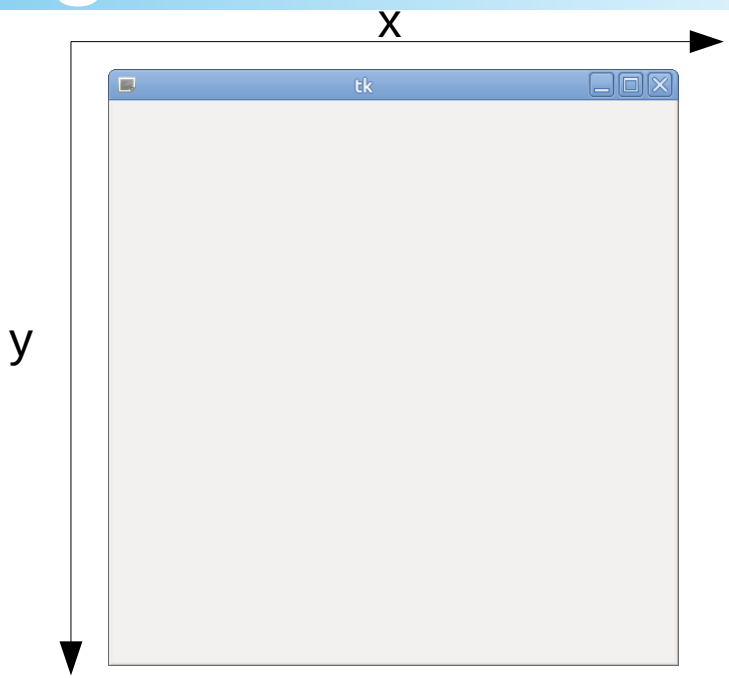
tkinter-drawing

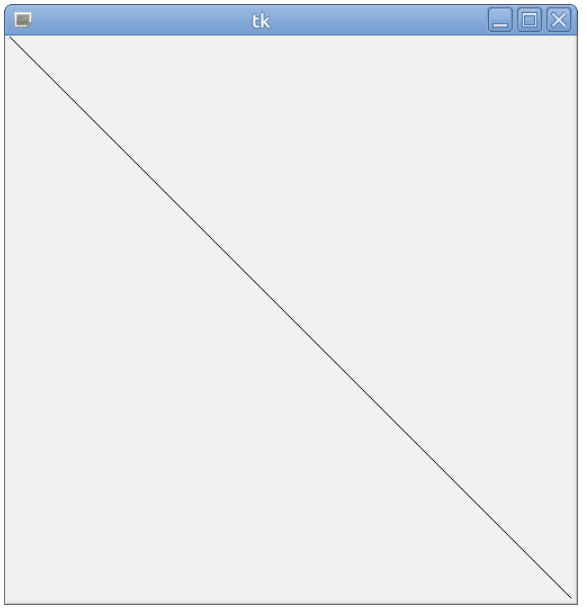
- Create a Canvas for drawing

```
from tkinter import *

root = Tk()
canvas = Canvas(root, width=500,height=500)
canvas.pack()
```



- Drawing a line

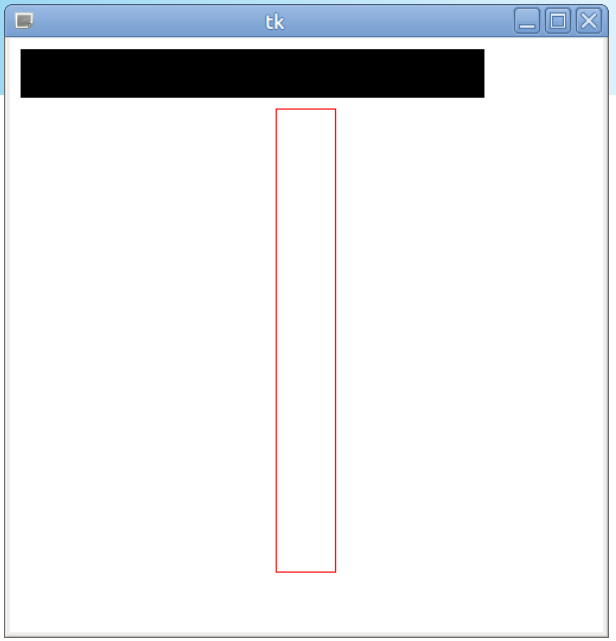
```
from tkinter import *

root = Tk()
canvas = Canvas(root, width=500,height=500)
canvas.pack()
canvas.create_line(0,0,500,500) #x1,y1,x2,y2
root.mainloop()
```



