Subject: Python **SAP ID: 60004220253 – Devansh Mehta**

Experiment No. 08

Aim: Creating GUI with python containing widgets such as labels, textbox, radio, checkboxes and custom dialog boxes.

Code:

```
from tkinter import *
win = Tk()
win.geometry("312x324")
win.resizable(0, 0)
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))
    input_text.set(result)
    expression = ""
expression = ""
input_text = StringVar()
input_frame = Frame(win, width=312,
height=50, bd=0,
highlightbackground="black",
highlightcolor="black",
highlightthickness=2)
input_frame.pack(side=TOP)
input_field = Entry(input_frame,
font=('arial', 18, 'bold'),
textvariable=input_text, width=50,
bg="#eee", bd=0, justify=RIGHT)
input_field.grid(row=0, column=0)
input_field.pack(ipady=10)
btns_frame = Frame(win, width=312,
height=272.5, bg="grey")
btns_frame.pack()
clear = Button(btns_frame, text = "C", fg =
"black", width = 32, height = 3, bd = 0, bg
= "#eee", cursor = "hand2", command =
lambda: bt_clear()).grid(row = 0, column =
0, columnspan = 3, padx = 1, pady = 1)
divide = Button(btns_frame, text = "/", fg
= "black", width = 10, height = 3, bd = 0,
bg = "#eee", cursor = "hand2", command =
lambda: btn_click("/")).grid(row = 0,
column = 3, padx = 1, pady = 1)
seven = Button(btns_frame, text = "7", fg
= "black", width = 10, height = 3, bd = 0,
bg = "#fff", cursor = "hand2", command =
lambda: btn_click(7)).grid(row = 1,
column = 0, padx = 1, pady = 1)
eight = Button(btns_frame, text = "8", fg =
"black", width = 10, height = 3, bd = 0, bg
= "#fff", cursor = "hand2", command =
lambda: btn_click(8)).grid(row = 1,
column = 1, padx = 1, pady = 1)
nine = Button(btns_frame, text = "9", fg =
"black", width = 10, height = 3, bd = 0, bg
```

```
= "#fff", cursor = "hand2", command =
lambda: btn_click(9)).grid(row = 1,
column = 2, padx = 1, pady = 1)

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

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

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

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

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

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

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

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

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

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

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

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

win.mainloop()
```

A.Y. 2022-2023

Subject: Python **SAP ID: 60004220253 – Devansh Mehta**

Output: