

Homework Assignment: Tkinter Basics

Definitions:

Fill in the definitions for the following terms related to the Tkinter library.

1. Listbox:

Definition: _____

2. StringVar:

Definition: _____

3. messagebox:

Definition: _____

4. Pack Geometry Manager:

Definition: _____

Coding Problem:

Create a Tkinter application that allows the user to input text into an entry widget and update a label with the entered text when a button is clicked.

Requirements:

1. The application should have an entry widget for the user to input text.
2. A button that, when clicked, updates the label with the text from the entry widget.
3. The label should initially display the text "Your text will appear here."

Steps to Complete the Coding Problem:

1. Set Up the Main Application Window:

- Create the main application window using `tk.Tk()`.
- Set the window title and size using `title()` and `geometry()` methods.

2. Define the Function to Update the Label:

- Create a function named `update_label()` that:
 - Retrieves the text from the entry widget using the `get()` method.
 - Checks if the text is not empty.
 - Updates the label's text using the `config()` method.
 - If the entry is empty, displays a warning message using `messagebox.showwarning()`.

3. Create the Entry Widget:

- Add an entry widget to the window using ``tk.Entry()``.
- Use the ``pack()`` method to add padding and display it.

4. Create the Button:

- Add a button to the window using ``tk.Button()``.
- Set the button's command to call the ``update_label()`` function.
- Use the ``pack()`` method to add padding and display it.

5. Create the Label:

- Add a label to the window using ``tk.Label()``.
- Set the initial text of the label to "Your text will appear here".
- Use the ``pack()`` method to add padding and display it.

6. Run the Main Event Loop:

- Start the Tkinter main event loop using ``root.mainloop()``.

Example Output:

The application window should look something like this:

```
...
-----
|      Text Updater      |
|-----|
| Entry Widget: [        ] |
| [Update Label Button]  |
|                        |
| Label: Your text will appear here|
|-----|
...
```