

Calculator using Python

Program Code:-

```
import tkinter as tk

from tkinter import messagebox

def button_click(symbol):

    if symbol == '=':

        try:

            result = eval(entry.get())

            entry.delete(0, tk.END)

            entry.insert(tk.END, str(result))

        except Exception as e:

            messagebox.showerror("Error", "Invalid Input")

    elif symbol == 'C':

        entry.delete(0, tk.END)

    else:

        entry.insert(tk.END, symbol)

# Create main window

root = tk.Tk()

root.title("Calculator")

# Dark mode colors

root.config(bg="#2b2b2b")

button_color = "#333333"

text_color = "#ffffff"
```

```
# Entry field
```

```
entry = tk.Entry(root, width=35, borderwidth=5, bg=button_color, fg=text_color, font=("Arial", 14))
```

```
entry.grid(row=0, column=0, columnspan=4, padx=10, pady=10)
```

```
# Define buttons
```

```
buttons = [
```

```
    ('7', 1, 0), ('8', 1, 1), ('9', 1, 2), ('/', 1, 3),
```

```
    ('4', 2, 0), ('5', 2, 1), ('6', 2, 2), ('*', 2, 3),
```

```
    ('1', 3, 0), ('2', 3, 1), ('3', 3, 2), ('-', 3, 3),
```

```
    ('0', 4, 0), ('.', 4, 1), ('=', 4, 2), ('+', 4, 3),
```

```
    ('C', 5, 0), ('^', 5, 1), ('√', 5, 2), ('!', 5, 3) # Additional operations: exponent (^), square root (√),  
    factorial (!)
```

```
]
```

```
# Create buttons
```

```
for (text, row, column) in buttons:
```

```
    button = tk.Button(root, text=text, padx=40, pady=20, bg=button_color, fg=text_color,
```

```
                        font=("Arial", 12, "bold"), command=lambda symbol=text: button_click(symbol))
```

```
    button.grid(row=row, column=column)
```

```
# Run the main event loop
```

```
root.mainloop()
```