

# GUI CALCULATOR WITH HISTORY LOGGING

## IMPORT MODULES

```
import tkinter as tk
from tkinter import messagebox,
from tkinter import
scrolledtext as scrolledtext
as os
```

## INPUT HELPER


```
INSERT(val)          val)
CLEAR()              CLEAR)
```

## HISTORY FUNCTIONS

```
load_history()
delete 1.0.)      1) / end
if n(HISTORY_FILE)) ;
history
}
```

## HISTORY FUNCTIONS

```
load_history()
delete 1.0.n(HISTORY_FILE
open (user confirma)
open history
} clear
```

[ [2025-07-25  13:09:11] 2+3 = 5

## HISTORY FILE

```
HISTORY_FILE = 'calc_history.txt'
```

## LOG FUNCTION

```
def log(entry)
try
    expr = eval(f entry())
    log(f'expr = {expr}')
    log(f"expr := {x}n")
} except
    messagebox.showerror('Error', e)
} blh
```

## GUI SETUP

```
root = tk
title = 'Calculator'
geometry = '350x550'
resizable = False
entry = entry('Area + 18'), tib
root.mainloop()
```

## OUTPUT

```
root = 'Calculator'
root.geometry = '350x550'
resizable = False
entry = Pac(padx "rad" )right(2)
root.mainloop()
```

**import tkinter as tk**

**datetime**

**messagebox**

**os**

## Functions

### log(entry)

```
time = datetime.now()
strftime("[%Y-m-ds H:%M:%S%])
line = f("time)
HISTORY_FILE
history.insert(line)
```

### calculate()

```
expr = entry.get
result = eval(expr)
log(f"expr = {result}")
```

### load\_history()

```
history.delete(1.0,END)
```

### insert(val)

```
entry.insert(tk.END, val)
```

### clear()

```
entry.delete(1.0,END)
read from HISTORY_FILE
```

## GUI Setup

### Tkinter Root

```
title("Calculator")
geometry("350x550")
resizable(False,False)
```

### Entry

Input field

### ScrolledText History

Timestamped History

### Buttons

GUI Keypad

### Scontrol Buttons

Reload & Clear  
History