In Python

November 3, 2018 by Gulsanober Saba — 11 Comments

Welcome to Python GUI Login tutorial. In this tutorial i will teach you to create a Login form wher register themselves and can login. Registration and Login requires everywhere, either you are filli form or want to access any application. So in this tutorial we will see how to implement user regis login in python.

In this, we will create a GUI interface. Python provides Tkinter toolkit to develop GUI applications python, you can develop any GUI applications easily. If you have ideas then you can turn your imag into reality and make many creative things in programming. So without wasting time let's start ou GUI Login tutorial. It may be lengthy so guys please keep patience and follow this till the end, and pretty sure you will learn much knowledge and also enjoy.

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Python GUI Login Tutorial – Getting Started With Tkinter

Creating New Project

Open your IDE and create a new project and then inside this project create a python file. I prefer **PyCharm** but you can prefer anyone as it doesn't matters, but if you want to know best python IDl refer Best Python IDEs.

Importing Tkinter Module

For importing tkinter just write one line of code.

```
from tkinter import *
```

Designing Main Screen

So first of all you have to design the main screen. This screen have two buttons Login and Register see how to implement this.

```
def main_account_screen():

    main_screen = Tk()   # create a GUI window
    main_screen.geometry("300x250") # set the configuration of GUI window
    main_screen.title("Account Login") # set the title of GUI window

# create a Form label
Label(text="Choose Login Or Register", bg="blue", width="300", height="2", font=("Calibri", 13)).p
Label(text="").pack()
```

```
# create a register button
 Button(text="Register", height="2", width="30").pack()

main_screen.mainloop() # start the GUI

main_account_screen() # call the main_account_screen() function
```

- You can also customize the design of main screen as per your choice and make it more attra
- So let's see the output of this code.

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Designing New Screen For Registration

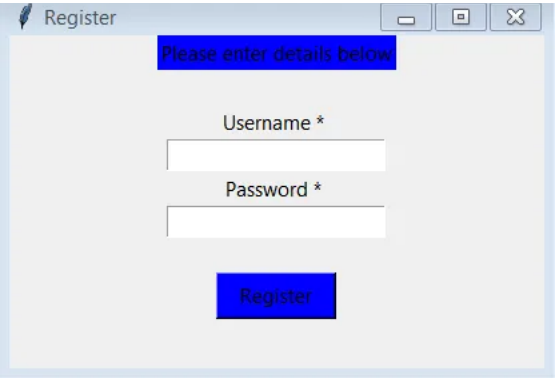
Now we will design a new screen for registration. That means if a user press register button on m then a new window will appear where users have to enter username and password. And this way t register themselves. So let's see how to do that.

```
def register():

# The Toplevel widget work pretty much like Frame,
# but it is displayed in a separate, top-level window.
#Such windows usually have title bars, borders, and other "window decorations".
# And in argument we have to pass global screen variable
```

```
    username = StringVar()
    password = StringVar()

# Set label for user's instruction
    Label(register_screen, text="Please enter details below", bg="blue").pack()
    Label(register_screen, text="").pack()

# Set username label
    username_lable = Label(register_screen, text="Username * ")
    username_lable.pack()

# Set username entry
# The Entry widget is a standard Tkinter widget used to enter or display a single line of text.

    username_entry = Entry(register_screen, textvariable=username)
    username_entry.pack()

# Set password label
    password_lable = Label(register_screen, text="Password * ")
    password_lable.pack()

# Set password entry
    password_entry = Entry(register_screen, textvariable=password, show='*')
    password_entry.pack()

    Label(register_screen, text="").pack()

# Set register button
    Button(register_screen, text="Register", width=10, height=1, bg="blue").pack()
```

And now we have to add two things inside the main_account_screen() method.

```
global main_screen

# add command=register in button widget
```



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So, as user clicks register button on main window(first) then a new screen will be appear where us enter their entry.

Assigning Functions To Register Button

Now we have to implement event on register button. It means, after filling the entries, as soon as t register button is pressed, entries are saved in a file. So let's see how to do it.

```
def register_user():

# get username and password
    username_info = username.get()
    password_info = password.get()

# Open file in write mode
    file = open(username_info, "w")

# write username and password information into file
    file.write(username_info + "\n")
    file.write(password_info)
    file.close()

    username_entry.delete(0, END)
```

And now we have to declare username, password, username_entry, password_entry as global so a following codes inside **register()** function

```
# set global variables

global username
global password
global username_entry
global password_entry
```

And add one more thing inside **register()** function

```
# add command = register

Button(register_screen, text="Register", width=10, height=1, bg="blue", command = register_user
```

And now we will finally test our registration process. So fill the username and password field in re and press register button. You will find, a **Registration Success** message on screen. So let's see the

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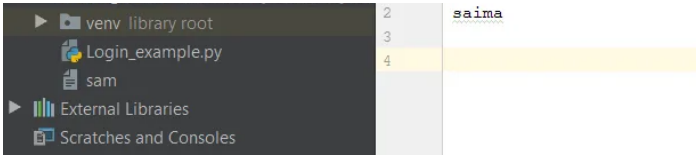
And after registration a text file has been created which contain user's informations such as usern password. So the file like –



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So you can see username and password have been saved successfully in this file.

