Tool Tip Notes

Tooltip Series: “Whispers of Guidance in UI”

**Part 1: What Is a Tooltip, Really?**

* Definition: A small pop-up that appears when a user hovers over a UI element.
* Purpose: Offers context, hints, or instructions without cluttering the interface.
* UX Philosophy: Tooltips are like gentle whispers — they guide without interrupting.

**Part 2: Writing a Tooltip Class from Scratch**

Let’s build it step-by-step, with full beginner-friendly commentary.

import tkinter as tk

class ToolTip:

def \_\_init\_\_(self, widget, text):

self.widget = widget # The widget we want to attach the tooltip to

self.text = text # The text that will appear in the tooltip

self.tip\_window = None # This will hold the tooltip window itself

# Bind mouse events to the widget

self.widget.bind("<Enter>", self.show\_tip)

self.widget.bind("<Leave>", self.hide\_tip)

def show\_tip(self, event=None):

if self.tip\_window or not self.text:

return

# Get position of the widget on screen

x, y, \_, cy = self.widget.bbox("insert")

x += self.widget.winfo\_rootx() + 25

y += self.widget.winfo\_rooty() + cy + 25

# Create a new top-level window for the tooltip

self.tip\_window = tw = tk.Toplevel(self.widget)

tw.wm\_overrideredirect(True) # Remove window borders

tw.wm\_geometry(f"+{x}+{y}") # Position it

# Add a label with the tooltip text

label = tk.Label(tw, text=self.text, justify='left',

background="#ffffe0", relief='solid', borderwidth=1,

font=("tahoma", "8", "normal"))

label.pack(ipadx=1)

def hide\_tip(self, event=None):

if self.tip\_window:

self.tip\_window.destroy()

self.tip\_window = None

**Part 3: How to Use It**

entry = tk.Entry(root) entry.pack() ToolTip(entry, "Enter your magical value here.")

**Part 4: Enhancements & Customization**

* Delay before showing
* Fade-in effect
* Positioning tweaks
* Styling with themes
* Multi-line tooltips or rich formatting

**Part 5: Accessibility & UX Best Practices**

* Tooltips should never replace labels
* Avoid critical info in tooltips alone
* Test with screen readers and keyboard navigation