A MINI PROJECT

IN

PYTHON

(SIMPLE CALCULATOR)

Simple Calculator in Python:

Doing a mathematical calculation in your head, not trusting your answer, so you ended up using a calculator anyway. So we have just proved the importance of the simplest machine you've ever seen. Now let's see how we can create this simple calculator using Python.

Project Prerequisites:

To implement this project you need to know the following:

1. Basic concepts of Python
2. Tkinter – To create GUI

- To install the libraries, you can use pip installer from the cmd/Terminal: Pip install tkinter

Steps to Create Simple Calculator using Python

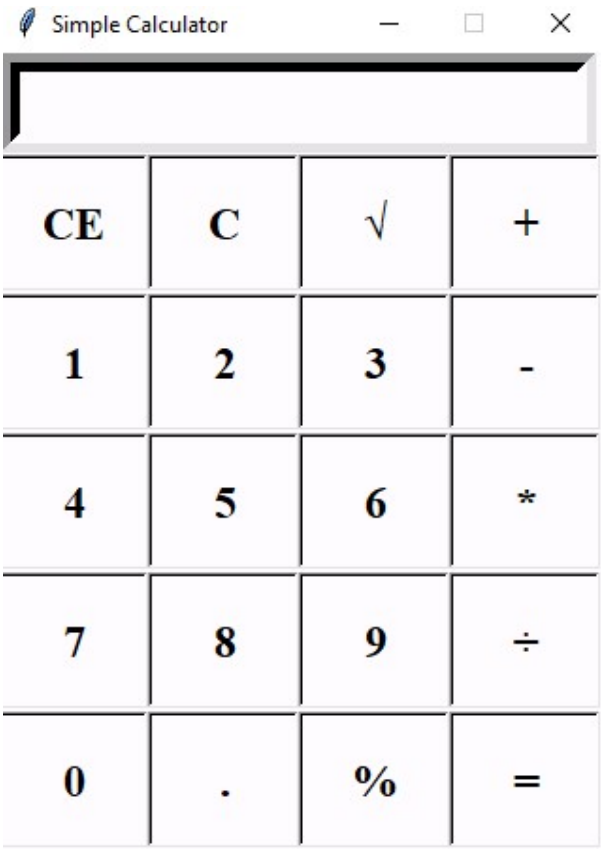
Code:

```
from tkinter import *
import math
def click(value):
    ex = entryField.get()  # 789 ex[0:len(ex)-1]
    answer = ''
    try:
        if value == 'C':
            ex = ex[0:len(ex) - 1]  # 78
            entryField.delete(0, END)
```

```
            entryField.insert(0, ex)
            return
        elif value == 'CE':
            entryField.delete(0, END)
        elif value == '√':
            answer = math.sqrt(eval(ex))
        elif value == chr(247):  # 7/2=3.5
            entryField.insert(END, "/")
            return
        elif value == '=':
            answer = eval(ex)
        else:
            entryField.insert(END, value)
            return
        entryField.delete(0, END)
        entryField.insert(0, answer)
    except SyntaxError:
        pass

root = Tk()
root.title('Simple Calculator')
root.config(bg='#FEFCFF')
root.resizable(0,0)
root.geometry('322x425')
```

```
entryField = Entry(root, font=('Times', 20, 'bold'), bg='#FEFCFF',
fg='black', bd=10, relief=SUNKEN, width=21)

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

button_text_list = ["CE", "C", "√", "+",

                    "1", "2", "3", "-",

                    "4", "5", "6", "*",

                    "7", "8", "9", chr(247),

                    "0", ".", "%", "="]

rowvalue = 1

columnvalue = 0

for i in button_text_list:

   button = Button(root, width=5, height=2, bd=2, relief=SUNKEN,
text=i, bg='#FEFCFF', fg='black',

                    font=('Times', 18, 'bold'), activebackground='#FF8A33',
command=lambda button=i: click(button))

   button.grid(row=rowvalue, column=columnvalue, pady=1)

   columnvalue += 1

   if columnvalue > 3:

      rowvalue += 1

      columnvalue = 0

root.mainloop()
```

OUTPUT:



Explanation:

After importing tkinter, we have defined following functions:

1. **Click(value):** this function takes a numeric parameter from the user and store in value variable.

2. **Ex** variable will store user input using **entryField.get()**

3. **Answer** variable will return the result accordingly user inputs.

4. **C** function simply to delete last character inside the entry field.

5. **CE** function delete the all chararcters enter by the user.

6. **Math** function is applied **sqrt** for square root of number.

7. **chr(247)** symbol is use for division.