

Python Tkinter - Adding Two Numbers

This lesson will walk through how to create a GUI(Graphical User Interface) in Python Tkinter that adds two integers.

STEP ONE:

Copy and paste the starter code.

```
from tkinter import *
class MyWindow:
    def __init__(self, win):

        window.config(bg='#E0E0E0')

        #program name

        #label and textbox for first number

        #label and textbox for second number

        #the add button

        #label and textbox for the result

        #function to add the two numbers

window=Tk()
mywin=MyWindow(window)
window.title('Adding Two Numbers')
window.geometry("400x300+10+10")
window.mainloop()
```

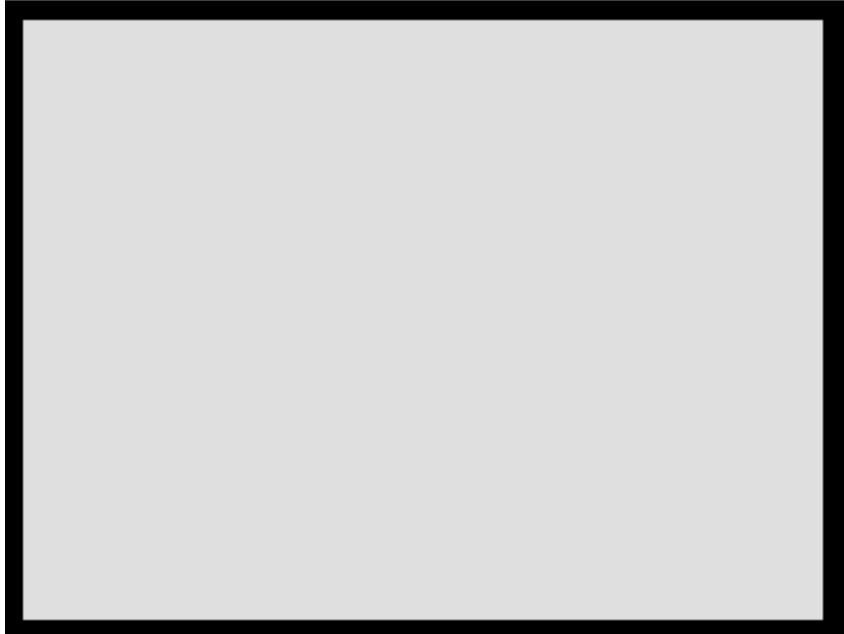
The code should look like this:

```

main.py
1 from tkinter import *
2 class MyWindow:
3     def __init__(self, win):
4
5         window.config(bg='#E0E0E0')
6
7         #program name
8
9         #label and textbox for first number
10
11        #label and textbox for second number
12
13        #the add button
14
15        #label and textbox for the result
16
17        #function to add the two numbers
18
19 window=Tk()
20 mywin=MyWindow(window)
21 window.title('Adding Two Numbers')
22 window.geometry("400x300+10+10")
23 window.mainloop()

```

The output should look like this:



You can change the background color for the window. Feel free to edit the RGB Hex code on line 5. For more information, see https://www.rapidtables.com/web/color/RGB_Color.html .

```
1 from tkinter import *
2 class MyWindow:
3     def __init__(self, win):
4         ...
5         window.config(bg='#E0E0E0')
6
```

STEP TWO:

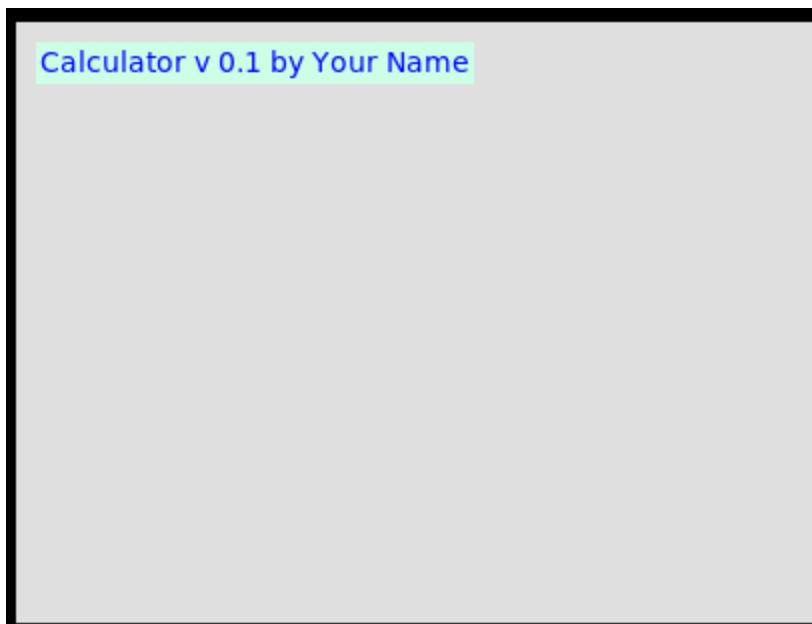
Now we are ready to add the name of our program. We are adding a label that we have decided to name 'lbl_title'. We are specifying what the label says, where it is, and what the foreground and background colors are. Experiment with changing the position and colors.

```

1 from tkinter import *
2 class MyWindow:
3     def __init__(self, win):
4
5         window.config(bg='#E0E0E0')
6
7         #program name
8         self.lbl_title=Label(win, text='Calculator v 0.1 by Your Name')
9         self.lbl_title.place(x=10, y=10)
10        self.lbl_title.config(fg="#0000FF", bg = "#CCFFEE")
11
12        #label and textbox for first number
13
14

