

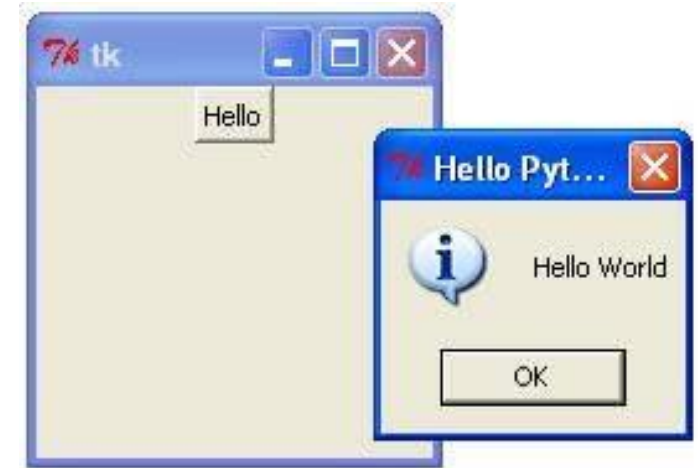
# GRAPHICAL USER INTERFACE

TKINTER



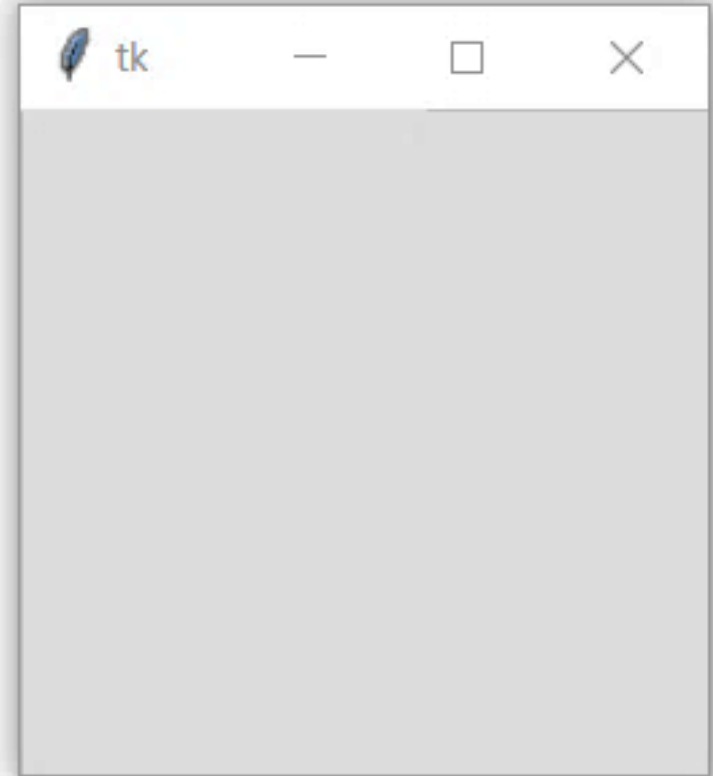
# Tkinter

- The Tkinter module is the standard Python interface to the Tk GUI toolkit from Sun Labs.
- Tkinter provides classes allowing the display and positioning and graphical widgets.



