Tkinter

**Option Details:**

* **expand** : When set to true, widget expands to fill any space not otherwise used in widget's parent.
* **fill** : Determines whether widget fills any extra space allocated to it by the packer, or keeps its own minimal dimensions: NONE (default), X (fill only horizontally), Y (fill only vertically), or BOTH (fill both horizontally and vertically).
* **side** : Determines which side of the parent widget packs against: TOP (default), BOTTOM, LEFT, or RIGHT.
* **column** : The column to put widget in; default 0 (leftmost column).
* **columnspan** : How many columns widgetoccupies; default 1.
* **ipadx, ipady** : How many pixels to pad widget, horizontally and vertically, inside widget's borders.
* **padx, pady** : How many pixels to pad widget, horizontally and vertically, outside v's borders.
* **row** : The row to put widget in; default the first row that is still empty.
* **rowspan** : How many rowswidget occupies; default 1.
* **sticky** : What to do if the cell is larger than widget. By default, with sticky='', widget is centered in its cell. sticky may be the string concatenation of zero or more of N, E, S, W, NE, NW, SE, and SW, compass directions indicating the sides and corners of the cell to which widget sticks.
* **anchor** : The exact spot of widget other options refer to: may be N, E, S, W, NE, NW, SE, or SW, compass directions indicating the corners and sides of widget; default is NW (the upper left corner of widget)
* **bordermode** : INSIDE (the default) to indicate that other options refer to the parent's inside (ignoring the parent's border); OUTSIDE otherwise.
* **height, width** : Height and width in pixels.
* **relheight, relwidth** : Height and width as a float between 0.0 and 1.0, as a fraction of the height and width of the parent widget.
* **relx, rely** : Horizontal and vertical offset as a float between 0.0 and 1.0, as a fraction of the height and width of the parent widget.
* **x, y** : Horizontal and vertical offset in pixels.
* **activebackground**: to set the background color when is under the cursor.
* **activeforeground**: to set the foreground color when is under the cursor.
* **bg**: to set he normal background color.
* **command**: to call a function.
* **font**: to set the font on the label.
* **bd**: to set the border width in pixels.
* **highlightcolor**: to set the color shown in the focus highlight.
* **Title**: To set the title of the widget.
* **curso**r: to set the cursor used.
* **from\_** : To set the value of one end of the scale range.
* **to**: To set the value of the other end of the scale range.
* **insertbackground**: To set the background of the widget.
* **disabledbackground**: To disable the background when mouse is over the widget.

**Tkinter Widgets**

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| **Name** | **Syntax** | **Details** |
| **Tk** | Object\_name=tkinter.Tk(screenName=None, baseName=None, className=’Tk’, useTk=1) | To create a main window. To change the name of the window,change the class Name to the desired one. |
| **mainloop** | **Object\_name.mainloop()** | used when your application is ready to run. mainloop() is an infinite loop used to run the application, wait for an event to occur and process the event as long as the window is not closed. |
| **pack** | widget.pack( pack\_options )  Some of the options are:  expand,fill,size | This geometry manager organizes widgets in blocks before placing them in the parent widget |
| **grid** | widget.grid( grid\_options )  column,columnspan,ipadx,ipady,padx,pady,row,rowspan,sticky | This geometry manager organizes widgets in a table-like structure in the parent widget |
| **place** | widget.place( place\_options )  Some of the options are:  Anchor,bordermode,height,width,relheight,relwidth,relx,rely,x,y | This geometry manager organizes widgets by placing them in a specific position in the parent widget |
| Button | Button(master, option=value)  Some of the options are: (activebackground, activeforeground, bg,command,font,image,width,height) | To add a button in application, this widget is used |
| Title | master.title(string) | To give a title of master panel. |
| Checkbutton | CheckButton(master, option=value)  Some of the options are: (Title, activebackground, activeforegroundbg,command,font,image) | To select any number of options by displaying a number of options to a user as toggle buttons |
| Entry | Entry(master, option=value)  Some of the options are: (bd,bg,cursor,command,highlightcolor,width,height) | It is used to input the single line text entry from the user |
| Frame | Frame(master, option=value)  Some of the options are: (highlightcolor, bd,bg,cursor,width,height) | It acts as a container to hold the widgets. It is used for grouping and organizing the widgets |
| Label | Label(master, option=value)  Some of the options are: bg,command,font,image,width,height | It refers to the display box where one can put any text or image which can be updated any time as per the code |
| Listbox | Listbox(master, option=value)  Some of the options are: bg,bd,font,image,width,height,highlightcolor | It offers a list to the user from which the user can accept any number of options. |
| MenuButton | MenuButton(master, option=value)  Some of the options are: bg,bd,cursor, activebackground, activeforeground,image,width,height,highlightcolor | It is a part of top-down menu which stays on the window all the time |
| Menu | Menu(master, option=value)  Some of the options are: bg,activebackground,activeforeground,bg,command,font,image | It is used to create all kinds of menus used by the application |
| Message | Message(master, option=value)  Some of the options are: bd,bg,font,image,height,width | It refers to the multi-line and non-editable text. It works same as that of Label. |
| Radiobutton | RadioButton(master, option=value)  Some of the options are: bg,activebackground,activeforeground,bg,command,font,image | It is used to offer multi-choice option to the user. It offers several options to the user and the user has to choose one option |
| Scale | Scale(master, option=value)  Some of the options are:  cursor, activeforeground,bg,orient,from\_,to,image,width | It is used to provide a graphical slider that allows to select any value from that scale |
| Scrollbar | Scrollbar(master, option=value)  Some of the options are:  Width,activebackground,bg,bd,cursor | It refers to the slide controller which will be used to implement listed widgets |
| Text | Text(master, option=value)  Some of the options are:  Highlightcolor,insertbackground,bg,font,image,width,height | To edit a multi-line text and format the way it has to be displayed |
| TopLevel | TopLevel(master, option=value)  Some of the options are:  bg,bd,cursor,width,height | This widget is directly controlled by the window manager. It don’t need any parent window to work on |
| SpinBox | SpinBox(master, option=value)  Some of the options are:  bg,bd,cursor,width,command,activebackground,disabledbackground,from\_,to | It is an entry of ‘Entry’ widget. Here, value can be input by selecting a fixed value of numbers |
| PannedWindow | PannedWindow(master, option=value)  Some of the options are:  bg,bd,cursor,width,height | It is a container widget which is used to handle number of panes arranged in it |

Created By:

**Arif Hossain Jim**

Reference From:

1. <https://www.geeksforgeeks.org/>
2. <https://www.tutorialspoint.com/>