UNIVERSITAS INTERNASIONAL BATAM

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Python Programming GUI

Chapter 12

Teknik Pemprograman

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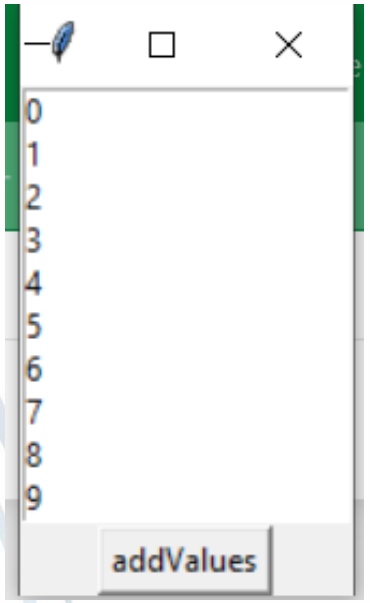
Tkinter Python

- The tkinter package (“Tk interface”) is the standard Python interface to the Tcl/Tk GUI toolkit. Both Tk and tkinter are available on most Unix platforms, including macOS, as well as on Windows systems.

- Running python -m tkinter from the command line should open a window demonstrating a simple Tk interface, letting you know that tkinter is properly installed on your system, and also showing what version of Tcl/Tk is installed, so you can read the Tcl/Tk documentation specific to that version.

https://docs.python.org/3/library/tkinter.html

Listbox

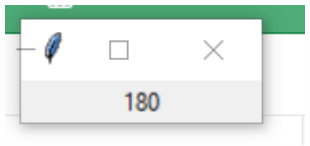



```
import time
import tkinter as tk

LIMIT = 10
DELAY = 1000  # Millisecs


class mainApp(tk.Tk):
    def __init__(self, *args, **kwargs):
        tk.Tk.__init__(self, *args, **kwargs)
        listbox = tk.Listbox(self)
        listbox.pack()
        button3 = tk.Button(self, text="addValues",
                            command=lambda : self.addValues(listbox))
        button3.pack()

    def addValues(self, listbox):
         self.after(DELAY, self.insertValue, listbox, 0, LIMIT)

    # ADDED
    def insertValue(self, listbox, value, limit):
        if value < limit:
            listbox.insert(tk.END, str(value))
            self.after(DELAY, self.insertValue, listbox, value+1, limit)


app = mainApp("test")
app.mainloop()
```

Looping

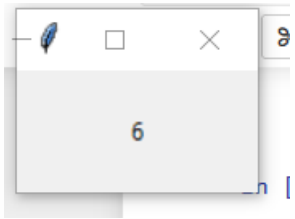
```python
import tkinter as tk

root = tk.Tk()
root.title("Tkinter Looping Example")

items = ["Jerus", "Apel", "Duku", "Nangka", "Rambutan"]

for i, item in enumerate(items):
    label = tk.Label(root, text=f"{i + 1}. {item}", font=("Arial", 14))
    label.pack(pady=5)  # Add some spacing between labels
root.mainloop()
```

While




```
import tkinter as tk

x = 0
def change_text():
    global x
    var.set(x)
    x +=1
    root.after(100,change_text)#instead of a while loop that block the mainloop

root = tk.Tk()
var = tk.StringVar()
lab = tk.Label(root, textvariable=var)
lab.pack()
change_text()

root.mainloop()
```