Finally we have completed register process and now its time to move towards login process. So

Designing New Screen For Login

We have seen register process, now we have to implement login process. So for this, first of all we design a login window. It is same as register window but having little changes. So the code for logi

```
# define login function
def login():

    login_screen = Toplevel(main_screen)
    login_screen.title("Login")
    login_screen.geometry("300x250")
    Label(login_screen, text="Please enter details below to login").pack()
    Label(login_screen, text="").pack()

    global username_verify
    global password_verify

    username_verify = StringVar()
    password_verify = StringVar()


    Label(login_screen, text="Username * ").pack()
    username_login_entry = Entry(login_screen, textvariable=username_verify)
    username_login_entry.pack()
    Label(login_screen, text="").pack()
    Label(login_screen, text="Password * ").pack()
```

The above code is same as we have done in register so here I am not explaining it.

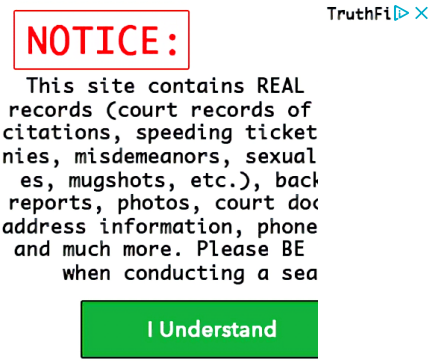
And now add a line inside main_account_screen()

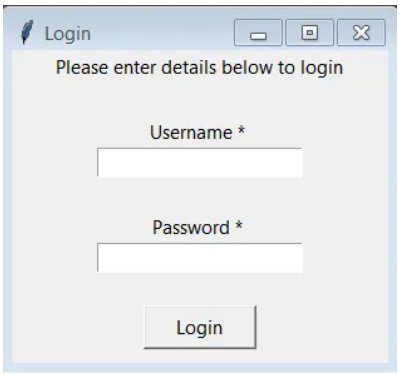
```
# add command = login

Button(text="Login", height="2", width="30", command = login).pack()
```

And now define login verification function.

```
def login_verification():
    print("working...")
```

And now our login screen look like –





Defining Verification function

```
def login_verify():
#get username and password

    username1 = username_verify.get()
    password1 = password_verify.get()
# this will delete the entry after login button is pressed
    username_login_entry.delete(0, END)
    password_login_entry.delete(0, END)

#The method listdir() returns a list containing the names of the entries in the directory given by
    list_of_files = os.listdir()

#defining verification's conditions
    if username1 in list_of_files:
        file1 = open(username1, "r")   # open the file in read mode

#read the file,
#as splitlines() actually splits on the newline character,
#the newline character is not left hanging at the end of each line. if password1 in verify:

        verify = file1.read().splitlines()
            login_sucess()

        else:
            password_not_recognised()

    else:
        user_not_found()
```

Designing Login Success Popup

Now we will define a function that will show a popup for successful login. If user has entered the v
entries then this popup will appear. So let's see how to do it.

```
    login_success_screen.geometry("150x100")
    Label(login_success_screen, text="Login Success").pack()

# create OK button
    Button(login_success_screen, text="OK", command=delete_login_success).pack()
```

And now define a function for deleting the popup. So write the code.

```
def delete_login_success():
    login_success_screen.destroy()
```

So now let's see the output. If the user enter the valid username and password then the popup wil
below.

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Designing Invalid Password Popup

If user enter wrong password then a popup for invalid password will appear. So to do this we will
following method.

```
def password_not_recognised():
    global password_not_recog_screen
    password_not_recog_screen = Toplevel(login_screen)
    password_not_recog_screen.title("Success")
    password_not_recog_screen.geometry("150x100")
    Label(password_not_recog_screen, text="Invalid Password ").pack()
    Button(password_not_recog_screen, text="OK", command=delete_password_not_recognised).p
```

And now define a function for deleting this popup. So write the code.

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You can destroy this by pressing **OK** button.

