from tkinter import \*

import math

root = Tk()

blank\_space = " "

root.title (50 \* blank\_space + "VS Code Calculation")

root.resizable(width =FALSE, height = False)

root.geometry("438x573+460+40")

coverFrame = Frame (root, bd=20, pady=2, relief = RIDGE)

coverFrame.grid()

coverMainFrame = Frame (coverFrame, bd=10, pady=2, bg='cadetblue',  relief = RIDGE)

coverMainFrame.grid()

MainFrame = Frame (coverMainFrame, bd=5, pady=2, relief = RIDGE)

MainFrame.grid()

class Calculator():

    def \_\_init\_\_(self):

        self.total = 0

        self.current =""

        self.input\_value= True

        self.check\_sum = False

        self.op = ""

        self.result = False

    def numberEnter(self,num):

        self.result = False

        firstnum = entDisplay.get()

        secondnum = str(num)

        if self.input\_value:

            self.current = secondnum

            self.input\_value = False

        else:

            if secondnum == '.':

                if secondnum in firstnum():

                    return

            self.current = firstnum + secondnum

        self.display(self.current)

    def display(self,value):

        entDisplay.delete(0, END)

        entDisplay.insert(0, value)

added\_value = Calculator()

entDisplay = Entry(MainFrame, font=('arial',18, 'bold'), bd=14, width=26,bg='cadetblue', justify=RIGHT)

entDisplay.grid(row =0, column=0, columnspan=4, pady=1)

entDisplay.insert(0, "0")

numpad = "789456123"

i = 0

btn = []

for j in range(3,6):

    for k in range(3):

        btn.append(Button(MainFrame, width=6,height=2, font=('arial',16, 'bold'), bd=4, text=numpad[i]))

        btn[i].grid(row=j, column=k, pady=1)

        btn[i]["command"] = lambda x=numpad[i]: added\_value.numberEnter(x)

        i += 1

btnBackSpace=Button(MainFrame, width=6, height=2, font=('arial', 16, 'bold'), bd=4, text="←",

bg='yellow')

btnBackSpace.grid(row=1, column=0, pady=1)

btnClear=Button(MainFrame, width=6, height=2, font=('arial', 16, 'bold'), bd=4, text=chr(67),

bg='cadetblue')

btnClear.grid(row=1, column=1, pady=1)

btnClearAll=Button(MainFrame, width=6, height=2, font=('arial', 16, 'bold'), bd=4,

text=chr(67)+chr(69),bg='cadet blue')

btnClearAll.grid(row=1, column=2, pady=1)

btnPM= Button(MainFrame, width=6, height=2, font=('arial', 16, 'bold'), bd=4, text=chr(177),

bg='cadet blue')

btnPM.grid(row=1, column=3, pady=1)

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btnSq = Button(MainFrame, width=6, height=2, font=('arial', 16, 'bold'), bd=4, text="√")

btnSq.grid(row=2, column=0, pady=1)

btnCos = Button(MainFrame, width=6, height=2, font=('arial', 16, 'bold'), bd=4, text="Cos")

btnCos.grid(row=2, column=1, pady=1)

btntan = Button(MainFrame, width=6, height=2, font=('arial', 16, 'bold'), bd=4, text="Tan")

btntan.grid(row=2, column=2, pady=1)

btnsin = Button(MainFrame, width=6, height=2, font=('arial', 16, 'bold'), bd=4, text="Sin",

bg='cadet blue')

btnsin.grid(row=2, column=3, pady=1)

#=============================================Scientific=====================================================#

btnAdd = Button(MainFrame, width=6, height=2, font=('arial', 16, 'bold'), bd=4, text="+",

bg='cadet blue')

btnAdd.grid(row=3, column=3, pady=1)

btnSub = Button(MainFrame, width=6, height=2, font=('arial', 16, 'bold'), bd=4, text="-",

bg='cadet blue')

btnSub.grid(row=4, column=3, pady=1)

btnMult = Button(MainFrame, width=6, height=2, font=('arial', 16, 'bold'), bd=4, text="\*",

bg='cadet blue')

btnMult.grid(row=5, column=3, pady=1)

btnDiv = Button(MainFrame, width=6, height=2, font=('arial', 16, 'bold'), bd=4, text=chr(274),

bg='cadet blue')

btnDiv.grid(row=6, column=3, pady=1)

btnZero = Button(MainFrame, width=6, height=2, font=('arial', 16, 'bold'), bd=4, text="0",

bg='cadet blue')

btnZero.grid(row=6, column=0, pady=1)

btnDot = Button(MainFrame, width=6, height=2, font=('arial', 16, 'bold'), bd=4, text=".",

bg='cadet blue')

btnDot.grid(row=6, column=1, pady=1)

btnEquals = Button(MainFrame, width=6, height=2, font=('arial', 16, 'bold'), bd=4, text="Sin",

bg='cadet blue')

btnEquals.grid(row=6, column=2, pady=1)

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root.mainloop()