```

The output should look something like this:

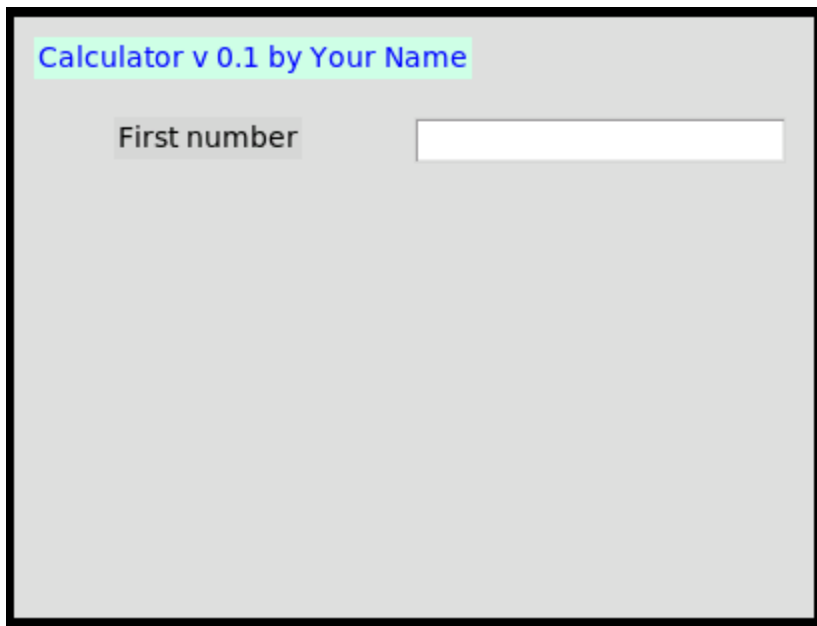


STEP THREE:

Now we will add the label and textbox for the first number. For the label we are indicating what it says and where it is(x,y). Notice that we specify a textbox with the word 'Entry'.

```
10     self.lbl_title.config(fg="#0000FF", bg = "#CCFFE5")
11
12     #label and textbox for first number
13     self.lbl_one=Label(win, text='First number')
14     self.lbl_one.place(x=50, y=50)
15     self.txt_one=Entry()
16     self.txt_one.place(x=200, y=50)
17
18     #label and textbox for second number
19
```

The output should look like this:

