GUI

Basic construction

import   tkinter

root = tkinter·Tk() ⟶ creates window. This does not have any parent
                   ⟶ class of window

⋮ ⟶ All widgets to be inserted in the window go in between "root" and its mainloop

root . mainloop () ⟶ Runs the window in an infinite loop till it is closed.
                     Compulsory for all tkinter applications

① Import tkinter
② Create the root window
③ Add widgets
④ Add event handling to widgets
⑤ Run mainloop

FUNCTIONS

To add a title to the window

root . title ("String")

              [OR]

root = tkinter . Tk(className = "string")

                      ⟶ Not just window title; taken as class name
                        First letter is always lowercase

Bind function

root. bind ("<event>",   event handler function)

E.g: root . bind ("<Return>", lambda e: root.destroy())

Window resizing

root . geometry ("[value] x [value]")

root . minsize (width = [value] , height = [value])

WIDGETS

label.pack()] ⟶ unsophisticated: simply packs onto the screen one after the other

[OR]

label.place(relx = $v_x \in [0,1]$, rely = $v_y \in [0,1]$, anchor = [value from "center", "n", "ne", "nw", "s", "se", "sw", "e", "w"])

[OR]

label.place(relx = [value], rely = [value], x = [x position of anchor], y = [y position of anchor])

[OR]

label.grid(row = [int-value], column = [int-value], rowspan = [int-value], columnspan = [int-value])

① Label

label = tkinter.Label(master = root, text = "text", font = ("font_name", fontsize (no.), "bold italic .."), textvariable = var_name, fg = "[colour as text or #hexcode]", bg = "[colour]", height = "[no.]", width = "[no.]")

always overwrites "text"

② Button

label = tkinter.Label(master = root, text = "text", font = ("font_name", fontsize (no.), "bold italic ..") textvariable = var_name, fg = "[colour as text or #hexcode]", bg = "[colour]", height = "[no.]", width = "[no.]", activebackground = "[colour]", activeforeground = "[colour]", command = func)

⟶ DO NOT call this function if you are not using lambda functions
This is executed on button click

③ Checkbutton] ⟶ checkbox

chk = tkinter.Checkbutton(master = root, text = "text", variable = chkvar)

⟶ tkinter integer variable takes value 1 when checkbutton is checked, else is 0

④ Frame

frame = tkinter. Frame (master = root..)

* Stores other widgets inside it
* When it is deleted, all widgets inside it are also deleted