

# Tkinter Cheat Sheet

The most popular GUI creation tool for Python, Tkinter provides a number of widgets and methods you can use to create a user interface for your application.

## Tkinter Widgets

Code	from tkinter import *	from tkinter import *
Widgets	<div>Button instance = Button(root, text="Click me!", ...)</div> <div>Checkbox instance = tk.Checkbutton(parent, option, ...)</div> <div>Entry instance = tk.Entry(master, option, ...)</div> <div>Frame instance = Frame(parent, option, ...)</div> <div>Label instance = tk.Label(text="some text")</div> <div>LabelFrame instance = LabelFrame( master, option, ...)</div> <div>Menubutton instance = Menubutton ( master, options, ... )</div> <div>PanedWindow instance = PanedWindow(master, options, ... )</div> <div>Radiobutton instance = Radiobutton(master, options, ... )</div> <div>Scale instance = Scale (master, option, ... )</div> <div>Scrollbar instance = Scrollbar ( master, options, ... )</div>	<div>Combobox instance = ttk.Combobox(master, option=value, ...)</div> <div>Notebook instance = ttk.Notebook(container, options, ... )</div> <div>Progressbar instance = Progressbar(parent, options, ... )</div> <div>Separator # orient options are 'horizontal' or 'vertical': instance = ttk.Separator(container,orient='horizontal')</div> <div>Sizegrip instance = ttk.Sizegrip(master, options, ... )</div> <div>Treeview instance = ttk.Treeview(master, options, ... )</div>

## Position Widgets using pack(), place() or grid()

pack() organizes widgets in horizontal and vertical boxes that are limited to left, right, top, bottom positions. Each box is offset and relative to each other.

```
root.geometry('200x100')
test = tk.Label(root, text="pack(side=tk.bottom)", bg="teal")
test.pack(side=tk.bottom)
```

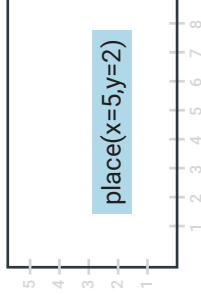


### Options:

padx pads externally along the x axis  
pady pads externally along the y axis  
ipadx pads internally along the x axis  
ipady pads internally along the y axis

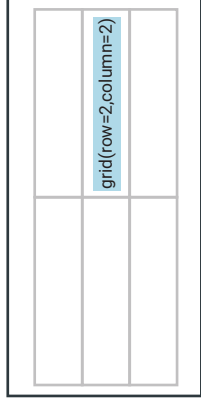
place() places widgets in a two dimensional grid using x and y absolute coordinates.

```
root.geometry('200x100')
Label(root, text="place(x=5, y=2)",
bg="#A3DBE0").place(x=5, y=2)
```



grid() locates widgets in a two dimensional grid using row and column absolute coordinates.

```
root.geometry('200x100')
Label(root, text="grid(row=2, column=2)",
width=12).grid(row=2, column=2)
```



## Tkinter Images with Pillow

```
# Pillow is imported as PIL
from PIL import ImageTk, Image

image1 = Image.open("<path/image_name>")
test = ImageTk.PhotoImage(image1)

label1 = tkinter.Label(image=test)
label1.image = test

# Position image as the background image
label1.place(x=1, y=1)
# Resize image to fit on button
photoimage = photo.subsample(1, 2)
# Position image on button
Button(root, image = photoimage,).pack(side = BOTTOM)
```

