolkit, align = "left",  
            spacing = 5, container = NULL, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.ggroup(toolkit, horizontal = TRUE,  
        spacing = 5, use.scrollwindow = FALSE, container = NULL, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.gframe(toolkit, text, markup, pos,  
        horizontal = TRUE, spacing = 5, container = NULL, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.gimage(toolkit, filename = "",  
        dirname = "", stock.id = NULL, size = "", handler = NULL,  
        action = NULL, container = NULL, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.glabel(toolkit, text = "",  
        markup = FALSE, editable = FALSE, handler = NULL, action = NULL,  
        container = NULL, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.glayout(toolkit, homogeneous = FALSE,  
        spacing = 10, container = NULL, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.gnotebook(toolkit, tab.pos = 3,  
          container = NULL, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.gpanedgroup(toolkit, horizontal = TRUE,  
            container = NULL, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'
```

```
.gprogressbar(toolkit, value, container,
... )

## S3 method for class 'guiWidgetsToolkittcltk'
.gradio(toolkit, items, selected = 1,
horizontal = FALSE, handler = NULL, action = NULL,
container = NULL, ...)

## S3 method for class 'guiWidgetsToolkittcltk'
.gseparator(toolkit, horizontal = TRUE,
container = NULL, ...)

## S3 method for class 'guiWidgetsToolkittcltk'
.gslider(toolkit, from = 0, to = 100,
by = 1, value = from, horizontal = TRUE, handler = NULL,
action = NULL, container = NULL, ...)

## S3 method for class 'guiWidgetsToolkittcltk'
.gspinbutton(toolkit, from = 0,
to = 10, by = 1, value = from, digits = 0, handler = NULL,
action = NULL, container = NULL, ...)

## S3 method for class 'guiWidgetsToolkittcltk'
.gstackwidget(toolkit, container = NULL,
... )

## S3 method for class 'guiWidgetsToolkittcltk'
.gstatusbar(toolkit, text = "",
container = NULL, ...)

## S3 method for class 'guiWidgetsToolkittcltk'
.gtext(toolkit, text = NULL,
width = NULL, height = 300, font.attr = NULL, wrap = TRUE,
handler = NULL, action = NULL, container = NULL, ...)

## S3 method for class 'guiWidgetsToolkittcltk'
.gtimer(toolkit, ms, FUN, data = NULL,
one.shot = FALSE, start = TRUE)

## S3 method for class 'guiWidgetsToolkittcltk'
.gtree(toolkit, offspring = NULL,
offspring.data = NULL, chosen.col = 1, offspring.col = 2,
icon.col = NULL, tooltip.col = NULL, multiple = FALSE,
handler = NULL, action = NULL, container = NULL, ...)

## S3 method for class 'guiWidgetsToolkittcltk'
.gvarbrowser(toolkit, handler = NULL,
action = "summary", container = NULL, ...)
```

```
## S3 method for class 'guiWidgetsToolkittcltk'  
.gwindow(toolkit, title,  
  visible = visible, name, width, height, parent, handler, action, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.addStockIcons(toolkit, iconNames,  
  iconFiles, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.getStockIcons(toolkit, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.getStockIconByName(toolkit,name, ...)  
  