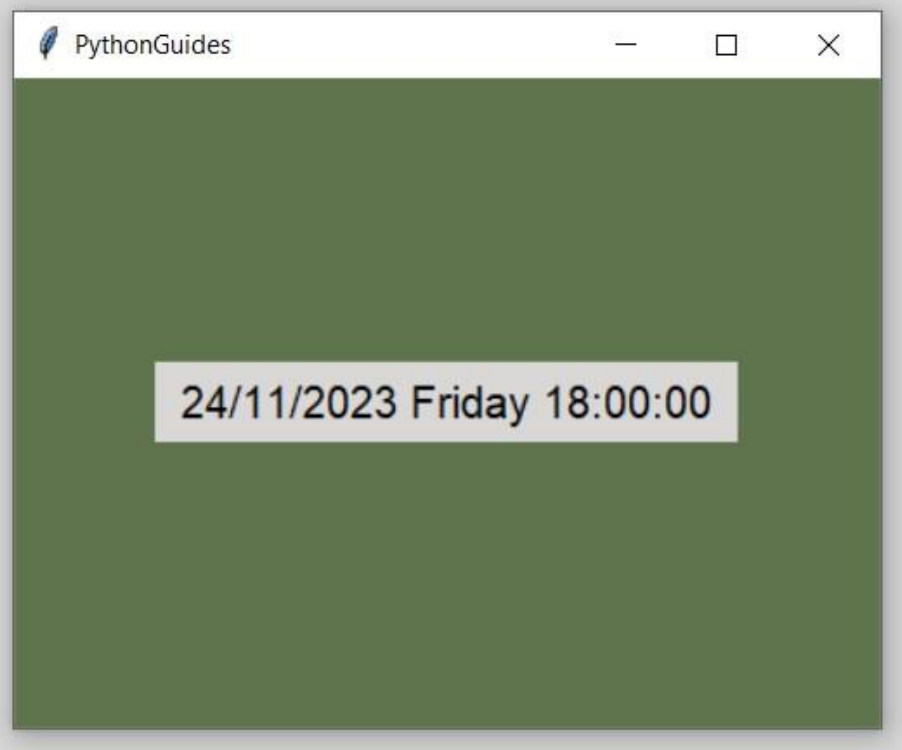
Looping



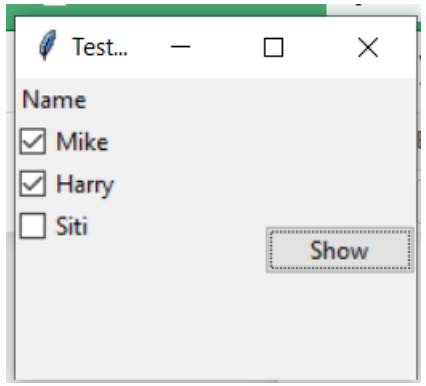

```python
import tkinter as tk

def x_loop():
    global x
    if x <= 100:
        x += 1
        # Update the label
        label.config(text=x)
        # after 2000 ms call `x_loop` again
        root.after(2000, x_loop)

x = 0
root = tk.Tk()

label = tk.Label(root, text=x)
label.pack(pady=20)

# STart the loop
x_loop()

root.mainloop()
```

While

```
from tkinter import *
import time

ws = Tk()
ws.title('PythonGuides')
ws.geometry('400x300')
ws.config(bg='#5f734c')

time_lbl = Label(
    ws,
    text=time.strftime( "%d/%m/%Y %A %H:%M:%S"),
    font=(21),
    padx=10,
    pady=5,
    bg='#d9d8d7'
    )

time_lbl.pack(expand=True)
ws.update()

while True:
    time.sleep(1)
    time_text=time.strftime("%d/%m/%Y %A %H:%M:%S")
    time_lbl.config(text=time_text)
    ws.update()

ws.mainloop()
```

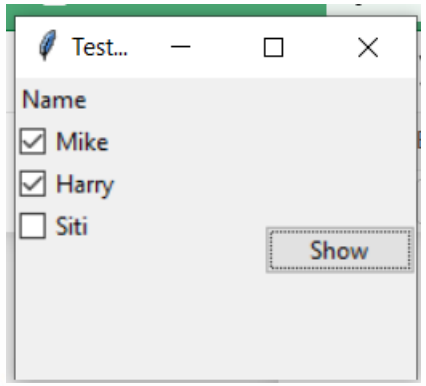


Looping




```python
import tkinter as tk
from tkinter import ttk

def boxstates():
    finalValue = []
    for x in checkboxList:
        finalValue.append(x.get())
    print(finalValue)

root = tk.Tk()

root.title("Testing Checkbox")
root.geometry("200x150")

# ------------------Chekbox-------------

checkboxList = [tk.IntVar(), tk.IntVar(), tk.IntVar()]
name1 = ["Mike", "Harry", "Siti"]

labelName = tk.Label(root, text = "Name")
labelName.pack(anchor = tk.W)

def createCheckboxes():
    for x, y in zip (checkboxList, name1):
        check1_t1 = ttk.Checkbutton(root, text=y, variable=x)
        check1_t1.pack(anchor = tk.W)

# ------------------Button-------------
btn2 = ttk.Button(root, text="Show", command = boxstates)
btn2.pack(side=tk.RIGHT)

createCheckboxes()
root.mainloop()
```

