MINI PROJECT

Develop a desktop application - Basic arithmetic calculator which performs addition, subtraction, multiplication, division and mod operation using GUI.

Mini project.py - C:/Users/KAVYA SRI/Desktop/python 3/Mini project.py (3.11.1)

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```
# Python program to create a simple GUI
# calculator using Tkinter

# import everything from tkinter module
from tkinter import *

expression = ""  # globally declration of the expression variable


# Function to update expression in the text entry box
def press(num):
        global expression

        # concatenation of string
        expression = expression + str(num)

        # update the expression by using set method
        equation.set(expression)


# Function to evaluate the final expression
def equalpress():
        try:

                global expression

                # eval function evaluate the expression and str function convert the resultinto string
                total = str(eval(expression))

                equation.set(total)

                # initialize the expression variable by empty string
                expression = ""

        # if error is generate then handle by the except block
        except:

                equation.set(" error ")
                expression = ""


# Function to clear the contents
# of text entry box
def clear():
        global expression
        expression = ""
        equation.set("")
```

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# of text entry box
def clear():
        global expression
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        equation.set("")


# Driver code
if __name__ == "__main__":
        # create a GUI window
        gui = Tk()

        # set the background colour of GUI window
        gui.configure(background="light green")

        # set the title of GUI window
        gui.title("Simple Calculator")

        # set the configuration of GUI window
        gui.geometry("270x150")

        # StringVar() is the variable class
        # we create an instance of this class
        equation = StringVar()

        # create the text entry box for
        # showing the expression .
        expression_field = Entry(gui, textvariable=equation)

        # grid method is used for placing
        # the widgets at respective positions
        # in table like structure .
        expression_field.grid(columnspan=4, ipadx=70)
```

```
    button1 = Button(gui, text=' 1 ', fg='black', bg='yellow',
                                    command=lambda: press(1), height=1, width=7)
    button1.grid(row=2, column=0)

    button2 = Button(gui, text=' 2 ', fg='black', bg='yellow',
                                    command=lambda: press(2), height=1, width=7)
    button2.grid(row=2, column=1)

    button3 = Button(gui, text=' 3 ', fg='black', bg='yellow',
                                    command=lambda: press(3), height=1, width=7)
    button3.grid(row=2, column=2)

    button4 = Button(gui, text=' 4 ', fg='black', bg='yellow',
                                    command=lambda: press(4), height=1, width=7)
    button4.grid(row=3, column=0)

    button5 = Button(gui, text=' 5 ', fg='black', bg='yellow',
                                    command=lambda: press(5), height=1, width=7)
    button5.grid(row=3, column=1)

    button6 = Button(gui, text=' 6 ', fg='black', bg='yellow',
                                    command=lambda: press(6), height=1, width=7)
    button6.grid(row=3, column=2)

    button7 = Button(gui, text=' 7 ', fg='black', bg='yellow',
                                    command=lambda: press(7), height=1, width=7)
    button7.grid(row=4, column=0)

    button8 = Button(gui, text=' 8 ', fg='black', bg='yellow',
                                    command=lambda: press(8), height=1, width=7)
    button8.grid(row=4, column=1)

    button9 = Button(gui, text=' 9 ', fg='black', bg='yellow',
                                    command=lambda: press(9), height=1, width=7)
    button9.grid(row=4, column=2)

    button0 = Button(gui, text=' 0 ', fg='black', bg='yellow',
                                    command=lambda: press(0), height=1, width=7)
    button0.grid(row=5, column=0)

    plus = Button(gui, text=' + ', fg='black', bg='red',
                               command=lambda: press("+"), height=1, width=7)
    plus.grid(row=2, column=3)

    minus = Button(gui, text=' - ', fg='black', bg='red',
```

```
minus = Button(gui, text=' - ', fg='black', bg='red',
                        command=lambda: press("-"), height=1, width=7)
minus.grid(row=3, column=3)

multiply = Button(gui, text=' * ', fg='black', bg='red',
                                command=lambda: press("*"), height=1, width=7)
multiply.grid(row=4, column=3)

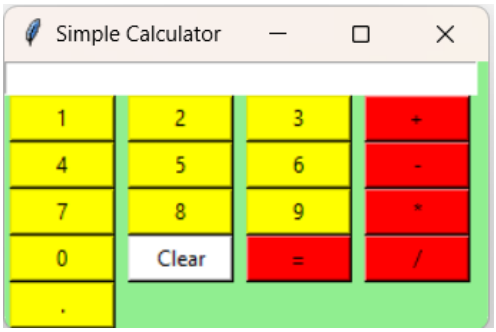
divide = Button(gui, text=' / ', fg='black', bg='red',
                                command=lambda: press("/"), height=1, width=7)
divide.grid(row=5, column=3)

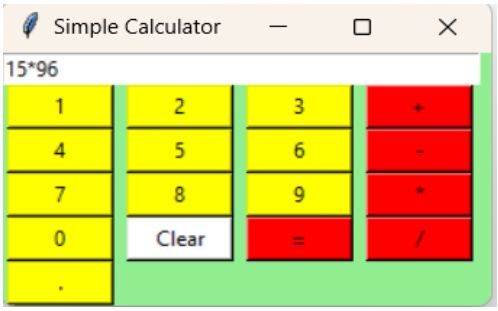
equal = Button(gui, text=' = ', fg='black', bg='red',
                        command=equalpress, height=1, width=7)
equal.grid(row=5, column=2)

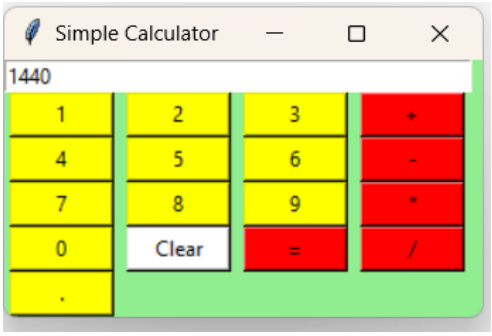
clear = Button(gui, text='Clear', fg='black', bg='red',
                        command=clear, height=1, width=7)
clear.grid(row=5, column='1')

Decimal= Button(gui, text='.', fg='black', bg='yellow',
                                command=lambda: press('.'), height=1, width=7)
Decimal.grid(row=6, column=0)
# start the GUI
gui.mainloop()
```

Output:


Simple Calculator
1
2
3
+
4
5
6
-
7
8
9
*
0
Clear
=
/
.


Simple Calculator
15*96
1
2
3
+
4
5
6
-
7
8
9
*
0
Clear
=
/
.


Simple Calculator
1440
1
2
3
+
4
5
6
-
7
8
9
*
0
Clear
=
/
.