

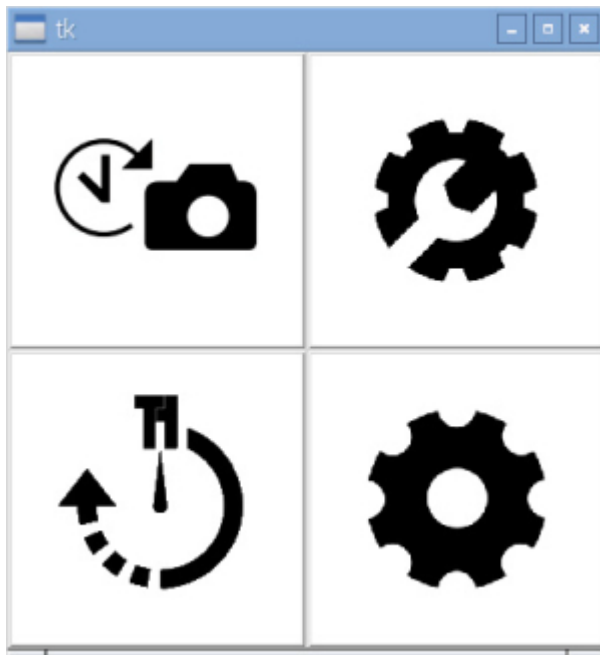
A 4 Button GUI

**** NOTE **** You need **Python 3** for this project, the syntax wont work in Python 2 (but can be changed If you know the differences)

As a precursor to my Intervalometer Project, I need to create a control system. In a previous entry we looked at setting up a 3.2" LCD, and this is what I will use as it is a touchscreen. My project then wont require keyboards/mice or phone apps to work.

This is an example of using something in Python called Tkinter, which has many functi^ons for creating GUI's (forms, labels, buttons etc) and the following code will create a 4 button app where a function is executed depending on what button is pressed.

This GUI can be used on an LCD Touchscreen, or simply as a GUI for a project that runs in a window on the desktop.



This program does the following:

- Creates a window (root)
- Creates 2 frames to go in that window (topFrame and bottomFrame)
- Creates 4 Icons
- Loads an image on to each Icon
- Associates each button with a function
- Sets button 1 and 2 in the top frame
- Sets button 2 in the bottom frame

See the Program in Action

[4buttonguivideo.mp4](#) [4buttonactual.mp4](#)

The Code

You can download the code and icon files

[Here](#)

```
<sxh [py][; options for SyntaxHighlighter]> # Python 3.4.2
#
# Test programme for doing a simple 4 button GUI
#
# Alan Walker
```

```
# Aug 2016
#
#
# This programe creates a root window, then creates two frame in that root window (topFrame and bottomFrame)
# Then four buttons are created, two in the top frame, two in the bottom. An image is loaded on to each button
# Each button is assigned to a function so that something happens when the buttons are clicked.
# The buttons are positioned left and right so you have a 2x2 layout
#
# Thats it, this is just a tester for my LCD screen that I want to use for my Intervalometer.
#
#

from tkinter import * #import libraries

def btn1click(): # define a function (you have to define it before you can call it, thats why its at the top of the programe
print("You Pressed Button 1!") # function code

def btn2click():
print("You Pressed Button 2!")

def btn3click():
print("You Pressed Button 3!")

def btn4click():
print("You Pressed Button 4!")

root = Tk() #This is the root window, all the frames will be in this window

topFrame = Frame(root) #This project will have 2 frames, an upper and a lower. 2 icons in top, 2 in bottom
#without the frames, its impossible to organise the 4 icons in a 2x2 configuration
#topFrame is the frame at the top, Frame=(root) means the frame is in the root window

topFrame.pack() # something.pack means show that something (or it will be hidden)
bottomFrame = Frame (root) #the bottom frame (still in the root window)
bottomFrame.pack(side=BOTTOM) #place the bottom frame at the bottom (by default, the only other frame will be at the top)

button1 = Button(topFrame, text="Button 1", fg="red") #make a button called button1, put it in the top frame,
#call it button 1, make the foreground colour (text) red.
button1.img = PhotoImage(file="icons/timelapse.gif") #associate the image timelapse.gif with this button
button1.config(image=button1.img) #set the button1 image on the button
button1.config(command=btn1click) #set what function to execute upon button click

button2 = Button(topFrame, text="Button 2", fg="blue")
button2.img = PhotoImage(file="icons/tlsettings.gif")
button2.config(image=button2.img)
button2.config(command=btn2click)

button3 = Button(bottomFrame, text="Button 3", fg="green")
button3.img = PhotoImage(file="icons/slidertl.gif")
button3.config(image=button3.img)
button3.config(command=btn3click)

button4 = Button(bottomFrame, text="Button 4", fg="black")
button4.img = PhotoImage(file="icons/slidersettings.gif")
button4.config(image=button4.img)
button4.config(command=btn4click)

button1.pack(side=LEFT) #show button1 on the left
button2.pack(side=RIGHT) #show button2 on the right (b1 and b2 are in the top frame)
button3.pack(side=LEFT)
button4.pack(side=RIGHT)

root.mainloop() </sxh>
```

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