tkinter-drawing

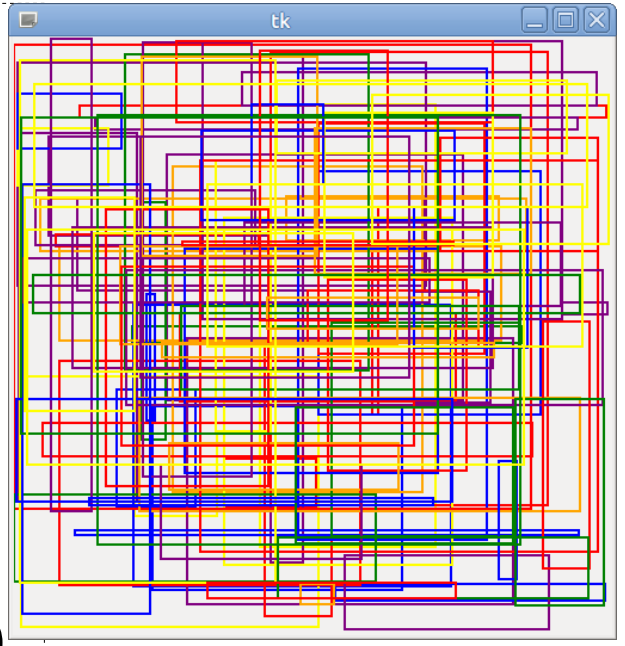
- Drawing a rectangle

```
from tkinter import *
root = Tk()
canvas = Canvas(root, width=500,height=500,bg="white")
canvas.pack()
canvas.create_rectangle(10,10,400,50,fill="black")
canvas.create_rectangle(225,450,275,60,outline="red")
root.mainloop()
```



- Drawing multiple random rectangles

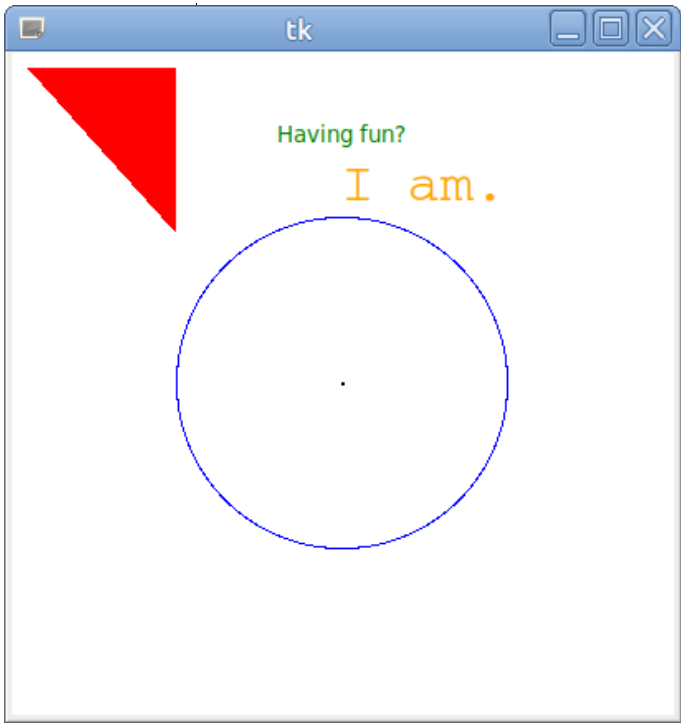
```
from tkinter import *
import random
root = Tk()
canvas = Canvas(root, width=500,height=500)
canvas.pack()
colors  =["red","green","blue","orange","yellow","purple"]
for i in range(100):
    color=random.choice(colors)
    x1,y1=random.randint(1,500),random.randint(1,500)
    x2,y2=random.randint(1,500),random.randint(1,500)
    canvas.create_rectangle(x1,y1,x2,y2,width=2,outline=color)
root.mainloop()
```