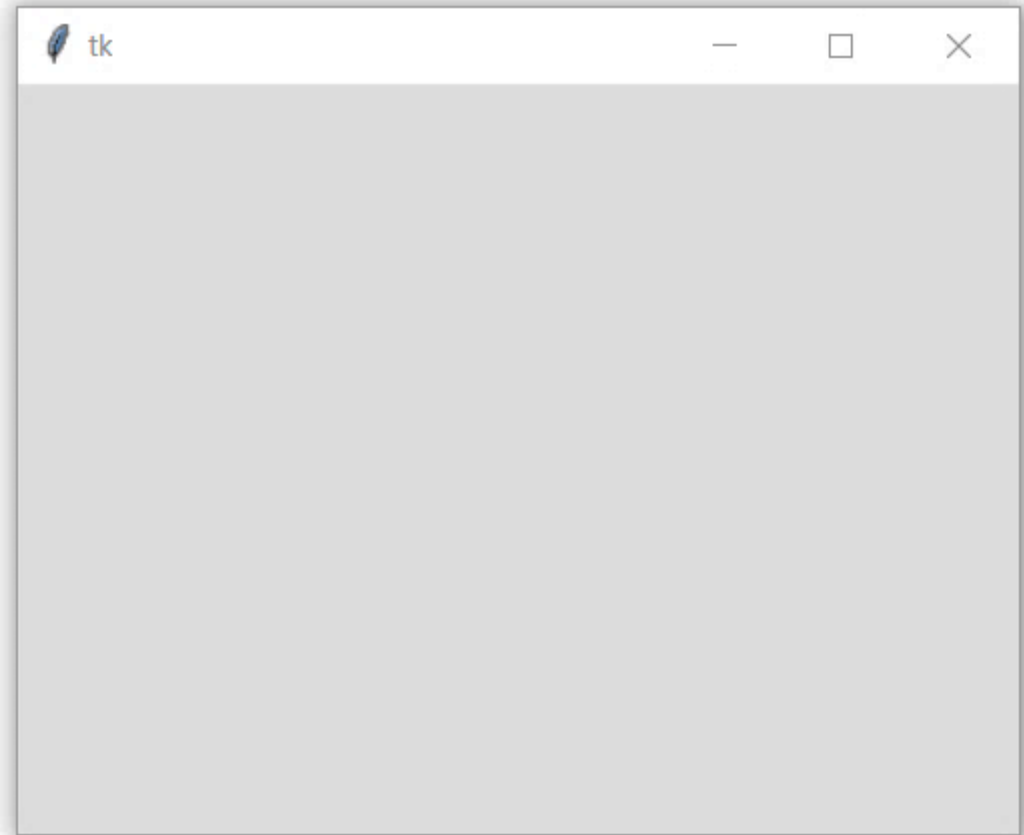
# Startup tkinter

```
from tkinter import *      #(1)  
root = Tk()                #(2)  
root.mainloop()            #(3)
```



# Widget: Frame

```
master=Tk()  
master.geometry("400x300")  
frame1=Frame(master)  
master.mainloop()
```



# Widget: Canvas

`x1 = 0`

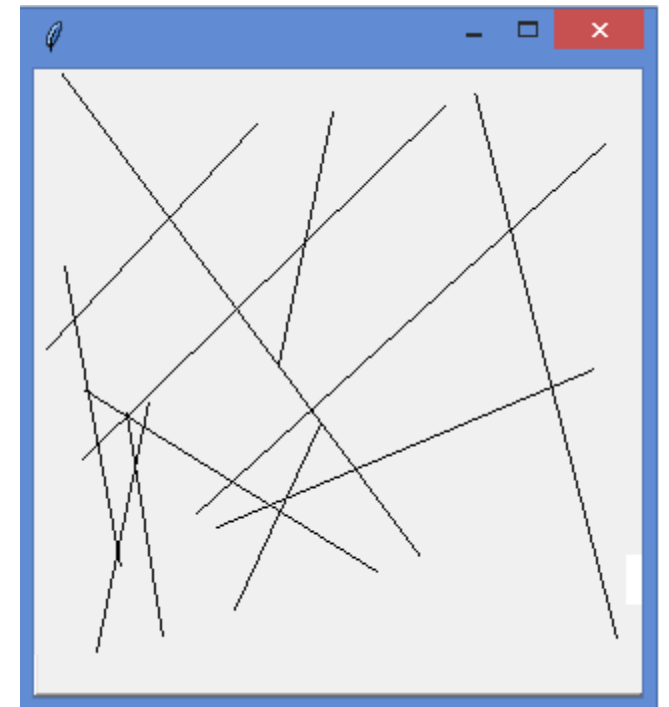
`y1 = 0`

`x2 = 300`

`y2 = 300`

**`canvas = Canvas(master, width=300, height=300)`**

**`canvas.create_line(x1, y1, x2, y2)`**



# Events: Keyboard

```
root = Tk()
def keypressed(event):
    print("pressed", repr(event.char))
frame = Frame(root, width=100, height=100)
frame.bind("<Key>", keypressed)
```



