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Batch C
SY CE

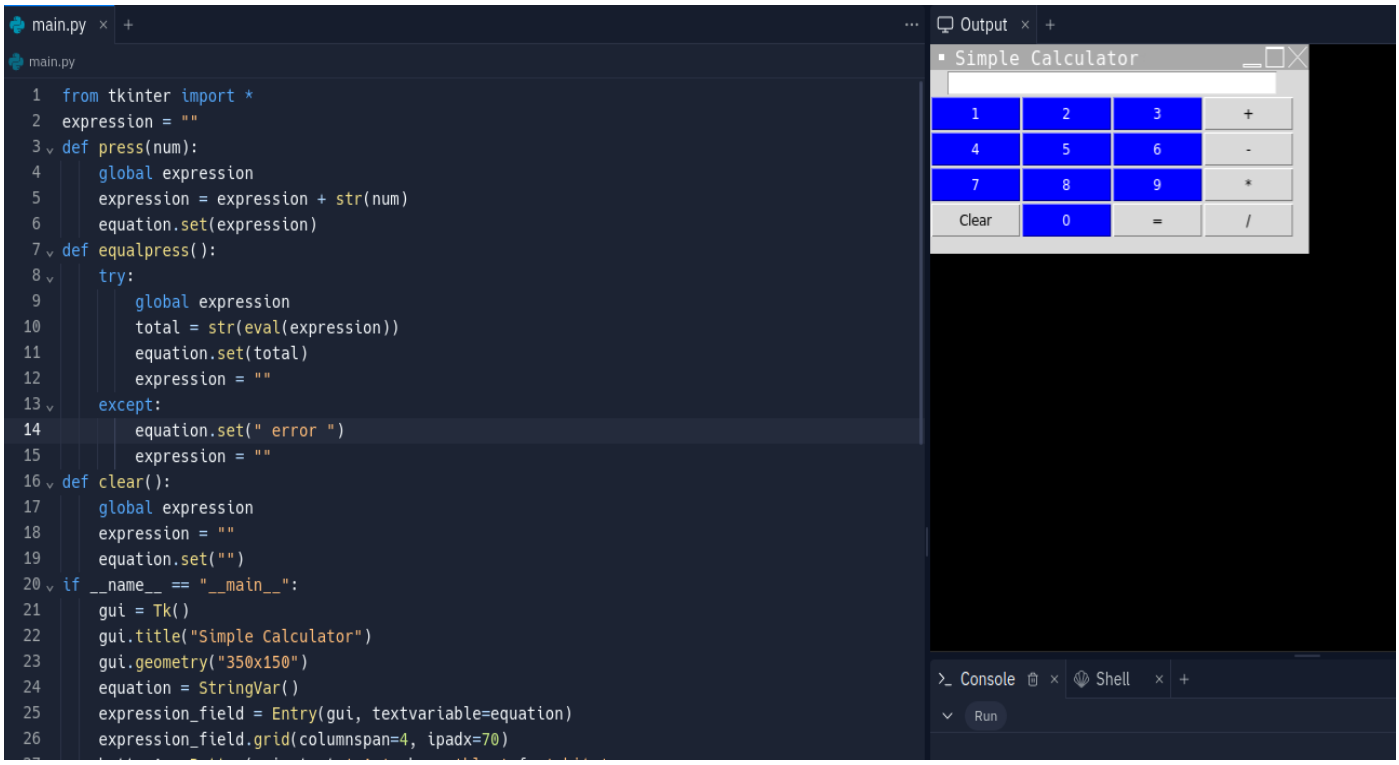
Experiment 6 :
AIM:
Create a calculator using the tkinter library.
THEORY:
Tkinter is a Python Package for creating GUI applications.
Python has a lot of GUI frameworks, but Tkinter is the only framework that's built into the Python standard library.
Tkinter has several strengths; it's cross-platform, so the same code works on Windows, macOS, and Linux.
Tkinter is lightweight and relatively painless to use compared to other frameworks.
This makes it a compelling choice for building GUI applications in Python, especially for applications where a modern shine is unnecessary, and the top priority is to build something that's functional and cross-platform quickly.

