



Adamson University  
College of Engineering  
Computer Engineering Department



## **OBJECT-ORIENTED PROGRAMMING**

Laboratory Activity No. 3

### **GUI in Python (Common Widgets)**

*Submitted by:*

**Acuesta, Alemari – Leader**  
**Francisco, Rj**  
**Hirata, Christian**  
**Jamandre, Jan Nathan**  
**Valdez, Reynard James M.**  
**<TTH- 2 pm – 3 pm > / <58002>**

*Date Submitted*

**20-04-2023**

*Submitted to:*

**Engr. Maria Rizette H. Sayo**

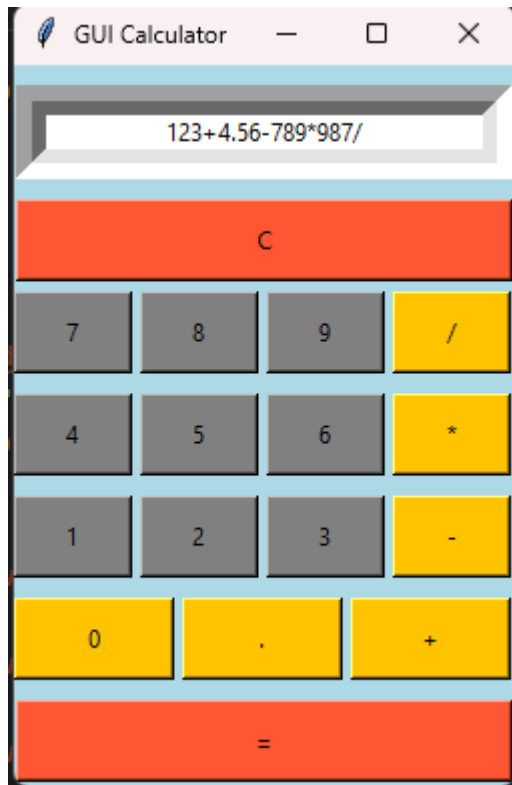
## I. Objectives

- Create a basic calculator with the core functionality of adding, subtracting, multiplying and dividing
- Create a basic calculator that is able to accept decimal values into its calculations.
- Have the buttons on the calculator of different colours.

## II. Methods

<pre>def clearf():     screen.delete(0, "end")  clear = Button(win, text="C", width=34, height=2, command=clearf, bg='#FF5733') clear.grid(row=1, sticky="nw", padx=1) clear.bind('&lt;Button-1&gt;', clearf())</pre>	<p>This part of the program is responsible for the clear button. This is achieved by “.delete”</p>
<pre>Seven = Button(win, text="7", width=7, height=2, command = lambda : screen.insert("end", "7"), bg='#008080') Seven.grid(row=2, sticky="w", padx=0) Eight = Button(win, text="8", width=7, height=2, command = lambda : screen.insert("end", "8"), bg='#008080') Eight.grid(row=2, sticky="w", padx=65) Nine = Button(win, text="9", width=7, height=2, command = lambda : screen.insert("end", "9"), bg='#008080') Nine.grid(row=2, sticky="w", padx=126) Divide = Button(win, text="/", width=7, height=2, command = lambda : screen.insert("end", "/"), bg='#FFC300')</pre>	<p>The Button() function is used to build a button named "Seven" with parameters such as text, height, width, command, lambda, and background colour.</p>
<pre>Zero = Button(win, text="0", width=10, height=2, command = lambda : screen.insert("end", "0"), bg='#FFC300') Zero.grid(row=5, sticky="w", padx=0) Period = Button(win, text=".", width=10, height=2, command = lambda : screen.insert("end", "."), bg='#FFC300') Period.grid(row=5, sticky="w", padx=84) Add = Button(win, text="+", width=10, height=2, command = lambda : screen.insert("end", "+"), bg='#FFC300') Add.grid(row=5, sticky="w", padx=168, pady=5)</pre>	<p>Similar to the functions used earlier this part of the program shares similar traits wherein it uses the Button() function however this is the part where “.” and “+” is added to the functionality of the calculator along with the number 0</p>
<pre>Equal = Button(win, text="=", width=34, height=2, command=res, bg='#FF5733') Equal.grid(row=6, sticky="w", padx=1, pady=5)  def res():     if screen.get() == "":         pass     elif screen.get()[0] == "0":         screen.delete(0, "end")     else:         err = screen.get()         err = eval(err)         clearf()         screen.insert("end", err)</pre>	<p>The first picture was used to add the = button and function to the program, however it wouldn't have worked without having to first define the “res” command. The second picture shows what the “res” command is going to do through the use of if-else statements.</p>

### III. Results



### IV. Conclusion

In summary, our group managed to get the job done. I used a program such as ".delete" to delete the contents of the program. I also named the button '7' for program-wide formatting, and added '+' and '.' as well. with the button (). Then I programmed the '=' and defined the 'res' command in the if-else statement. Overall, we were able to complete all the tasks and ensure that the design and colour were incorporated into the piece.

### V. Reference

<https://www.geeksforgeeks.org/python-simple-gui-calculator-using-tkinter/>