from future.moves import tkinter

import math

def click(val):

e = entry.get()

ans = " "

try:

if val == "C":

e = e[0:len(e) - 1]

entry.delete(0, "end")

entry.insert(0, e)

return

elif val == "CE":

entry.delete(0, "end")

elif val == "√":

ans = math.sqrt(eval(e))

elif val == "π":

ans = math.pi

elif val == "cosθ":

ans = math.cos(math.radians(eval(e)))

elif val == "sinθ":

ans = math.sin(math.radians(eval(e)))

elif val == "tanθ":

ans = math.tan(math.radians(eval(e)))

elif val == "2π":

ans = 2 \* math.pi

elif val == "cosh":

ans = math.cosh(eval(e))

elif val == "sinh":

ans = math.sinh(eval(e))

elif val == "tanh":

ans = math.tanh(eval(e))

elif val == chr(8731):

ans = eval(e) \*\* (1 / 3)

elif val == "x\u02b8":

entry.insert("end", "\*\*")

return

elif val == "x\u00B3":

ans = eval(e) \*\* 3

elif val == "x\u00B2":

ans = eval(e) \*\* 2

elif val == "ln":

ans = math.log2(eval(e))

elif val == "deg":

ans = math.degrees(eval(e))

elif val == "rad":

ans = math.radians(eval(e))

elif val == "e":

ans = math.e

elif val == "log10":

ans = math.log10(eval(e))

elif val == "x!":

ans = math.factorial(eval(e))

elif val == chr(247):

entry.insert("end", "/")

return

elif val == "=":

ans = eval(e)

else:

entry.insert("end", val)

return

entry.delete(0, "end")

entry.insert(0, ans)

except SyntaxError:

pass

root = tkinter.Tk()

root.title("Scientific Calculator")

root.geometry("680x486+100+100")

root.config(bg="black")

entry = tkinter.Entry(root, font=("arial", 20, "bold"), bg="black", fg="white", bd=10, width=30)

entry.grid(row=0, column=0, columnspan=8)

button\_list = ["C", "CE", "√", "+", "π", "cosθ", "tanθ", "sinθ", "1", "2", "3", "-", "2π", "cosh", "tanh", "sinh",

"4", "5", "6", "\*", chr(8731), "x\u02b8", "x\u00B3", "x\u00B2", "7", "8", "9", chr(247), "ln", "deg",

"rad", "e", "0", ".", "%", "=", "log10", "(", ")", "x!"]

r = 1

c = 0

for i in button\_list:

button = tkinter.Button(root, width=5, height=2, bd=2, text=i, bg="black", fg="white",

font=("arial", 18, "bold"), command=lambda button=i: click(button))

button.grid(row=r, column=c, pady=1)

c += 1

if c > 7:

r += 1

c = 0

root.mainloop()