## S3 method for class 'guiWidgetsToolkittcltk'  
.stockIconFromObject(toolkit,obj, ...)
```

Arguments

toolkit	toolkit
msg	Character. message to display.
title	Character. Title
icon	What icon to show
parent	Hint as to where to display
...	ignored
text	Character. Initial text
do.buttons	FALSE to suppress buttons when no parent
handler	handler called when Ok button invoked
action	passed to handler for OK button
delay	delay
menu.list	A list defining the menu structure. Named sub lists determine the submenu titles and structure. The list may have components of class: GAction, mapped to a button; GSeparator, mapped to a horizontal separator; GRadio, mapped to linked buttons; or GCheckbox, mapped to a checkbox button.
popup	logical. If true, make a popup window to be added through a handler call
container	A parent container. When a widget is created it can be incorporated into the widget heirarchy by passing in a parent container at construction time. (For some toolkits this is not optional, e.g. gWidgets2tcltk or gWidgets2WWW2 .)
label	label for action
tooltip	tooltip for actin
key.accel	keyboard accelerator. If given, parent must be specified.
format	Date format

checked	is button selected
use.togglebutton	Use a toggle button (shows depressed) not a check box
items	data.frame specifies items for selection. May be a vector, matrix or data frame
multiple	logical allow multiple selection
chosen.col	which value from the row is returned by selection
icon.col	NULL or integer. If latter, specifies column containing stock icon
tooltip.col	NULL or integer. If latter, specifies column containing tooltip
horizontal	logical. If true displayed horizontally, else vertically
use.table	logical. If supported, and TRUE then uses a table widget with scrollbars
selected	integer. Which item (by index) is selected. Use -1 for no selection
editable	logical. Is user allowed to edit value
coerce.with	A function of function name to be called before selected value is returned by svalue
width	width of widget
initial.msg	initial.msg
markup	does label use markup (toolkit specific)
type	type of browser: to open a file, to save a file or to select a directory
initial.filename	Suggested file name
initial.dir	initial directory. If a filename is given, and is not an absolute name, this will be prepended. If filename given initial directory will be taken from that.
filter	A filter specification. This can be a named character vector of file extensions or something toolkit specific. Here are some examples: character c("csv"="csv","txt"="txt") RGtk2 Something like <pre>list("All files" = list(patterns = c("*")), "R files" = list(patterns = c("*.R", "*.Rdata")), "text files" = list(mime.types = c("text/plain"))))</pre>
	tcltk
	Qt
multi	Logical. Allow multiple files to be selected?
quote	quote output
align	alignment of label. Left justify or center balance. Leave as "default" for underlying toolkit default.
spacing	spacing between columns

<code>use.scrollwindow</code>	logical. Either TRUE, "TRUE", FALSE, "FALSE", "y", or "x". For all toolkits a non-FALSE value will place the child components into a scrollable container. For some toolkits this will only be in the direction of packing. If the toolkit allows it (RGtk2), then values of "x" or "y" can be used to override the default scrolling directions. A box container with scrollwindows should have its size set either directly or through packing with <code>expand=TRUE</code> as its size request will not reflect the size of its child components.
<code>pos</code>	position of label: 0=left, 1=right, some toolkit allow values in between
<code>filename</code>	basename of file
<code>dirname</code>	dirname of file
<code>stock.id</code>	stock id of icon (if non NULL)
<code>size</code>	size of icon when a stock id (toolkit dependent)
<code>homogeneous</code>	are cells all the same size
<code>tab.pos</code>	integer. Position of tabs, 1 on bottom, 2 left, 3 top, 4 right. (If supported)
<code>value</code>	a list or menu bar specifying the new menubar
<code>from</code>	If a number of length one then a starting point, in which case to, by are passed to seq. Otherwise a sequence of values for which <code>sort(unique(from))</code> will order
<code>to</code>	ending point when from is starting point
<code>by</code>	step size if not specified by from
<code>digits</code>	digits
<code>height</code>	height of widget (when width is specified)
<code>font.attr</code>	font attributes for text buffer. One can also specify font attributes for insertion. The font attributes are specified with a list with named components, with names and values coming from: weight in c("light", "normal", "bold", "heavy") style in c("normal", "oblique", "italic") family in c("sans", "helvetica", "times", "monospace") size in c("xx-small", "x-small", "small", "medium", "large", "x-large", "xx-large") foreground a value in colors() background a value in colors()
<code>wrap</code>	logical do lines wrap
<code>ms</code>	interval in milliseconds
<code>FUN</code>	FUnction to call. Has one argument, data passed in
<code>data</code>	passed to function
<code>one.shot</code>	logical. If TRUE, called just once, else repeats
<code>start</code>	logical. If FALSE, started by <code>start_timer</code> OO method. (Call <code>obj\$start_time()</code>).
<code>offspring</code>	function. A function passed values <code>path</code> and <code>data</code> , the latter from <code>offspring.data</code> . The path is the current position of the parent item using the named keys from the chosen column.

<code>offspring.data</code>	Passed to second argument of <code>offspring</code> function. Used to parameterize a function call.
<code>offspring.col</code>	integer or column name. Points to column containing logical values indicating if a row has offspring.
<code>visible</code>	logical. If TRUE window is drawn when constructed. Otherwise, window can be drawn later using <code>visible<-</code> . This value can default to FALSE by setting the option: <code>options("gWidgets:gwindow-default-visible-is-false"=TRUE)</code> . There are advantages: windows can draw slowly when adding many items. With gWidgets2RGtk2 , the <code>ggraphics</code> widget can like to be added to an undrawn widget as this avoids sizing issue.
<code>name</code>	name of icon
<code>iconNames</code>	names of icons
<code>iconFiles</code>	path of icons
<code>obj</code>	obj to get icon from

See Also

The documentation for this is found at `gbutton`.

The documentation for this is found at `gprogressbar`.

GComponentObservable *GComponentObservable adds the observable interface*

Description

GComponentObservable adds the observable interface

Usage