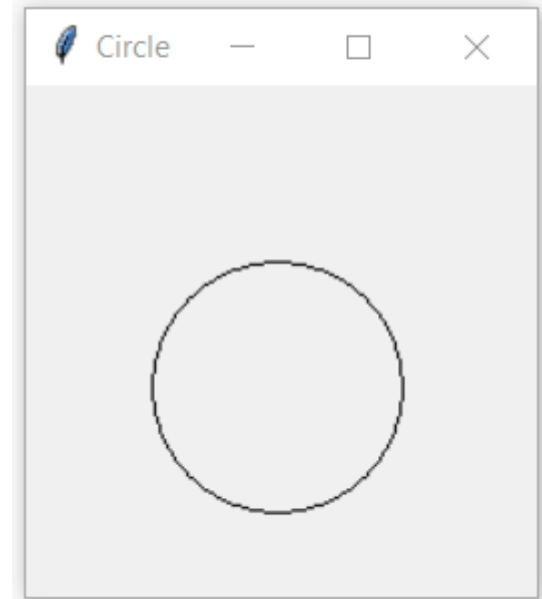
# Event: Mouse

```
def mouseclicked(event):  
    print("clicked at", event.x, event.y)  
frame = Frame(root, width=500, height=500)  
frame.bind("<Button-1>", mouseclicked)
```



# Widget: Circle

```
def DrawCircle(self, x, y, r) :  
    return create_oval(x-r, y-r, x+r, y+r)  
tk.Canvas.create_circle = DrawCircle  
canvas.create_circle(100, 120, 50)
```





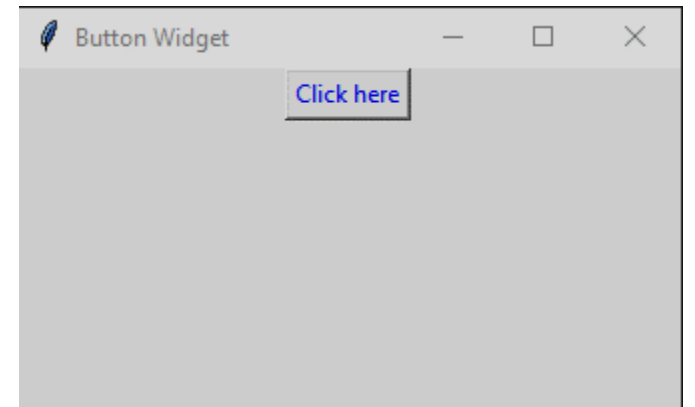
# Widget: Button

```
def Clicked():
```

```
    s = "Button Clicked"
```

```
    messagebox.showinfo("Button Info",s)
```

```
button1 = Button(master, text = "Hello", fg="blue", command = Clicked)
```

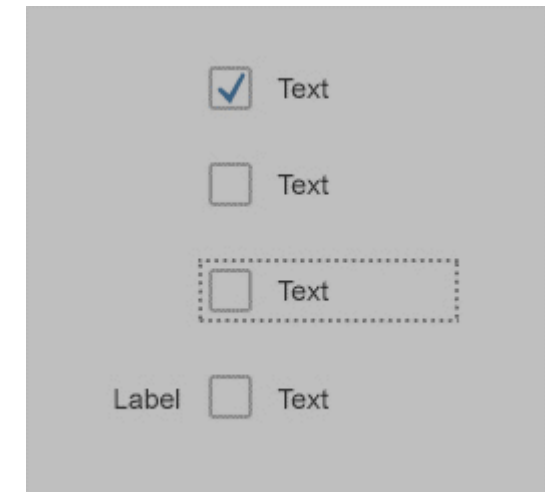


# Widget: Checkbox

```
checkboxbutton1=Checkbox(labelframe, text="C1").pack()
```

```
checkboxbutton2=Checkbox(labelframe, text="C2").pack()
```

```
checkboxbutton3=Checkbox(labelframe, text="C3").pack()
```

