**Calculator App: Source Code**

Source code for calculator app:

1. from tkinter import \*
2. import ast
3. root = Tk()
5. #writing a function to get button clicked and add it to entry widget
6. i = 0
7. # this function gets the number to be added and ads it to input
8. def get\_number(num):
9. global i
10. # insert the num at index i
11. display.insert(i,num)
12. # Increment the index
13. i+=1
15. def get\_operation(operator):
16. global i
17. length = len(operator)
18. display.insert(i,operator)
19. i+=length
21. def clear\_all():
22. display.delete(0, END)

25. def calculate():
26. entire\_string = display.get()
27. try:
28. #a = parser.expr(entire\_string).compile()
29. node = ast.parse(entire\_string,mode="eval")
30. result = eval(compile(node,'<string>','eval'))
31. clear\_all()
32. display.insert(0, result)
33. except Exception:
34. clear\_all()
35. display.insert(0, "Error")

38. def undo():
39. entire\_string = display.get()
40. if len(entire\_string):
41. new\_string = entire\_string[:-1]
42. clear\_all()
43. display.insert(0, new\_string)
44. else:
45. clear\_all()
46. display.insert(0, "")

49. #Let's first add an input field which will be Entry widget
50. display = Entry(root)
51. display.grid(row=1,columnspan=6,sticky=W+E)
53. #adding buttons form 1 to 9
54. numbers =[1,2,3,4,5,6,7,8,9]
55. counter=0
56. for x in range(3):
57. for y in range(3):
58. button\_text = numbers[counter]
59. button = Button(root,text=button\_text,width=2,height=2,command=lambda text=button\_text: get\_number(text))
60. button.grid(row=x+2,column=y)
61. counter+=1
63. #adding zero on row 5
64. button = Button(root,text="0",width=2,height=2,command=lambda:get\_number(0))
65. button.grid(row=5,column=1)

68. #adding AC and = button
69. Button(root, text="AC",width=2,height=2,command=lambda:clear\_all()).grid(row=5, column=0)
70. Button(root, text="=",width=2,height=2,command=lambda :calculate()).grid(row=5, column=2)
72. #adding the delete / undo button
73. Button(root, text="<-", width=2,height=2, command=lambda: undo()).grid(row=5, column=4)
75. #now column 3 is empty, lets fill it up with operations
76. count = 0
77. operations =['+','-','\*','/','\*3.14',"%","(","\*\*",")","\*\*2"]
78. for x in range(4):
79. for y in range(3):
80. if count<len(operations):
81. button = Button(root,text=operations[count],width=2,height=2,command= lambda text=operations[count] : get\_operation(text))
82. count+=1
83. button.grid(row=x+2,column=y+3)
85. root.mainloop()