```
GComponentObservable(...)
```

Arguments

... passed to constructor

GEdit-class	<i>show the word list</i>
-------------	---------------------------

Description

show the word list

Arguments

str a string. If missing do nothing, otherwise match against string to generate word list. Popup menu depending on length

Methods

add_bindings() Add bindings to the entry box
clear_error() Clear error message
clear_init_txt(...) clear out init text, set back to black
find_match(x) Find match in word list
make_styles(bg = "#ff6622") Create tcl styles, cf <http://paste.tclers.tk/506>
set_error(msg) Add error state and message to widget
set_init_txt(msg) set initial text, gray out
set_invalid(value, msg) Set widget as invalid or not
set_validator(FUN) Set a function to do the validation
validate_input() Return logical indicating if input is valid

getWidget.tkwin	<i>method for getWidget defined in gWidgets2</i>
-----------------	--

Description

method for getWidget defined in gWidgets2

Usage

```
## S3 method for class 'tkwin'
getWidget(obj)
```

Arguments

obj object

GMenuBar	<i>Toplevel menu bar</i>
----------	--------------------------

Description

The GMenuBar class provides functionality for a top-level menubar. In **tlctk** the menubars can show either gaction items (proxied as buttons), gradio items or gcheckbox items. In the latter two cases, one uses the parent argument – not the container argument – to specify the parent container. Such items can also be shared with toolbars.

Usage

```
GMenuBar(...)
```

Arguments

... passed to constructor

Examples

```
## Not run:
w <- gwindow("having fun?")
sb <- gstatusbar("Your message here...", cont=w)
g <- ggroup(cont=w, horizontal=FALSE)
f <- function(h,...) message(h$obj$get_value())

l <- list(file=gaction("file", handler=function(h,...) print("file"),
  key.accel="<Control-x><Control-s>", parent=w),
  ok=gaction("ok", icon="ok", handler=function(h,...) print("ok")),
  radio=list(
    rb=gradio(state.name[1:3], parent=w, handler=function(h,...)
      print(h$obj$get_value()))
  )
  sep=gseparator(vertical=TRUE),
  ,cb=gcheckbox("really", parent=w, handler=function(h,...) print(h$obj$get_value()))
)
mlist <- list(File=l)
mb <- gmenu(mlist, cont=w)

## End(Not run)
```

GSpinButton	<i>Spinbutton class</i>
-------------	-------------------------

Description

Spinbutton class

Usage

```
GSpinButton(...)
```

Arguments

... passed to constructor GSpinButton is the base class for spin buttons. The widget is buggy in tcltk, atleast with the old non-themed style and a Mac running tcltk under X11. The bug is the thing keeps spinning when the buttons are pressed.

GStatusBar	<i>GStatusBar is the base class for a status bar</i>
------------	--

Description

The GStatusBar class inherits for GBoxContainer meaning it can be used as a parent container. As such, one can add additional widgets beyond the plain label that is the main property of this widget.

Usage

