Tkinter Documentation

Tkinter is one of Python's Standard GUI Library developed by **John Ousterhout.** It is used for **GUI Programming** in Python. The name Tkinter comes from '**Tk interface**'. In a Python Script, we can use it by:

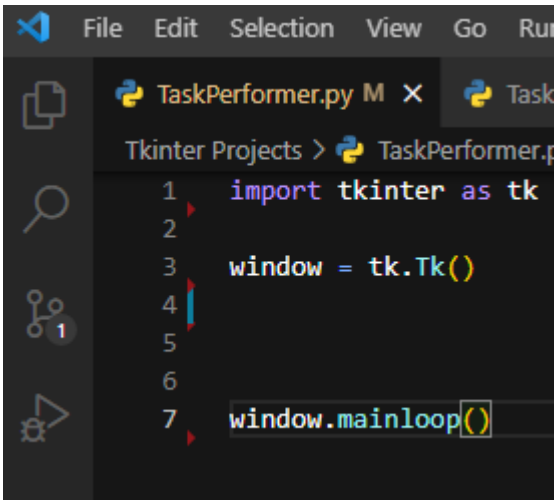
```
import tkinter as tk
```

In the above picture, we have used **import** keyword to call and use **tkinter** library in our python script.

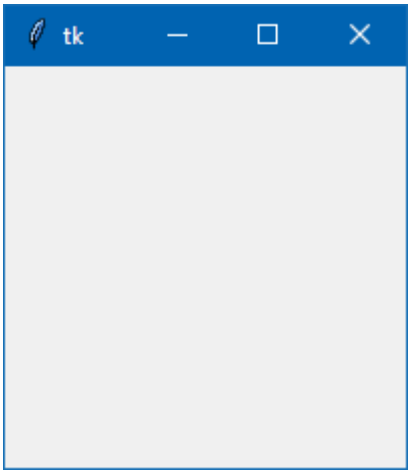
Now let's see some useful attributes of it:

1. Initialising a new tkinter window:

We can initialise a new tkinter window by using **tk.Tk()** function and **tk.mainloop()** function in a python script.



Here, you can see we have imported and used both **tk.Tk()** and **tk.mainloop()** to create a new window, which you can see below.



2. Adding widgets in a new Tkinter window:

Adding a widget to a new Tk window is not that cumbersome. We can perform it by using **tkinter.ttk** library to add widgets in a **tkinter** window.

```
import tkinter.ttk as ttk
```

Here we have imported the **tkinter.ttk** library with which we can add widgets in a window.

First we'll add a **Label** in a tkinter window using **ttk.Label()** function.

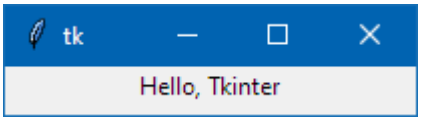
```
import tkinter as tk
import tkinter.ttk as ttk
window = tk.Tk()

ttk.Label(window, text="Hello, Tkinter").pack()

window.mainloop()       You, seconds ago • Uncom
```

N.B: Use **.pack()** or **.grid()** function to pack widgets, else it won't reflect in a tkinter window.

And after running this we get:



So, you can see that a text **Hello, Tkinter** gets displayed in a new tkinter window.

3. Packing widgets in tkinter:

Now we'll see how to pack widgets in tkinter so that we can get changes reflected in a tkinter window.

3.1 Methods of geometry managing in a tkinter window:

i. Using **ttk.pack()** method

```
ttk.Label(window, text="Hello, Tkinter").pack()
```

ii. Using **ttk.grid()** method

```
ttk.Label(window, text="Hello, Tkinter").grid()
```

The basic difference is that **pack()** method requires a **side** parameter for determining the position of a widget in a tkinter window, whereas **grid()** requires **row** and **column** as well as sticky(which uses nsew directions for positioning) as parameter for the same.

Also if the **ttk.Label()** function is stored in a **variable** then you should do, **<variable_name>.pack()** or **<variable_name>.grid()** because **.grid()** or **.pack()** returns **None**.