# Tkinker python

# Basic window

from tkinter import \*

root = Tk()

theLabel = Label(root, text="This is too easy")

theLabel.pack()

root.mainloop()

# Organizing layout

from tkinter import \*

root = Tk()

topFrame = Frame(root)

topFrame.pack()

bottomFrame = Frame(root)

bottomFrame.pack(side=BOTTOM)

button1 = Button(topFrame, text='Button 1', fg="red")

button2 = Button(topFrame, text='Button 2', fg="blue")

button3 = Button(topFrame, text='Button 3', fg="green")

button4 = Button(bottomFrame, text='Button 4', fg="purple")

button1.pack(side=LEFT)

button2.pack(side=LEFT)

button3.pack(side=LEFT)

button4.pack(side=BOTTOM)

root.mainloop()

# Fitting widgets in your layout

from tkinter import \*

root = Tk()

one = Label(root, text= "one",bg='red', fg="white")

one.pack()

two = Label(root, text= "two", bg="green", fg="black")

two.pack(fill=X)

three = Label(root, text= "three", bg="blue", fg="white")

three.pack(side=LEFT, fill=Y)

root.mainloop()

# Grid layout

from tkinter import \*

root=Tk()

label\_1 = Label(root, text="Name")

label\_2 = Label(root, text="Password")

entry\_1 = Entry(root)

entry\_2 = Entry(root)

label\_1.grid(row=0, sticky=E) # sticky = E # east (right) align text

label\_2.grid(row=1, sticky=E)

entry\_1.grid(row=0, column=1)

entry\_2.grid(row=1, column=1)

c = Checkbutton(root, text="Keep me logged in")

c.grid(columnspan=2)

root.mainloop()

# Binding Functions to Layouts

1

from tkinter import \*

root = Tk()

def printName():

print("Hello world")

button1 = Button(root, text="Print name", command=printName)

button1.pack()

root.mainloop()

2

from tkinter import \*

root = Tk()

def printName(event):

print("Hello world")

button\_1 = Button(root, text="Print name", command=printName)

button\_1.bind("<Button-1>", printName)

button\_1.pack()

root.mainloop()

# Mouse click event

from tkinter import \*

root = Tk()

def leftClick(event):

print("Left")

def middleClick(event):

print("Middle")

def rightClick(event):

print("Right")

frame = Frame(root, width=300, height=250)

frame.bind("<Button-1>", leftClick)

frame.bind("<Button-2>", middleClick)

frame.bind("<Button-3>", rightClick)

frame.pack()

root.mainloop()

# Using Classes

from tkinter import \*

class MyButtons:

def \_\_init\_\_(self, master):

frame = Frame(master)

frame.pack()

self.printButton = Button(frame, text="Print message", command=self.printMessage)

self.printButton.pack(side=LEFT)

self.quitButton = Button(frame, text="Quit", command=master.destroy)

self.quitButton.pack(side=LEFT)

def printMessage(self):

print("Message")

root = Tk()

b = MyButtons(root)

root.mainloop()

# Drop down menu

from tkinter import \*

def doNothing():

print("Message")

root = Tk()

#\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_menu\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

menu = Menu(root)

root.config(menu=menu)

subMenu = Menu(menu)

menu.add\_cascade(label="File", menu=subMenu)

subMenu.add\_command(label="New project", command=doNothing)

subMenu.add\_command(label="New", command=doNothing)

subMenu.add\_separator()

subMenu.add\_command(label="Exit", command=doNothing)

editMenu = Menu(menu)

menu.add\_cascade(label="Edit", menu=editMenu)

editMenu.add\_command(label="Redu", command=doNothing)

#\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_end\_menu\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

root.mainloop()

# Toolbar

from tkinter import \*

def doNothing():

print("Message")

root = Tk()

#\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_menu\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

#...

