# Python program to create a simple GUI

# calculator using Tkinter

# import everything from tkinter module

from tkinter import \*

# globally declare the expression variable

expression = ""

# Function to update expression

# in the text entry box

def press(num):

# point out the global expression variable

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 and except statement is used

# for handling the errors like zero

# division error etc.

# Put that code inside the try block

# which may generate the error

try:

global expression

# eval function evaluate the expression

# and str function convert the result

# into 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("")

# 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)

# create a Buttons and place at a particular

# location inside the root window .

# when user press the button, the command or

# function affiliated to that button is executed .

button1 = Button(gui, text=' 1 ', fg='black', bg='red',

command=lambda: press(1), height=1, width=7)

button1.grid(row=2, column=0)

button2 = Button(gui, text=' 2 ', fg='black', bg='red',

command=lambda: press(2), height=1, width=7)

button2.grid(row=2, column=1)

button3 = Button(gui, text=' 3 ', fg='black', bg='red',

command=lambda: press(3), height=1, width=7)

button3.grid(row=2, column=2)

button4 = Button(gui, text=' 4 ', fg='black', bg='red',

command=lambda: press(4), height=1, width=7)

button4.grid(row=3, column=0)

button5 = Button(gui, text=' 5 ', fg='black', bg='red',

command=lambda: press(5), height=1, width=7)

button5.grid(row=3, column=1)

button6 = Button(gui, text=' 6 ', fg='black', bg='red',

command=lambda: press(6), height=1, width=7)

button6.grid(row=3, column=2)

button7 = Button(gui, text=' 7 ', fg='black', bg='red',

command=lambda: press(7), height=1, width=7)

button7.grid(row=4, column=0)

button8 = Button(gui, text=' 8 ', fg='black', bg='red',

command=lambda: press(8), height=1, width=7)

button8.grid(row=4, column=1)

button9 = Button(gui, text=' 9 ', fg='black', bg='red',

command=lambda: press(9), height=1, width=7)

button9.grid(row=4, column=2)

button0 = Button(gui, text=' 0 ', fg='black', bg='red',

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',

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='red',

command=lambda: press('.'), height=1, width=7)

Decimal.grid(row=6, column=0)

# start the GUI

gui.mainloop()