

MINI PROJECT

Develop a desktop application - Basic arithmetic calculator which performs addition, subtraction, multiplication, division and mod operation using GUI.

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import tkinter as tk

class Calculator:
    def __init__(self, master):
        self.master = master
        master.title("Simple Calculator")

        # Create entry widget to display input and result
        self.display = tk.Entry(master, width=25, fg='black', bg='silver', font=('Arial', 16))
        self.display.grid(row=0, column=0, columnspan=4, padx=5, pady=5)

        # Define button layout and create buttons
        button_list = [
            '7', '8', '9', '/',
            '4', '5', '6', '*',
            '1', '2', '3', '-',
            '0', '.', '=', '+'
        ]

        # Loop through button list and create buttons
        for i, char in enumerate(button_list):
            row = i // 4 + 1
            col = i % 4
            button = tk.Button(master, text=char, width=5, fg='black', bg='pink', height=2, font=('Arial', 12),
                              command=lambda value=char: self.button_click(value))
            button.grid(row=row, column=col, padx=5, pady=5)

        # Add 'C' button to clear display
        clear_button = tk.Button(master, text='C', fg='black', bg='pink', width=5, height=2, font=('Arial', 12),
                                  command=lambda: self.clear_display())
        clear_button.grid(row=5, column=0, padx=5, pady=5)

    def button_click(self, value):
        if value == '=':
            try:
                # Evaluate expression and display result
                result = eval(self.display.get())
                self.display.delete(0, tk.END)
                self.display.insert(tk.END, str(result))
            except:
                self.display.delete(0, tk.END)
                self.display.insert(tk.END, "Error")
        else:
            # Append clicked value to display
            self.display.insert(tk.END, value)

    def clear_display(self):
        self.display.delete(0, tk.END)
```

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root = tk.Tk()
calculator = Calculator(root)
root.mainloop()
```

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