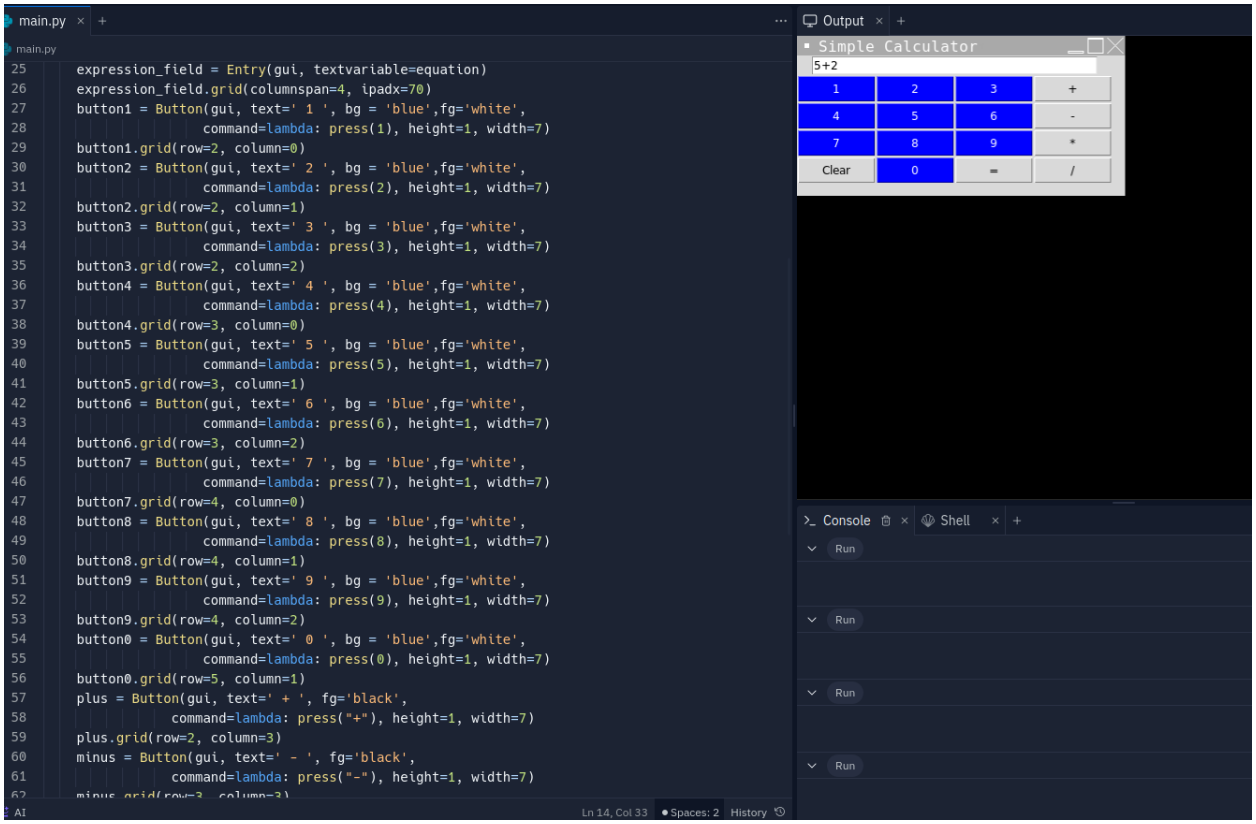
CODE:

```
from tkinter import *
expression = ""
def press(num):
	global expression
	expression = expression + str(num)
	equation.set(expression)
def equalpress():
	try:
	global expression
	total = str(eval(expression))
	equation.set(total)
	expression = ""
	except:
	equation.set(" error ")
	expression = ""
def clear():
	global expression
	expression = ""
	equation.set("")
if __name__ == "__main__":
	gui = Tk()
```

```
gui.title("Simple Calculator")
gui.geometry("350x150")
equation = StringVar()
expression_field = Entry(gui, textvariable=equation)
expression_field.grid(columnspan=4, ipadx=70)
button1 = Button(gui, text=' 1 ', bg = 'blue',fg='white',
        command=lambda: press(1), height=1, width=7)
button1.grid(row=2, column=0)
button2 = Button(gui, text=' 2 ', bg = 'blue',fg='white',
        command=lambda: press(2), height=1, width=7)
button2.grid(row=2, column=1)
button3 = Button(gui, text=' 3 ', bg = 'blue',fg='white',
        command=lambda: press(3), height=1, width=7)
button3.grid(row=2, column=2)
button4 = Button(gui, text=' 4 ', bg = 'blue',fg='white',
        command=lambda: press(4), height=1, width=7)
button4.grid(row=3, column=0)
button5 = Button(gui, text=' 5 ', bg = 'blue',fg='white',
        command=lambda: press(5), height=1, width=7)
button5.grid(row=3, column=1)
button6 = Button(gui, text=' 6 ', bg = 'blue',fg='white',
        command=lambda: press(6), height=1, width=7)
button6.grid(row=3, column=2)
button7 = Button(gui, text=' 7 ', bg = 'blue',fg='white',
        command=lambda: press(7), height=1, width=7)
button7.grid(row=4, column=0)
button8 = Button(gui, text=' 8 ', bg = 'blue',fg='white',
        command=lambda: press(8), height=1, width=7)
button8.grid(row=4, column=1)
button9 = Button(gui, text=' 9 ', bg = 'blue',fg='white',
        command=lambda: press(9), height=1, width=7)
button9.grid(row=4, column=2)
button0 = Button(gui, text=' 0 ', bg = 'blue',fg='white',
        command=lambda: press(0), height=1, width=7)
button0.grid(row=5, column=1)
plus = Button(gui, text=' + ', fg='black',
        command=lambda: press("+"), height=1, width=7)
plus.grid(row=2, column=3)
minus = Button(gui, text=' - ', fg='black',
        command=lambda: press("-"), height=1, width=7)
minus.grid(row=3, column=3)
multiply = Button(gui, text=' * ', fg='black',
        command=lambda: press("*"), height=1, width=7)
multiply.grid(row=4, column=3)
```

```
divide = Button(gui, text=' / ', fg='black',
        command=lambda: press("/"), height=1, width=7)
divide.grid(row=5, column=3)
equal = Button(gui, text=' = ', fg='black',
        command=equalpress, height=1, width=7)
equal.grid(row=5, column=2)
clear = Button(gui, text='Clear', fg='black',
        command=clear, height=1, width=7)
clear.grid(row=5, column=0)
gui.mainloop()
```




