

Part 4 - Building GUI Applications with ChatGPT and Tkinter

Yahya Nazer

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Part 4 - Building GUI Applications with ChatGPT and Tkinter

Purpose of This Part

In this part you learn how to write ChatGPT scripts that generate GUI applications using tkinter.

The goal is:

Objective → ChatGPT Script → Generated Python Code → Test → Improve Script → Improve GUI

Learning Objectives

- Create windows

- Create labels
- Create buttons
- Create text entry fields
- Select files and folders
- Create log windows
- Create color-coded workflow buttons
- Build practical GUI utilities

Chapter 1 - Creating Your First GUI Window

Objective

Create a simple GUI window with a title and label.

ChatGPT Script

Write a Python program.

Program Name:

Hello-GUI.py

Program Purpose:

Create a simple tkinter window.

Requirements:

1. Create a window.
2. Add a title.
3. Add a label saying Hello GUI World.
4. Window size 600x400.

Coding Standards:

1. Add a detailed program header.
2. Include Program Name, Purpose, User ChatGPT Script, Expected Output and Version.
3. Divide code into steps.
4. Add comments for beginners.

ChatGPT Generated Python Code

```
# =====
# Program Name:
# Hello-GUI.py
#
# Purpose:
# Create a simple tkinter window.
#
# User ChatGPT Script:
# Create a tkinter window with a title and label.
#
# Expected Output:
# A window appears with a label.
#
# Version:
# 1.0
```

```

# =====
# =====
# STEP 1 - Import Libraries
# =====
import tkinter as tk

# =====
# STEP 2 - Create Window
# =====
window = tk.Tk()
window.title("My First GUI")
window.geometry("600x400")

# =====
# STEP 3 - Create Label
# =====
label = tk.Label(window,text="Hello GUI World",font=("Arial",18))
label.pack(pady=40)

# =====
# STEP 4 - Run GUI
# =====
window.mainloop()

```

Chapter 2 - Buttons

Objective: Create buttons and connect them to functions.

Chapter 3 - Text Entry Fields

Objective: Collect user information through the GUI.

Chapter 4 - Folder Selection

Objective: Let the user select a folder using a dialog.

Chapter 5 - File Selection

Objective: Let the user select a file using a dialog.

Chapter 6 - Log Windows

Objective: Create scrolling log windows for status messages.

Chapter 7 - Color-Coded Workflow Buttons

Objective: Create guided workflows with gray, green, yellow and blue buttons.

Chapter 8 - Practical Utility

Build a Folder Scanner GUI using: - Select Folder - Scan Files - Log Window - Save Results - Color-Coded Buttons

Chapter 9 - Debugging GUI Programs

Use ChatGPT to explain and fix tkinter errors.

Chapter 10 - Part 4 Review

Skills Checklist

- Create windows
- Create labels
- Create buttons
- Create entry fields
- Select folders
- Select files
- Create log windows
- Create workflow buttons
- Debug GUI programs

Looking Ahead

Part 5 will focus on CSV files, Excel files, pandas, openpyxl and report generation.