

## Example email and password verification tool

This example uses the Tkinter library which allows you to create graphical user interfaces. Writing Python GUI's are not part of the course syllabus but they are useful and likely something you are interested in knowing how to do.

If it is something you wish learn more about, I do have some notes on my Python website, called "GUI with TKinter". <https://pbaumgarten.com/python/> - I'm happy to create additional resources for this if you are interested please let me know.

The image shows a Python Tkinter GUI titled "My fancy app". The main window contains several input fields and a "Submit" button. An error dialog box is overlaid on the main window, displaying a rocket icon and the message "Email addresses don't match".

**Main Window: My fancy app**

- Label: Your name:
- Input field: I am groot
- Label: Your email address:
- Input field: groot@avengers.com
- Label: Repeat email address again:
- Input field: iamgroot@grootisgreat.com
- Label: Your password:
- Input field: \*\*\*
- Label: Repeat password again:
- Input field: \*\*\*
- Button: Submit

**Error Dialog Box**

- Title: Error
- Icon: Rocket icon
- Message: Email addresses don't match
- Button: OK

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from tkinter import *
from tkinter.messagebox import showerror, showinfo

def clicked():
    # Executed when submit_button is clicked
    ok = True
    # Get text strings entered in the email1 and email2 text boxes
    email1 = email1_text.get()
    email2 = email2_text.get()
    # Run checks on the email addresses provided
    if "@" not in email1:
        email1_text["bg"] = "red"
        showerror("Error", "I said, an EMAIL ADDRESS")
        ok = False
    elif email1 != email2:
        email1_text["bg"] = "red"
        email2_text["bg"] = "red"
        showerror("Error", "Email addresses don't match")
        ok = False
    else:
        email1_text["bg"] = "white"
        email2_text["bg"] = "white"
    # Get text strings entered into the password1 and password2 text boxes
    pw1 = password1_text.get()
    pw2 = password2_text.get()
    # Run checks on the passwords provided
    if len(pw1) == 0:
        password1_text["bg"] = "red"
        showerror("Error", "You must enter a password")
        ok = False
    elif pw1 != pw2:
        password1_text["bg"] = "red"
        password2_text["bg"] = "red"
        showerror("Error", "Passwords don't match")
        ok = False
    else:
        password1_text["bg"] = "white"
        password2_text["bg"] = "white"
    # Exit program if all checks have passed
    if ok:
        showinfo("Good job", "Well done, bye for now")
        exit()
    # End of clicked()

# *** MAIN PROGRAM STARTS HERE ***

# Create the window
window = Tk()
window.title("My fancy app")
window.geometry("600x400")

# Create the elements
name_label = Label(window, text="Your name:")
name_label.place(x=20, y=20)

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name_text = Entry(window, text="")
name_text.place(x=20, y=50, width=300, height=25)
name_text.focus()
email1_label = Label(window, text="Your email address:")
email1_label.place(x=20, y=80)
email1_text = Entry(window, text="")
email1_text.place(x=20, y=110, width=300, height=25)
email2_label = Label(window, text="Repeat email address again:")
email2_label.place(x=20, y=140)
email2_text = Entry(window, text="")
email2_text.place(x=20, y=170, width=300, height=25)
password1_label = Label(window, text="Your password:")
password1_label.place(x=20, y=200)
password1_text = Entry(window, text="", show="*")
password1_text.place(x=20, y=230, width=300)
password2_label = Label(window, text="Repeat password again:")
password2_label.place(x=20, y=260)
password2_text = Entry(window, text="", show="*")
password2_text.place(x=20, y=290, width=300)
submit_button = Button(window, text="Submit", command=lambda:clicked() ) # Set command to
execute the clicked() function
submit_button.place(x=20, y=320, width=100, height=25)

# Run the app
window.mainloop()
```