tkinter-drawing

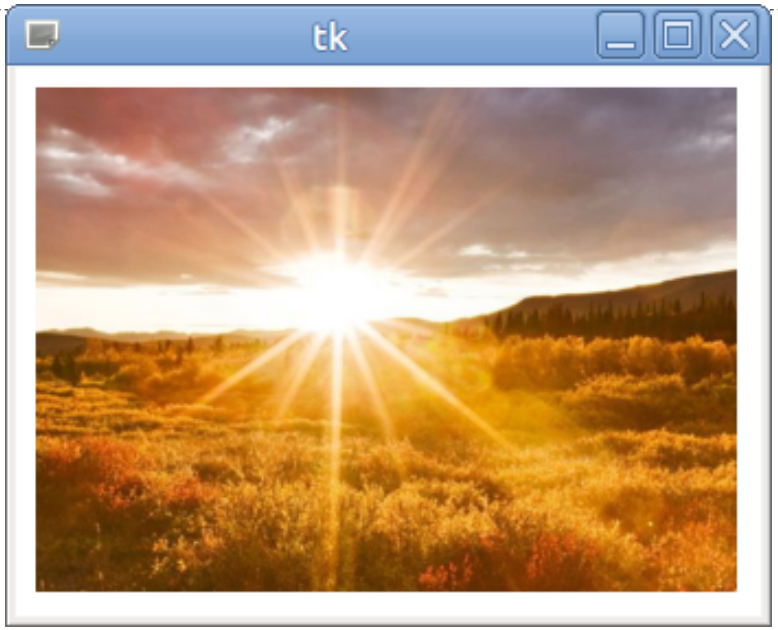
- Drawing polygons, ovals, single pixels, and displaying text

```
from tkinter import *
root = Tk()
canvas = Canvas(root, width=400,height=400,bg="white")
canvas.pack()

# oval/circle- the top left and bottom right corners of bounding box
canvas.create_oval(100,100,300,300,outline="blue")

#polygon-use successive (x,y)- all corners
canvas.create_polygon(10,10,100,10,100,110,fill="red")

#single pixel (trick) at 200,200
canvas.create_rectangle((200,200)*2)

#Text position at 50,200 in green
canvas.create_text(200,50,text="Having fun?",fill="green")

#Text with change of font and size
canvas.create_text(250,80,text="I am.",fill="orange",font=("Courier",25))

root.mainloop()
```



tkinter-image

```
from tkinter import *
root = Tk()
canvas = Canvas(root, width=340,height=250,bg="white")
canvas.pack()

#load picture found on google (search for sunshine 320x230)
my_image=PhotoImage(file="sunshine.png")

#position the image at (x,y)- anchor it (here NW for North West (top left) corner)
canvas.create_image(10,10,anchor=NW,image=my_image)

root.mainloop()
```



tkinter-animation

```
from tkinter import *
import time # so we can use the sleep method
root = Tk()
canvas = Canvas(root, width=400,height=400,bg="white")
canvas.pack()

oval1=canvas.create_oval(180,0,220,40,fill="blue") # use identifier
for i in range(360):
    canvas.move(oval1,0,1) # move down oval1 by 1 pixel
    #canvas.coords(oval1,180,i,220,40+i) # alternatively
    root.update()   # update the graphic (redraw)
    time.sleep(0.02) # wait 0.02 second
canvas.itemconfig(oval1,fill="red") # change configuration
root.mainloop()
```