```
GStatusBar(...)
```

Arguments

... passed to constructor

 GToolBar-class

 GToolBar *is the base class for toolbars*

Description

The toolbar is a container, so can have other widgets added to it as though it were a box container. Buttons should be added as action items, so that they are rendered in the proper style. Check buttons should be given the argument `use_togglebutton`. Use `addSpring` to right align items.

Arguments

... passed to constructor

Methods

`add_gaction_toolitem(obj)` Helper to add a gaction item

`add_gseparator_toolitem()` Helper to add a separator

`add_toolbar_items(items)` Map a toolbar list, a named list of gaction items or gseparator items

`clear_toolbar()` Clear toolbar items

`get_widget()` What widget do we use for the parent of the children

`set_value(value, ...)` We can't really adjust spacing between children after they have been positioned.

 guiWidgetsToolkittcltk-class

toolkit class for tlctk

Description

toolkit class for tlctk

gwidgets2_tcltk_column_alignment
align a column based on the class of the content

Description

Gives visual difference to data based on its class

Usage

```
gwidgets2_tcltk_column_alignment(x)

## Default S3 method:
gwidgets2_tcltk_column_alignment(x)

## S3 method for class 'numeric'
gwidgets2_tcltk_column_alignment(x)

## S3 method for class 'logical'
gwidgets2_tcltk_column_alignment(x)
```

Arguments

x column data to align

Value

anchor string

gwidgets2_tcltk_format_to_char
Format object to character class for inclusion in a table

Description

Gives chance to do more than as.character

Usage

```
gwidgets2_tcltk_format_to_char(x)

## Default S3 method:
gwidgets2_tcltk_format_to_char(x)

## S3 method for class 'factor'
```

```

gwidgets2_tcltk_format_to_char(x)

## S3 method for class 'integer'
gwidgets2_tcltk_format_to_char(x)

## S3 method for class 'numeric'
gwidgets2_tcltk_format_to_char(x)

## S3 method for class 'Date'
gwidgets2_tcltk_format_to_char(x)

## S3 method for class 'data.frame'
gwidgets2_tcltk_format_to_char(x)

```

Arguments

x object to format to character class

Value

object of character class with possible formatting.

List-class	<i>A list extension class.</i>
------------	--------------------------------

Description

Like a list, but has some methods. Completely superfluous, but makes copying some code algorithms easier. We implement methods such as append, push, pop and each for iteration. As well, there are some lookup methods.

Arguments

... passed to constructor

Methods

```

contains(name) TRUE if name is key in array
core() return list
each(FUN, ...) Iterator for lists, like sapply, but FUN gets passed index, key, and value
flush(...) Reset array, return contents as list
get_by_name(name) get item under name
get_id() Return an id, or name, for an object
get_item(index) Get item by index
insert(x, name, index) Insert item into List with 0 the head and index=len() the tail

```

len() length
pluck(id, FUN, ...) Like ext.pluck. Returns array with 'id' extracted from each item in the List
pop() pop last element of list
push(x, name) Append x with optional name. If name not specified new id created. Returns name

makeCalendar	<i>make a calendar...</i>
--------------	---------------------------

Description

make a calendar...

Usage

