Group12

March 9, 2023

Members:

1. Natthakorn Rattanakun
2. Digvijaysinh Hemantsinh Devdhara
3. Mohammand Shahid Sirajbhai Jamadar
4. Qiaoqiao Zou
5. Pongsatorn Krabuansang

GitHub repository : https://github.com/qiaoqiaozou/gropu-12_project

In [7]:
```python
from math import sqrt, pi, e
import tkinter as tk

TEXT_str = ''


def get_value():
    try:
        print('FUNCTION:', TEXT_str)
        value = str(eval(TEXT_str))
        return value
    except BaseException:
        print('wrong ! ')
        return ''
def main():
    root = tk.Tk()
    root.title("CALCULATOR")
    root.geometry('630x265+250+250')
    root.resizable(False, False)

    text_list = [
        'AC', 'DEL', '( )', '%','^',
        '7', '8', '9', '+', 'sqrt()',
        '4', '5', '6', '-', 'e',
        '1', '2', '3', '*', 'pi',
        '.', '0', '=', '/', 'cancel',
    ]

    Entry_word = tk.Entry(root, width=30, font=('Arial', 15))
    Entry_word.grid(row=0, column=0, columnspan=4)

    def CloseCal():
        root.destroy()
        exit()

    def btn_command(idx=None):
        global TEXT_str
        s = text_list[idx]
        print("INPUT : ", s)
        if s == '=':
            # Press the equal sign to call the evaluation function
            value_str = get_value()
            TEXT_str = ''   # Expression sought
            Entry_word.delete(0, tk.END)
```

```python
                    Entry_word.insert(tk.END, value_str)
            elif s == 'AC':
                TEXT_str = ''
                Entry_word.delete(0, tk.END)
            elif s == 'DEL':
                # print(Entry_word.index(tk.INSERT))
                Entry_word.delete(Entry_word.index(tk.INSERT) - 1,
                                  Entry_word.index(tk.INSERT))
                TEXT_str = Entry_word.get()
            elif s == '( )':
                Entry_word.insert(tk.INSERT, '()')
                TEXT_str = Entry_word.get()
            elif s == "^":
                Entry_word.insert(tk.INSERT, "pow(,)")
                TEXT_str = Entry_word.get()
            elif s == "%":
                Entry_word.insert(tk.INSERT, "*0.01")
                TEXT_str = Entry_word.get()
            elif s == "cancel":
                CloseCal()
            else:
                Entry_word.insert(tk.INSERT, s)
                TEXT_str = Entry_word.get()

    key = 0
    for i in range(1, 6):
        for j in range(0, 5):
            if text_list[key] == "=":
                btn = tk.Button(
                    root,
                    text=text_list[key],
                    width=10,
                    height=2,
                    relief=tk.GROOVE,
                    command=lambda idx=key: btn_command(idx),
                    bg="orange"
                )
            else:
                btn = tk.Button(
                    root,
                    text=text_list[key],
                    width=10,
                    height=2,
                    relief=tk.GROOVE,
                    command=lambda idx=key: btn_command(idx))
            btn.grid(row=i, column=j)
            key += 1

    root.mainloop()


if __name__ == "__main__":
    main()
```

```
INPUT :  5
INPUT :  +
INPUT :  2
INPUT :  =
FUNCTION: 5+2
INPUT :  DEL
INPUT :  6
INPUT :  -
INPUT :  3
INPUT :  =
FUNCTION: 6-3
INPUT :  DEL
INPUT :  6
INPUT :  *
INPUT :  2
INPUT :  =
FUNCTION: 6*2
INPUT :  DEL
INPUT :  8
INPUT :  /
INPUT :  2
INPUT :  =
FUNCTION: 8/2
INPUT :  DEL
INPUT :  ^
INPUT :  3
INPUT :  2
INPUT :  =
FUNCTION: pow(3,2)
INPUT :  DEL
INPUT :  sqrt()
INPUT :  9
INPUT :  =
FUNCTION: sqrt(9)
INPUT :  DEL
```

In [ ]: