Keyboard Tester - Python GUI Script with Explanations

Complete Python Code With Explanations

import tkinter as tk

This imports the 'tkinter' module, which allows us to create GUI applications.

from tkinter import Toplevel

This imports 'Toplevel' from tkinter, used to create new popup windows.

from ttkbootstrap import Style, ttk

This imports 'Style' and 'ttk' from the 'ttkbootstrap' library to make the GUI look modern.

STANDARD_KEYS = set([...])

This creates a set of 106 common keyboard keys to compare which ones the user has pressed.

pressed_history = []

An empty list that will store the history of pressed keys.

def create_main_window():

Defines the main function that creates the GUI.

style = Style("darkly")

Applies a dark modern theme using ttkbootstrap.

root = style.master

Gets the main tkinter window from the style object.

root.title("Keyboard Tester")

Sets the window title.

root.geometry("550x450")

Sets the size of the window.

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root.configure(bg="#1e1e1e")

Sets the background color to dark grey.

root.resizable(False, False)

Prevents the window from being resized.

header = ttk.Label(...)

Creates a header label that shows 'Keyboard Tester'.

header.pack(pady=25)

Places the header with padding around it.

key_box = tk.Label(...)

Creates a label in the middle to show the key pressed.

key_box.place(...)

Places it in the center of the window.

def show_key(event):

This function is called every time a key is pressed.

key = event.keysym.lower()

Gets the key name in lowercase.

if key not in pressed_history:

Avoids duplicate entries.

pressed_history.append(key)

Adds new key to history.

key_box.config(text=key.upper())

Displays the pressed key in the box.

...key_box.after(3000...)

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Clears the key display after 3 seconds.

root.bind("<Key>", show_key)

Binds the 'show_key' function to key press events.

def show_results():

Function to open a new window showing key history.

result_win = Toplevel(root)

Creates a new popup window.

result_win.title("Key Test Results")

Sets title of the result window.

result_win.geometry("420x420")

Sets size of the result window.

result_win.configure(bg="#1e1e1e")

Applies dark background.

ttk.Label(result_win, text=...)...

Creates the title inside the results window.

frame = ttk.Frame(result_win)

A frame to hold the scrollable list.

frame.pack(...)

Places the frame in the window.

history_list = tk.Listbox(...)

Creates a listbox to show all keys pressed.

for key in pressed_history:

Loop through all saved keys.

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history_list.insert(tk.END, key.upper())

Add each key to the list.

scrollbar = ttk.Scrollbar(...)

Creates a vertical scrollbar.

history_list.config(...)

Connects scrollbar to listbox.

history_list.pack(...)

Displays the list.

scrollbar.pack(...)

Displays the scrollbar.

count_label = ttk.Label(...)

Displays 'x/106' keys pressed info.

count_label.pack(pady=15)

Adds spacing and displays label.

check_button = ttk.Button(...)

Creates the 'Check Results' button.

check_button.pack(side="bottom", pady=30)

Places the button at the bottom.

credit_label = ttk.Label(...)

Adds credit at the bottom.

credit_label.pack(side="bottom", pady=5)

Places it nicely with padding.

root.mainloop()

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Starts the GUI loop and keeps the app running.

create_main_window()

Runs the function to launch the GUI.