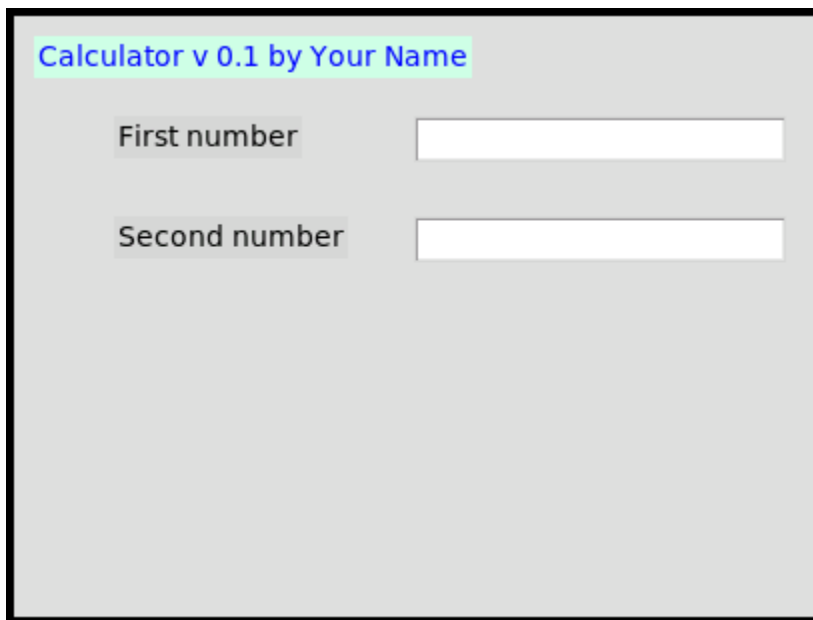


STEP FOUR:

Next, it is time to add the label and textbox for the second number. Notice that we have a consistent naming pattern: `lbl_one`, `lbl_two`, `txt_one`, `txt_two`, etc.

```
17
18     #label and textbox for second number
19     self.lbl_two=Label(win, text='Second number')
20     self.lbl_two.place(x=50, y=100)
21     self.txt_two=Entry()
22     self.txt_two.place(x=200, y=100)
23
```

Here is what it should look like:

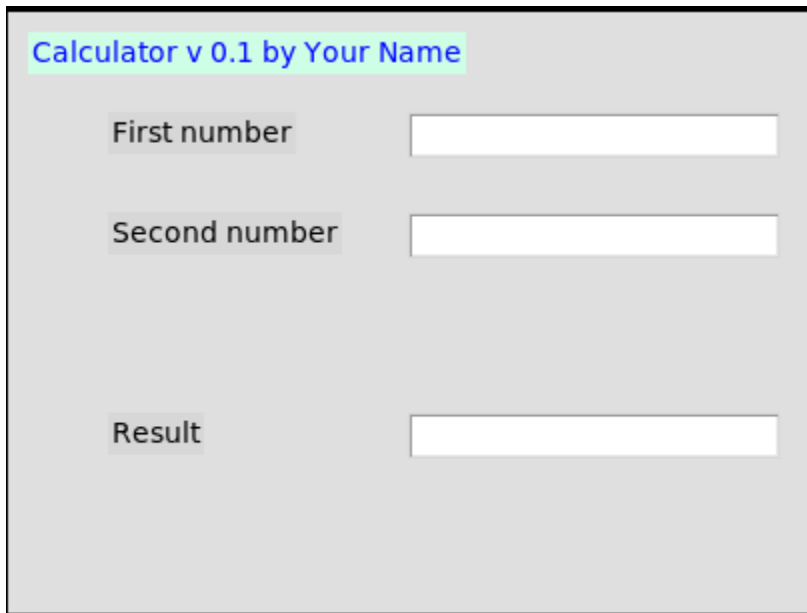


STEP FIVE:

Let's skip over the add button for a moment and work on the label and textbox for the result.

```
23
24     #the add button
25
26
27
28
29     #label and textbox for the result
30     self.lbl_result=Label(win, text='Result')
31     self.lbl_result.place(x=50, y=200)
32     self.txt_result=Entry()
33     self.txt_result.place(x=200, y=200)
34
35     #function to add the two numbers
36
```

It will look like this:



Calculator v 0.1 by Your Name

First number

Second number

Result

STEP SIX:

In order for the program to run without errors, we will need to complete the add button, and the function that runs it, at the same time. We have already completed the label and textbox for the result.

```

24     #the add button
25     self.btn_one=Button(win, text='Add', command=self.add)
26     self.btn_one.place(x=50, y=150)
27
28     #label and textbox for the result
29     self.lbl_result=Label(win, text='Result')
30     self.lbl_result.place(x=50, y=200)
31     self.txt_result=Entry()
32     self.txt_result.place(x=200, y=200)
33
34     #function to add the two numbers
35     def add(self):
36         self.txt_result.delete(0, 'end')
37         integer_one=int(self.txt_one.get())
38         integer_two=int(self.txt_two.get())
39         integer_result=integer_one + integer_two
40         self.txt_result.insert(END, str(integer_result))
41

```

The code `command=self.add` sends us to the add function. In the add function, we are getting the values from the text boxes, and storing them in two new variables: `integer_one`, and `integer_two`. The variable `integer_result` stores the answer, which is then sent to the results text box named `txt_result`.

Congratulations! Your program should now run.

Calculator v 0.1 by Your Name

First number

Second number

Add

Result