

Calculator using tkinter

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from tkinter import *
win = Tk() # This is to create a basic window
win.geometry("324x324") # this is for the size of the window
#win.resizable(0, 0) # this is to prevent from resizing the window
win.title("Calculator")

def btn_click(item):
    global expression
    expression = expression + str(item)
    input_text.set(expression)

def bt_clear():
    global expression
    expression = ""
    input_text.set("")

def bt_equal():
    global expression
    result = str(eval(expression)) # 'eval':This function is used to evaluates
the string expression directly
    input_text.set(result)
    expression = ""

expression = ""

input_text = StringVar()

# Let us creating a frame for the input field

input_frame = Frame(win, width=250, height=50, bd=0,
highlightbackground="black", highlightcolor="black", highlightthickness=2)

input_frame.pack(side=TOP)

#Let us create a input field inside the 'Frame'

input_field = Entry(input_frame, font=('arial', 18, 'bold'),
textvariable=input_text, width=50, bg="white", bd=0, justify=RIGHT)

input_field.grid(row=0, column=0)
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input_field.pack(ipady=10) # 'ipady' is internal padding to increase the
height of input field

#Let us creating another 'Frame' for the button below the 'input_frame'

btns_frame = Frame(win, width=312, height=272.5, bg="green")

btns_frame.pack()

# first row

clear = Button(btns_frame, text = "C", fg = "black", width = 32, height = 3,
bd = 0, bg = "red", cursor = "hand2", command = lambda: bt_clear()).grid(row =
0, column = 0, columnspan = 3, padx = 3, pady = 1)

divide = Button(btns_frame, text = "/", fg = "black", width = 10, height = 3,
bd = 0, bg = "red", cursor = "hand2", command = lambda:
btn_click("/")).grid(row = 0, column = 3, padx = 3, pady = 1)

# second row

one = Button(btns_frame, text = "1", fg = "black", width = 10, height = 3, bd
= 0, bg = "red", cursor = "hand2", command = lambda: btn_click(1)).grid(row =
1, column = 0, padx = 3, pady = 1)

Two = Button(btns_frame, text = "2", fg = "black", width = 10, height = 3, bd
= 0, bg = "red", cursor = "hand2", command = lambda: btn_click(2)).grid(row =
1, column = 1, padx = 3, pady = 1)

three = Button(btns_frame, text = "3", fg = "black", width = 10, height = 3,
bd = 0, bg = "red", cursor = "hand2", command = lambda: btn_click(3)).grid(row
= 1, column = 2, padx = 3, pady = 1)

multiply = Button(btns_frame, text = "*", fg = "black", width = 10, height =
3, bd = 0, bg = "red", cursor = "hand2", command = lambda:
btn_click("*")).grid(row = 1, column = 3, padx = 3, pady = 1)

# third row

four = Button(btns_frame, text = "4", fg = "black", width = 10, height = 3, bd
= 0, bg = "red", cursor = "hand2", command = lambda: btn_click(4)).grid(row =
2, column = 0, padx = 3, pady = 1)

five = Button(btns_frame, text = "5", fg = "black", width = 10, height = 3, bd
= 0, bg = "red", cursor = "hand2", command = lambda: btn_click(5)).grid(row =
2, column = 1, padx = 3, pady = 1)

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six = Button(btns_frame, text = "6", fg = "black", width = 10, height = 3, bd
= 0, bg = "red", cursor = "hand2", command = lambda: btn_click(6)).grid(row =
2, column = 2, padx = 3, pady = 1)

minus = Button(btns_frame, text = "-", fg = "black", width = 10, height = 3,
bd = 0, bg = "red", cursor = "hand2", command = lambda: btn_click("-
")).grid(row = 2, column = 3, padx = 3, pady = 1)

# fourth row

seven = Button(btns_frame, text = "7", fg = "black", width = 10, height = 3,
bd = 0, bg = "red", cursor = "hand2", command = lambda: btn_click(7)).grid(row
= 3, column = 0, padx = 3, pady = 1)

eight = Button(btns_frame, text = "8", fg = "black", width = 10, height = 3,
bd = 0, bg = "red", cursor = "hand2", command = lambda: btn_click(8)).grid(row
= 3, column = 1, padx = 3, pady = 1)

nine = Button(btns_frame, text = "9", fg = "black", width = 10, height = 3, bd
= 0, bg = "red", cursor = "hand2", command = lambda: btn_click(9)).grid(row =
3, column = 2, padx = 3, pady = 1)

plus = Button(btns_frame, text = "+", fg = "black", width = 10, height = 3, bd
= 0, bg = "red", cursor = "hand2", command = lambda: btn_click("+")).grid(row
= 3, column = 3, padx = 3, pady = 1)

# fourth row

zero = Button(btns_frame, text = "0", fg = "black", width = 21, height = 3, bd
= 0, bg = "red", cursor = "hand2", command = lambda: btn_click(0)).grid(row =
4, column = 0, columnspan = 2, padx = 3, pady = 1)

point = Button(btns_frame, text = ".", fg = "black", width = 10, height = 3,
bd = 0, bg = "red", cursor = "hand2", command = lambda:
btn_click(".")).grid(row = 4, column = 2, padx = 3, pady = 1)

equals = Button(btns_frame, text = "=", fg = "black", width = 10, height = 3,
bd = 0, bg = "red", cursor = "hand2", command = lambda: bt_equal()).grid(row =
4, column = 3, padx = 3, pady = 1)

win.mainloop()
```

output

