

## Finals task 4. Designing Tkinter GUI using OOP

### Code:

```
from tkinter import *
from tkinter import messagebox

class MyWindow:
    def __init__(self, win):
        self.lbl1 = Label(win, text='First number')
        self.lbl2 = Label(win, text='Second number')
        self.lbl3 = Label(win, text='Result')

        self.t1 = Entry(bd=3)
        self.t2 = Entry(bd=3)
        self.t3 = Entry(state='readonly')

        self.b1 = Button(win, text='Add', command=self.add)
        self.b2 = Button(win, text='Subtract')
        self.b2.bind('<Button-1>', self.sub)
        self.b3 = Button(win, text='Clear', command=self.clear)
        self.b4 = Button(win, text='About', command=self.about)

        self.lbl1.place(x=100, y=50)
        self.t1.place(x=200, y=50)
        self.lbl2.place(x=100, y=100)
        self.t2.place(x=200, y=100)
        self.b1.place(x=100, y=150)
        self.b2.place(x=200, y=150)
        self.b3.place(x=100, y=200)
        self.b4.place(x=200, y=200)
        self.lbl3.place(x=100, y=250)
        self.t3.place(x=200, y=250)

    def add(self):
        try:
            num1 = float(self.t1.get())
            num2 = float(self.t2.get())
            result = num1 + num2
            self.t3.config(state='normal')
            self.t3.delete(0, 'end')
            self.t3.insert(END, str(result))
            self.t3.config(state='readonly')
        except ValueError:
            messagebox.showerror("Invalid Input", "Text is not allowed! - Numbers Only")
```

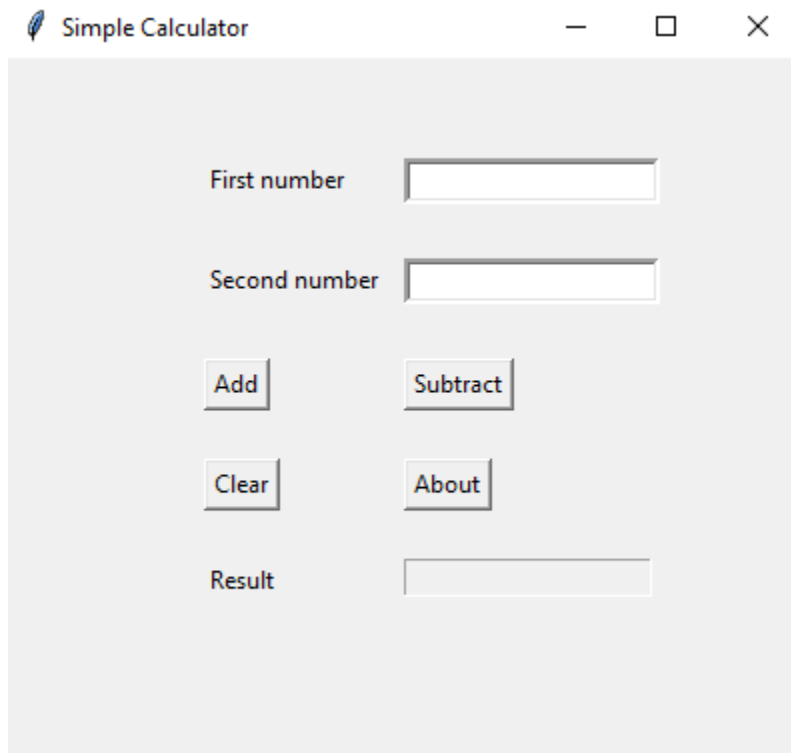
```
def sub(self, event):
    try:
        num1 = float(self.t1.get())
        num2 = float(self.t2.get())
        result = num1 - num2
        self.t3.config(state='normal')
        self.t3.delete(0, 'end')
        self.t3.insert(END, str(result))
        self.t3.config(state='readonly')
    except ValueError:
        messagebox.showerror("Invalid Input", "Text is not allowed! - Numbers Only")

def clear(self):
    self.t1.delete(0, 'end')
    self.t2.delete(0, 'end')
    self.t3.config(state='normal')
    self.t3.delete(0, 'end')
    self.t3.config(state='readonly')

def about(self):
    messagebox.showinfo("About", "Work of Daniel Robert T. Buccat")

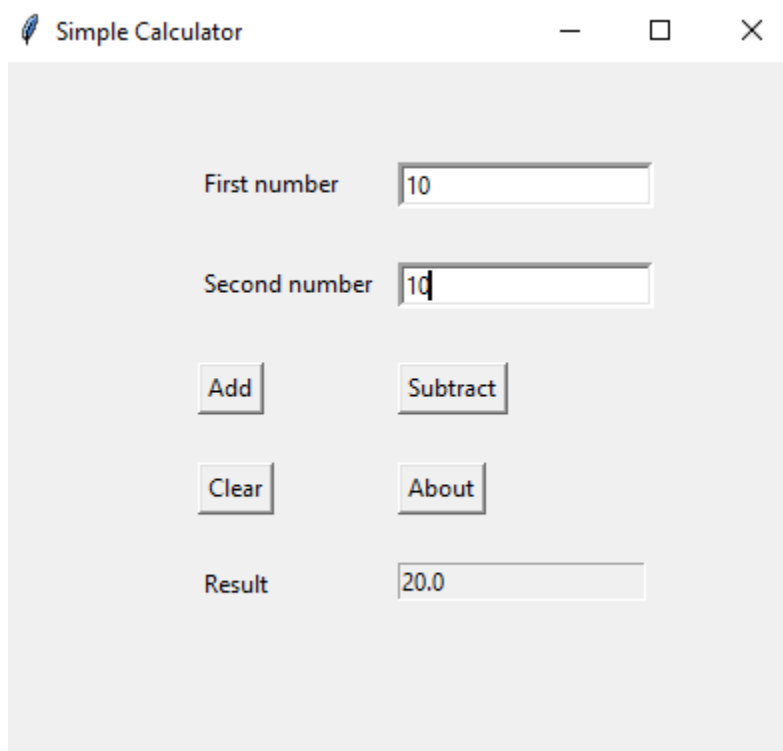
if __name__ == '__main__':
    window = Tk()
    mywin = MyWindow(window)
    window.title("Simple Calculator")
    window.geometry("400x350+10+10")
    window.mainloop()
```

## Output:




A screenshot of a Windows application window titled "Simple Calculator". The window has a standard title bar with minimize, maximize, and close buttons. The main content area is light gray and contains the following elements:

- "First number" label followed by an empty text input field.
- "Second number" label followed by an empty text input field.
- Two buttons: "Add" and "Subtract", arranged horizontally.
- Two buttons: "Clear" and "About", arranged horizontally.
- "Result" label followed by an empty text input field.



A second screenshot of the "Simple Calculator" window, showing the result of a calculation. The input fields now contain the values "10" and "10". The "Result" field displays "20.0".

| Field         | Value |
|---------------|-------|
| First number  | 10    |
| Second number | 10    |
| Result        | 20.0  |


 Simple Calculator — □ ×

First number

Second number

Result

 Invalid Input ×

 Text is not allowed! - Numbers Only

 About ×

 Work of Daniel Robert T. Buccat