```
makeCalendar(date_var, widget, date, date_format = "%Y-%m-%d",  
             set_value)
```

Arguments

date_var	var
widget	var
date	var
date_format	var
set_value	var from chron with slight change to arguments

Index

* **package**
 gWidgets2tcltk-package, 2

.addStockIcons.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.gaction.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.galert.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.gbasicdialog.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.gbutton.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.gcalendar.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.gcheckbox.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.gcheckboxgroup.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.gcombobox.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.gconfirm.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.gdf.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.gedit.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.getStockIconByName.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.getStockIcons.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.gexpandgroup.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.gfile.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.gfilebrowse.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.gformlayout.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.gframe.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.ggroup.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.gimage.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.ginput.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.glabel.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.glayout.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.gmenu.guiWidgetsToolkittcltk
 (.gmessage.guiWidgetsToolkittcltk),
 4

.gmessage.guiWidgetsToolkittcltk, 4

- .gnotebook.guiWidgetsToolkittcltk
(.gmessage.guiWidgetsToolkittcltk),
4
- .gpanedgroup.guiWidgetsToolkittcltk
(.gmessage.guiWidgetsToolkittcltk),
4
- .gprogressbar.guiWidgetsToolkittcltk
(.gmessage.guiWidgetsToolkittcltk),
4
- .gradio.guiWidgetsToolkittcltk
(.gmessage.guiWidgetsToolkittcltk),
4
- .gseparator.guiWidgetsToolkittcltk
(.gmessage.guiWidgetsToolkittcltk),
4
- .gslider.guiWidgetsToolkittcltk
(.gmessage.guiWidgetsToolkittcltk),
4
- .gspinbutton.guiWidgetsToolkittcltk
(.gmessage.guiWidgetsToolkittcltk),
4
- .gstackwidget.guiWidgetsToolkittcltk
(.gmessage.guiWidgetsToolkittcltk),
4
- .gstatusbar.guiWidgetsToolkittcltk
(.gmessage.guiWidgetsToolkittcltk),
4
- .gtable.guiWidgetsToolkittcltk
(.gmessage.guiWidgetsToolkittcltk),
4
- .gtext.guiWidgetsToolkittcltk
(.gmessage.guiWidgetsToolkittcltk),
4
- .gtimer.guiWidgetsToolkittcltk
(.gmessage.guiWidgetsToolkittcltk),
4
- .gtree.guiWidgetsToolkittcltk
(.gmessage.guiWidgetsToolkittcltk),
4
- .gvarbrowser.guiWidgetsToolkittcltk
(.gmessage.guiWidgetsToolkittcltk),
4
- .gwindow.guiWidgetsToolkittcltk
(.gmessage.guiWidgetsToolkittcltk),
4
- .stockIconFromObject.guiWidgetsToolkittcltk
(.gmessage.guiWidgetsToolkittcltk),
4
- DND (gWidgets2tcltk-package), 2
- DND-class (gWidgets2tcltk-package), 2
- GButton (gWidgets2tcltk-package), 2
- GButton-class (gWidgets2tcltk-package),
2
- GComponent (gWidgets2tcltk-package), 2
- GComponent-class
(gWidgets2tcltk-package), 2
- GComponentObservable, 12
- GContainer (gWidgets2tcltk-package), 2
- GContainer-class
(gWidgets2tcltk-package), 2
- GDF (gWidgets2tcltk-package), 2
- GDF-class (gWidgets2tcltk-package), 2
- GEdit (GEdit-class), 13
- GEdit-class, 13
- getWidget.tkwin, 13
- GLabel (gWidgets2tcltk-package), 2
- GLabel-class (gWidgets2tcltk-package), 2
- GMenuBar, 14
- GProgressBar (gWidgets2tcltk-package), 2
- GProgressBar-class
(gWidgets2tcltk-package), 2
- GSpinButton, 15
- GStatusBar, 15
- GTimer (gWidgets2tcltk-package), 2
- GTimer-class (gWidgets2tcltk-package), 2
- GToolBar (GToolBar-class), 16
- GToolBar-class, 16
- guiWidgetsToolkittcltk-class, 16
- GWidget (gWidgets2tcltk-package), 2
- GWidget-class (gWidgets2tcltk-package),
2
- gwidgets2_tcltk_column_alignment, 17
- gwidgets2_tcltk_format_to_char, 17
- gWidgets2tcltk-package, 2
- GWidgetWithItems
(gWidgets2tcltk-package), 2
- GWidgetWithItems-class
(gWidgets2tcltk-package), 2
- List (List-class), 18
- List-class, 18
- makeCalendar, 19