main.py
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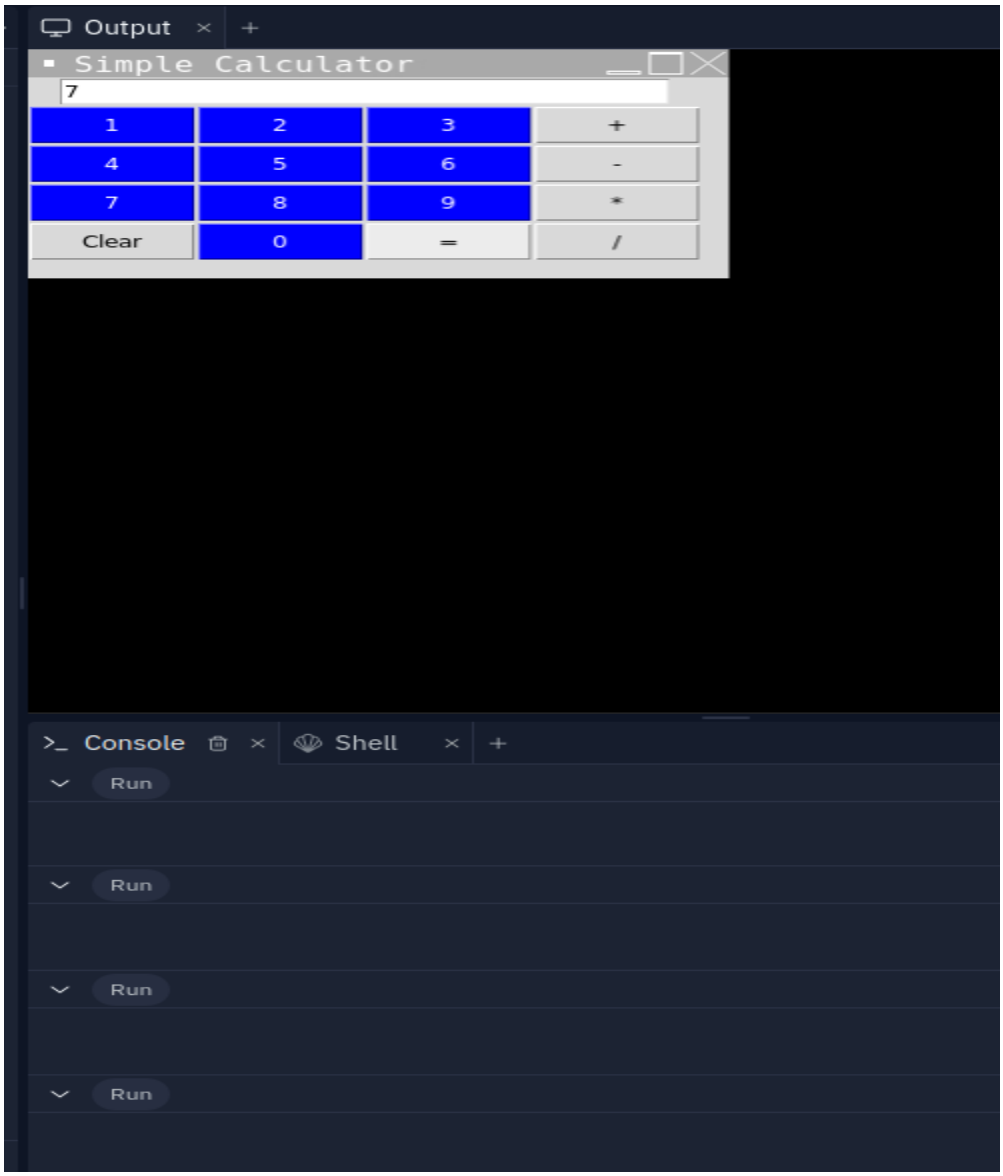
plus.grid(row=2, column=3)
minus = Button(gui, text=' - ', fg='black',
command=lambda: press("-"), height=1, width=7)
Ln 14, Col 33
Spaces: 2
History
Output
Simple Calculator
5+2
1
2
3
+
4
5
6
-
7
8
9
*
Clear
0
=
/
Console
Shell
Run
Run
Run
Run