Looping

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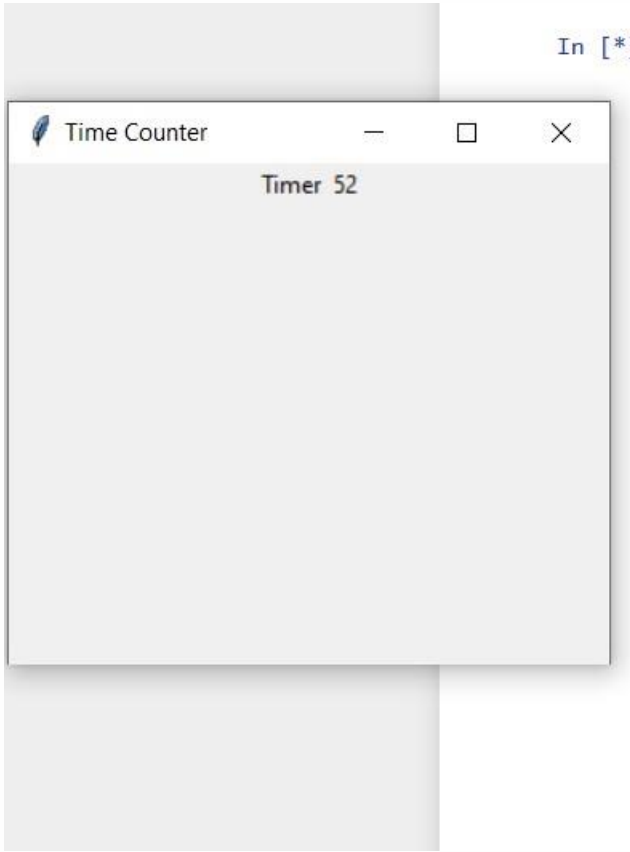
Looping




```
In [*]: import tkinter

root=tkinter.Tk()
root.geometry("300x250")
root.title("Time Counter")

Frame=tkinter.Frame(root)
Frame.pack(side=tkinter.TOP)

Label1=tkinter.Label(Frame,text="Timer")
Label1.pack(side=tkinter.LEFT)

def timer(*args,**kwargs):
    temp=int(temps.get())
    while temp>-1:
        temps.set(str(temp))
        root.update()
        time.sleep(1)
        temp-=1

temps=tkinter.StringVar()
temps.set("60")
label=tkinter.Label(Frame,textvariable=temps)
label.pack(side=tkinter.LEFT)
timer()
root.mainloop()
```

Looping

```
import sys
from tkinter import *
import time

def timing():
    current_time = time.strftime("%H : %M : %S")
    clock.config(text=current_time)
    clock.after(200,timing)

root=Tk()
root.geometry("600x300")
clock=Label(root,font=("times",60,"bold"),bg="blue")
clock.grid(row=2,column=2,pady=25,padx=100)
timing()

root.mainloop()
```

Latihan

1. Perbaiki coding aplikasi berikut ini

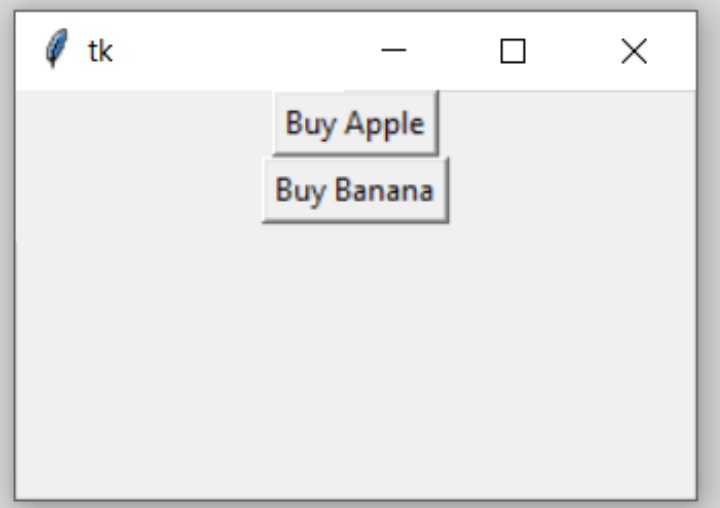
```
import tkinter as tk
from functools import partial

root = tk.Tk()

def print_buy(fruit):
    print('You buy 1 ' + f)

for f in ['Apple', 'Banana']:
    btn = tk.Button(
        root,
        text = 'Buy ' + f,
        command = lambda f=f: print_buy(f)
    )
    btn.pack()

root.mainloop()
```



Latihan

2. Buatlah untuk looping untuk menampilkan 1 – 20

3. Buatlah array menampilkan hari senin sampai minggu (senin, selasa,rabu, kamis, jumat, sabtu, minggu) jika di input 1 maka keluar hari : senin

4. Buatlah array jika di input data contoh input : budi akan muncul karyawan jikan di input wati akan muncul bukan karyawan. datakaryawan : [budi, bunga, alex, mawar, dani, sultan]