#\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_end\_menu\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

#\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_toolbar\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

toolbar = Frame(root, bg="blue")

insertBtn = Button(toolbar, text="Insert image", command=doNothing)

insertBtn.pack(side=LEFT, padx=2, pady=2) # pad = padding

printBtn = Button(toolbar, text="Insert image", command=doNothing)

printBtn.pack(side=LEFT, padx=2, pady=2)

toolbar.pack(side=TOP, fill=X)

#\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_end\_toolbar\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

root.mainloop()

# Status bar

from tkinter import \*

def doNothing():

print("Message")

root = Tk()

#\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_menu\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

#...

#\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_end\_menu\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

#\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_toolbar\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

#...

#\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_end\_toolbar\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

#\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_statusbar\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

status = Label(root, text="Preparing ...", bd=1, relief=SUNKEN, anchor=W) # bd= border,

status.pack(side=BOTTOM, fill=X)

#\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_end\_statusbar\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

root.mainloop()

# Message Box

from tkinter import \*

import tkinter.messagebox

root = Tk()

tkinter.messagebox.showinfo("Window title", "Message 1 ")

answer = tkinter.messagebox.askquestion("Question 1", "Do you like this?")

if answer == 'yes':

print("yes")

else:

print("no")

root.mainloop()

# Shapes and graphics

from tkinter import \*

root = Tk()

canvas = Canvas(root, width=200, height=100)

canvas.pack()

blackline = canvas.create\_line(0, 0, 200, 50) # create\_line(x1 y1 x2 y2)

redline = canvas.create\_line(0, 100, 200, 50, fill="red")

greenbox = canvas.create\_rectangle(25, 25, 130, 60, fill="green") # create\_rectangle(x, y, w, h)

# delete redline

canvas.delete(redline)

# delete ALL

# canvas.delete(ALL)

root.mainloop()

# Images and Icons

import tkinter as tk

root = tk.Toplevel()

photo = PhotoImage(file="image.png")

label = Label(root, image=photo)

label.pack()

root.mainloop()

# Webcam Video

import cv2

import tkinter as tk

from tkinter import \*

from PIL import Image, ImageTk

white           = "#ffffff"

lightBlue2      = "#adc5ed"

font            = "Constantia"

fontButtons = (font, 12)

maxWidth       = 760

maxHeight       = 580

#Graphics window

mainWindow = tk.Tk()

mainWindow.configure(bg=lightBlue2)

mainWindow.geometry('%dx%d+%d+%d' % (maxWidth,maxHeight,0,0))

mainWindow.resizable(0,0)

# mainWindow.overrideredirect(1)

mainFrame = Frame(mainWindow)

mainFrame.pack()

#Capture video frames

lmain = tk.Label(mainFrame)

lmain.grid(row=0, column=0)

cap = cv2.VideoCapture(0)

def pause\_capture():

print("Pause")

def start\_capture():

print("Start")

def show\_frame():

ret, frame = cap.read()

if ret:

cv2image = cv2.cvtColor(frame, cv2.COLOR\_BGR2RGBA)

img = Image.fromarray(cv2image)

imgtk = ImageTk.PhotoImage(image = img)

lmain.imgtk = imgtk

lmain.configure(image=imgtk)

lmain.after(10, show\_frame)

def close\_window():

cap.release()

mainWindow.destroy()

closeButton = Button(mainWindow, text = "START", font = fontButtons, bg = white, width = 20, height= 1)

closeButton.configure(command= start\_capture)

closeButton.pack(side=LEFT, anchor=CENTER, expand=True, padx=2, pady=2)

closeButton = Button(mainWindow, text = "PAUSE", font = fontButtons, bg = white, width = 20, height= 1)

closeButton.configure(command= pause\_capture)

closeButton.pack(side=LEFT,anchor=CENTER, expand=True, padx=2, pady=2)

closeButton = Button(mainWindow, text = "CLOSE", font = fontButtons, bg = white, width = 20, height= 1)

closeButton.configure(command= close\_window)

closeButton.pack(side=LEFT, anchor=CENTER, expand=True, padx=2, pady=2)

show\_frame() #Display

mainWindow.mainloop() #Starts GUI