Output
Simple Calculator
7
1
2
3
+
4
5
6
-
7
8
9
*
Clear
0
=
/
Console
Shell
Run
Run
Run
Run

main.py

```
                    command=lambda: press(5), height=1, width=7)
    button5.grid(row=3, column=1)
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                    command=lambda: press(6), height=1, width=7)
    button6.grid(row=3, column=2)
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                command=clear, height=1, width=7)
    clear.grid(row=5, column=0)
    gui.mainloop()
```
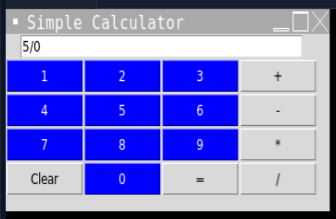

Output



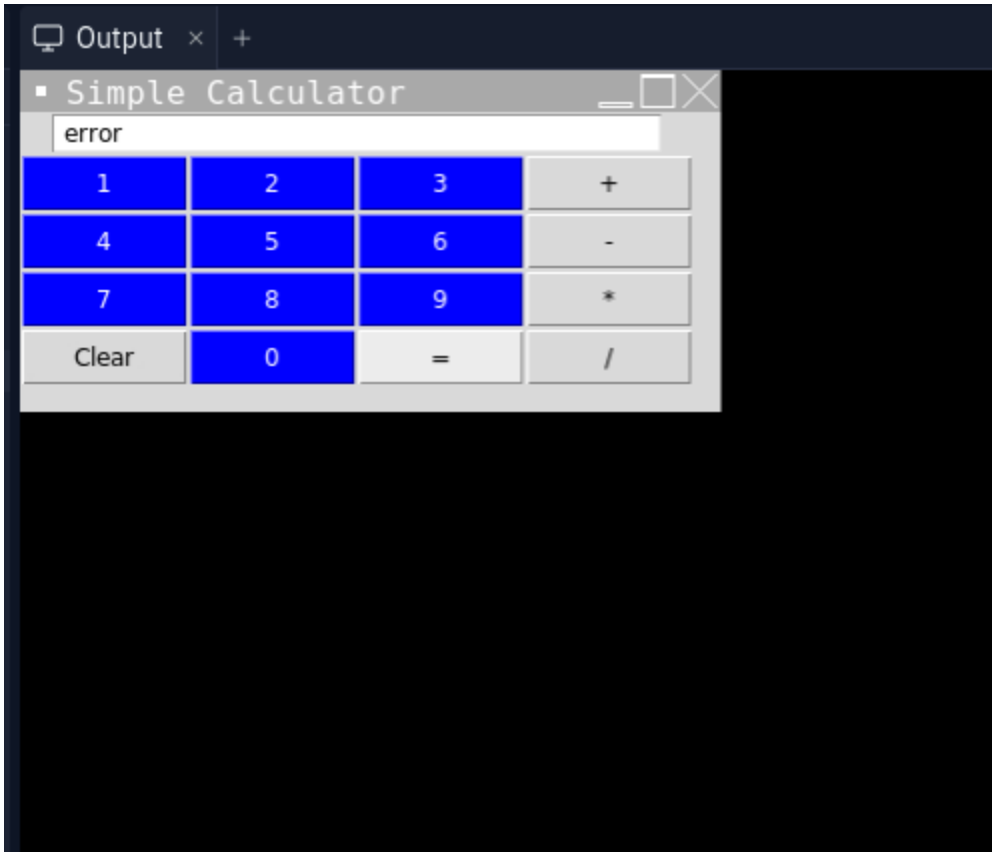
Console Shell

Run

Run

Run

Run



CONCLUSION:Thus we learnt about the tkinter, the Python Package for creating GUI applications.