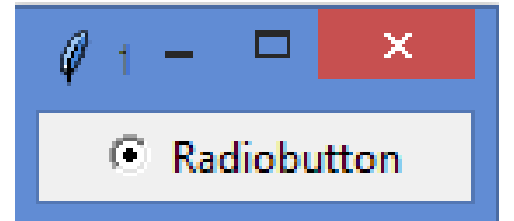


# Widget: Radiobutton

```
master=Tk()
```

```
rb1=tkinter.Radiobutton(master, text="Radiobutton").pack()
```

```
master.mainloop()
```



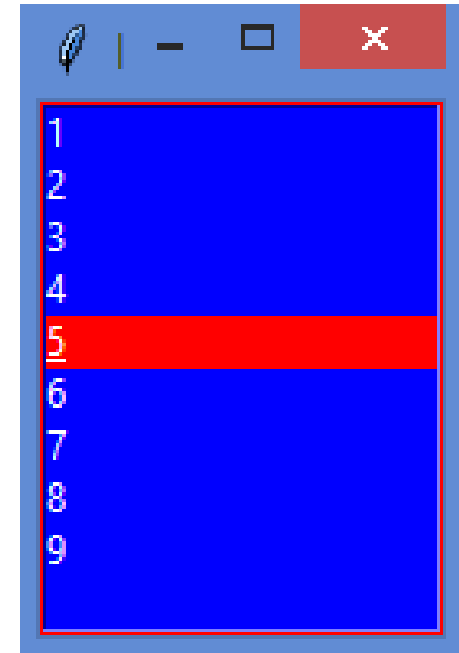
# Widget: Listbox

```
listbox=Listbox(master, highlightcolor="red")
```

```
listbox.grid(row=1, column=1)
```

```
for x in range(1, 10):
```

```
    listbox.insert(END, x)
```



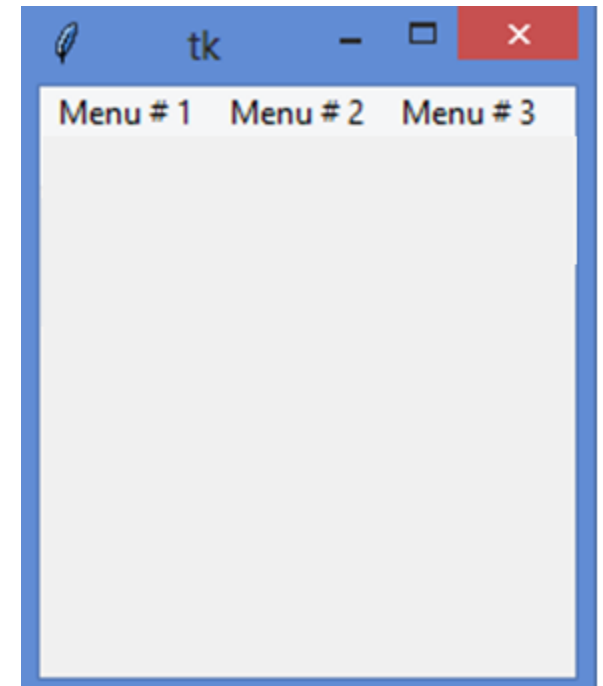
# Widget: Menubar

```
menu=Menu(master)
```

```
menu.add_command(label="Menu # 1")
```

```
menu.add_command(label="Menu # 2")
```

```
menu.add_command(label="Menu # 3")
```



# Tkinter Links

- <https://likegeeks.com/python-gui-examples-tkinter-tutorial/>
- <http://www.pythonlake.com/python/tkinter>
- [https://www.tutorialspoint.com/python/python\\_gui\\_programming.htm](https://www.tutorialspoint.com/python/python_gui_programming.htm)