Designing User Not Found Popup

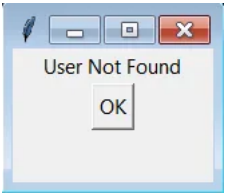
If user enter wrong username then a popup for **User Not Found** will appear. So to do this we will c following method.

```
def user_not_found():
    global user_not_found_screen
    user_not_found_screen = Toplevel(login_screen)
    user_not_found_screen.title("Success")
    user_not_found_screen.geometry("150x100")
    Label(user_not_found_screen, text="User Not Found").pack()
    Button(user_not_found_screen, text="OK", command=delete_user_not_found_screen).pack()
```

And now define a function for deleting this popup. So write the code.

```
def delete_user_not_found_screen():
    user_not_found_screen.destroy()
```

So now we will see the output of above code.



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```
import os

# Designing window for registration

def register():
    global register_screen
    register_screen = Toplevel(main_screen)
    register_screen.title("Register")
    register_screen.geometry("300x250")

    global username
    global password
    global username_entry
    global password_entry
    username = StringVar()
    password = StringVar()

    Label(register_screen, text="Please enter details below", bg="blue").pack()
    Label(register_screen, text="").pack()
    username_lable = Label(register_screen, text="Username * ")
    username_lable.pack()
    username_entry = Entry(register_screen, textvariable=username)
    username_entry.pack()
    password_lable = Label(register_screen, text="Password * ")
    password_lable.pack()
    password_entry = Entry(register_screen, textvariable=password, show='*')
    password_entry.pack()
    Label(register_screen, text="").pack()
    Button(register_screen, text="Register", width=10, height=1, bg="blue", command = register_us



# Designing window for login

def login():
    global login_screen
    login_screen = Toplevel(main_screen)
```

```
    global username_verify
    global password_verify

    username_verify = StringVar()
    password_verify = StringVar()

    global username_login_entry
    global password_login_entry

    Label(login_screen, text="Username * ").pack()
    username_login_entry = Entry(login_screen, textvariable=username_verify)
    username_login_entry.pack()
    Label(login_screen, text="").pack()
    Label(login_screen, text="Password * ").pack()
    password_login_entry = Entry(login_screen, textvariable=password_verify, show= '*')
    password_login_entry.pack()
    Label(login_screen, text="").pack()
    Button(login_screen, text="Login", width=10, height=1, command = login_verify).pack()

# Implementing event on register button

def register_user():

    username_info = username.get()
    password_info = password.get()

    file = open(username_info, "w")
    file.write(username_info + "\n")
    file.write(password_info)
    file.close()

    username_entry.delete(0, END)
    password_entry.delete(0, END)

    Label(register_screen, text="Registration Success", fg="green", font=("calibri", 11)).pack()
```

```
    username_login_entry.delete(0, END)
    password_login_entry.delete(0, END)

    list_of_files = os.listdir()
    if username1 in list_of_files:
        file1 = open(username1, "r")
        verify = file1.read().splitlines()
        if password1 in verify:
            login_sucess()

        else:
            password_not_recognised()

    else:
        user_not_found()

# Designing popup for login success

def login_sucess():
    global login_success_screen
    login_success_screen = Toplevel(login_screen)
    login_success_screen.title("Success")
    login_success_screen.geometry("150x100")
    Label(login_success_screen, text="Login Success").pack()
    Button(login_success_screen, text="OK", command=delete_login_success).pack()

# Designing popup for login invalid password

def password_not_recognised():
    global password_not_recog_screen
    password_not_recog_screen = Toplevel(login_screen)
    password_not_recog_screen.title("Success")
    password_not_recog_screen.geometry("150x100")
    Label(password_not_recog_screen, text="Invalid Password ").pack()
    Button(password_not_recog_screen, text="OK", command=delete_password_not_recognised).p
```

```
    user_not_found_screen.title("Success")
    user_not_found_screen.geometry("150x100")
    Label(user_not_found_screen, text="User Not Found").pack()
    Button(user_not_found_screen, text="OK", command=delete_user_not_found_screen).pack()

# Deleting popups

def delete_login_success():
    login_success_screen.destroy()


def delete_password_not_recognised():
    password_not_recog_screen.destroy()


def delete_user_not_found_screen():
    user_not_found_screen.destroy()


# Designing Main(first) window

def main_account_screen():
    global main_screen
    main_screen = Tk()
    main_screen.geometry("300x250")
    main_screen.title("Account Login")
    Label(text="Select Your Choice", bg="blue", width="300", height="2", font=("Calibri", 13)).pack(
    Label(text="").pack()
    Button(text="Login", height="2", width="30", command = login).pack()
    Label(text="").pack()
    Button(text="Register", height="2", width="30", command=register).pack()

    main_screen.mainloop()


main_account_screen()
```