

Assignment: 02

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Simple calculator

source code screenshot

```
python > Assignments > Assignment2 > Assign2 > calculator_app_GUI.py > SimpleCalculator > __init__
1  # Created by Shreejana Shrestha
2
3  import tkinter as tk
4  from tkinter import messagebox
5
6  class SimpleCalculator:
7      def __init__(self, root):
8          self.root = root
9          self.root.title("Simple Calculator")
10
11         # setting background color and border
12         self.root.configure(bg='gray')
13         self.root.attributes('-alpha', 0.95)
14
15         # initialize variables
16         self.num1 = tk.StringVar()
17         self.num2 = tk.StringVar()
18         self.operation = tk.StringVar(value="add")
19
20         # calling function to Create UI components
21         self.create_widgets()
22
23     def create_widgets(self):
24         # adding Heading label
25         tk.Label(self.root, text="Simple Calculator", font=("Helvetica", 16), bg='gray').grid(row=0, column=0, columnspan=2)
26
27         # Radio buttons for operation selection in vertical layout
28         tk.Radiobutton(self.root, text="Add", variable=self.operation, value="add", bg='gray').grid(row=1, column=0, columnspan=2)
29         tk.Radiobutton(self.root, text="Multiply", variable=self.operation, value="multiply", bg='gray').grid(row=2, column=0, columnspan=2)
```

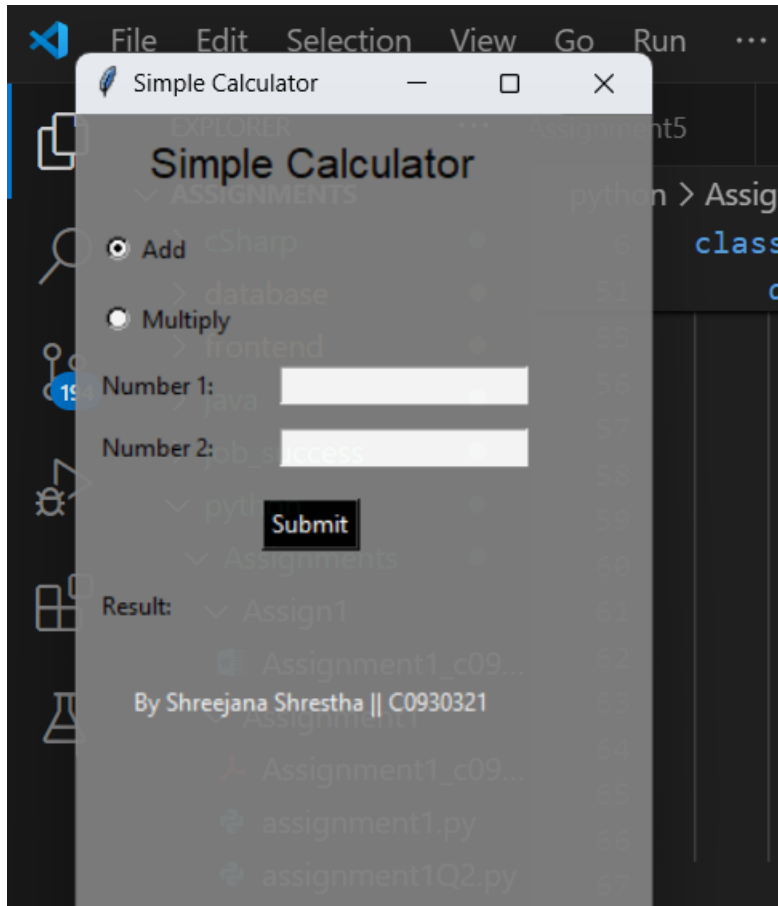
python > Assignments > Assignment2 > Assign2 > calculator_app_GUI.py > SimpleCalculator > __init__

```
6 class SimpleCalculator:
23     def create_widgets(self):
30
31         # Entry for number 1
32         tk.Label(self.root, text="Number 1:", bg='gray').grid(row=3, column=0, padx=10, pady=5, sticky='w')
33         tk.Entry(self.root, textvariable=self.num1).grid(row=3, column=1, padx=10, pady=5)
34
35         # Entry for number 2
36         tk.Label(self.root, text="Number 2:", bg='gray').grid(row=4, column=0, padx=10, pady=5, sticky='w')
37         tk.Entry(self.root, textvariable=self.num2).grid(row=4, column=1, padx=10, pady=5)
38
39         # Submit button
40         tk.Button(self.root, text="Submit", command=self.calculate, bg='black', fg='white').grid(row=5, column=0, col
41
42         # displaying result
43         tk.Label(self.root, text="Result:", bg='gray').grid(row=6, column=0, padx=10, pady=5, sticky='w')
44         self.result_label = tk.Label(self.root, text="", bg='gray', fg='white', font=("Helvetica", 12, "bold"))
45         self.result_label.grid(row=6, column=1, padx=10, pady=5, sticky='w')
46
47         # By Label
48         tk.Label(self.root, text="By Shreejana Shrestha || C0930321", bg='gray', fg='white').grid(row=7, column=0, co
49
50 # function for the calculation operation of add/multiply
51     def calculate(self):
52         try:
53             number1 = float(self.num1.get())
54             number2 = float(self.num2.get())
55
```

python > Assignments > Assignment2 > Assign2 > calculator_app_GUI.py > SimpleCalculator > __init__

```
6 class SimpleCalculator:
51     def calculate(self):
55
56         if self.operation.get() == "add":
57             result = number1 + number2
58         elif self.operation.get() == "multiply":
59             result = number1 * number2
60         else:
61             result = "Invalid operation"
62
63         # Update the result label
64         self.result_label.config(text=str(result))
65     except ValueError:
66         messagebox.showerror("Input Error", "Please enter valid numbers")
67
68 if __name__ == "__main__":
69     root = tk.Tk()
70     root.configure(bg='gray')
71     root.title("Simple Calculator")
72     calculator = SimpleCalculator(root)
73     root.mainloop()
74
```

output screenshot



> Assignments > Assignment2 > Assign2 > calculator_app_GUI.py >

```
class SimpleCalculator:
```

```
def calcula
```

Simple Calculator

Simple Calculator

☒ Add

☐ Multiply

Number 1: 23

Number 2: 11

Submit

Result: 34.0

```
except ValueError:
```

```
messagebox.showerror("Input Error", "Please
```

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```
if __name__ == "__main__":
```

```
root = tk.Tk()
```

```
root.configure(bg='gray')
```

```
root.title("Simple Calculator")
```

```
calculator = SimpleCalculator(root)
```

```
root.mainloop()
```

Simple Calculator

— □ ×

Simple Calculator

☒ Add

☐ Multiply

Number 1:

-22

Number 2:

10

Submit

Result:

-12.0

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Assignment5

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python > Assignments > Assignment2 > Assign2 > calculator_app_GUI.py > SimpleCa

```
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```

```
51 def calcula
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```
55
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69     root = tk.Tk()
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70     root.configure(bg='gray')
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71     root.title("Simple Calculator")
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72     calculator = SimpleCalculator(root)
```

```
73     root.mainloop()
```

```
74
```

Simple Calculator

Simple Calculator

☐ Add

☒ Multiply

Number 1:

Number 2:

Result: 121.0

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