

# P10\_2347107

September 27, 2023

P10: Apply regular expressions for form validation(TkInter).

1. Create a form using the following widgets for your domain. Label, Entry, Button, RadioButton, OptionMenu, Checkbutton, message box
2. Apply regular expression to validate the input of all widgets. Reuse your code from P6: Implement 're' module
3. Make a simple calculation related to your domain. E.g. Age from DOB, Amount to be paid, Year of experience from date of joining, etc.
4. Display all widget inputs that are received from the user.

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[ ]: import tkinter as tk
from tkinter import messagebox
import re
from PIL import Image, ImageTk
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[ ]: def calculate_age():
    dob = dob_entry.get()
    dob_pattern = r'\d{4}-\d{2}-\d{2}' # Regular expression for YYYY-MM-DD
    ↪date format

    if not re.match(dob_pattern, dob):
        messagebox.showerror("Error", "Invalid date of birth format_
    ↪(YYYY-MM-DD)")
        return

    year_of_birth = int(dob[:4])
    current_year = 2023 # Update with the current year
    age = current_year - year_of_birth
    age_label.config(text=f"Age: {age} years")

def check_name(event):
    email=event.widget.get()
    if not re.match(r'^[A-Za-z\s]+[A-Za-z\s]+$', email):
        messagebox.showerror("Error", "Invalid name format")
        return

def check_email(event):
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email=event.widget.get()
if not re.match(r'^[a-zA-Z0-9._-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,}$', email):
    messagebox.showerror("Error", "Invalid email format")
    return

# Function to display all widget inputs
def display_inputs():
    inputs_text.delete(1.0, tk.END) # Clear the text widget
    inputs_text.insert(tk.END, f"Name: {name_entry.get()}\n")
    inputs_text.insert(tk.END, f"Email: {email_entry.get()}\n")
    inputs_text.insert(tk.END, f"Gender: {gender.get()}\n")
    inputs_text.insert(tk.END, f"Country: {country_var.get()}\n")
    inputs_text.insert(tk.END, f"Subscribe to Newsletter: {subscribe_var.
    get()}\n")
    inputs_text.insert(tk.END, f>Date of Birth: {dob_entry.get()}\n")

# Create the main window
root = tk.Tk()
root.geometry("500x1000")
root.title("Spotify Registration Form")

#Logo
image = Image.open("Spotify_Logo_RGB_Green.png")
photo = ImageTk.PhotoImage(image)
image_label = tk.Label(root, image=photo)
spotify_label = tk.Label(root, text="S P O T I F Y",font=("TkDefaultFont", 16))

# Labels
name_label = tk.Label(root, text="Name:")
email_label = tk.Label(root, text="Email:")
gender_label = tk.Label(root, text="Gender:")
country_label = tk.Label(root, text="Country:")
subscribe_label = tk.Label(root, text="Subscribe to Newsletter:")
dob_label = tk.Label(root, text="Date of Birth (YYYY-MM-DD) :")

# Entry Widgets
name_entry = tk.Entry(root)
name_entry.bind("<FocusOut>", check_name)
email_entry = tk.Entry(root)
email_entry.bind("<FocusOut>", check_email)

# Radio Buttons
gender = tk.StringVar()
male_radio = tk.Radiobutton(root, text="Male", variable=gender, value="Male")
female_radio = tk.Radiobutton(root, text="Female", variable=gender,
    value="Female")

```

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# Option Menu
countries = ["USA", "Canada", "UK", "Australia", "India", "Other"]
country_var = tk.StringVar(root)
country_var.set(countries[0])
country_option_menu = tk.OptionMenu(root, country_var, *countries)

# Check Button
subscribe_var = tk.BooleanVar(root)
subscribe_checkbox = tk.Checkbutton(root, text="Subscribe",
    ↪variable=subscribe_var)

# Entry for Date of Birth
dob_entry = tk.Entry(root)

# Calculate Age Button
calculate_button = tk.Button(root, text="Calculate Age", command=calculate_age)

# Text Widget to Display Inputs
inputs_text = tk.Text(root, height=10, width=40)

# Display Inputs Button
display_button = tk.Button(root, text="Display Inputs", command=display_inputs)

image_label.place(x=-10, y=10)
spotify_label.place(x=30, y=20)
name_label.place(x=30, y=100)
name_entry.place(x=200, y=100)
email_label.place(x=30, y=150)
email_entry.place(x=200, y=150)
gender_label.place(x=30, y=200)
male_radio.place(x=200, y=200)
female_radio.place(x=300, y=200)
country_label.place(x=30, y=250)
country_option_menu.place(x=200, y=250)
subscribe_label.place(x=30, y=300)
subscribe_checkbox.place(x=200, y=300)
dob_label.place(x=30, y=350)
dob_entry.place(x=200, y=350)
calculate_button.place(x=240, y=400)
inputs_text.place(x=30, y=500)
display_button.place(x=240, y=700)

# Age Label
age_label = tk.Label(root, text="")
age_label.place(x=350, y=350)

root.mainloop()

```

OUTPUT:

Spotify Registration Form

SPOTIFY

Name:

Aryan Majhi

Email:

jhiaryan6@gmail.com

Gender:

☒ Male ☐ Female

Country:

India

Subscribe to Newsletter:

☒ Subscribe

Date of Birth (YYYY-MM-DD):

2002-06-06

Age: 21 years

Calculate Age

Name: Aryan Majhi

Email: majhiaryan6@gmail.com

Gender: Male

Country: India

Subscribe to Newsletter: True

Date of Birth: 2002-06-06

Display Inputs