**Task11 Use the Tkinter module for UI design.**

**11.1 Student Registration Form**

A college wants a GUI-based student registration form where students can enter their name, age, and course. If any field is empty, show a warning. Otherwise, display the details.

**Aim:**

To design and implement a **Graphical User Interface (GUI)** program in Python using **Tkinter**, that allows students to enter their **Name**, **Age**, and **Course**.  
If any field is left empty, the program should display a **warning message**; otherwise, it should display the entered details in an information dialog box.

**Algorithm:**

1. **Start the program.**
2. **Import required modules:**
   * Import tkinter as tk for GUI components.
   * Import messagebox from tkinter for pop-up messages.
3. **Create the main window:**
   * Initialize the window using root = tk.Tk().
   * Set title and size using title() and geometry().
4. **Add widgets:**
   * Add Label widgets for “Name”, “Age”, and “Course”.
   * Add Entry widgets to take user input for each field.
5. **Define the submit\_form() function:**
   * Retrieve inputs using .get() method.
   * Check if any field is empty:
     + If empty → display warning using messagebox.showwarning().
     + Else → display information using messagebox.showinfo().
6. **Add a Submit button:**
   * Create a Button labeled **Submit**.
   * Link it to submit\_form() using command parameter.
7. **Display the window:**
   * Call root.mainloop() to run the GUI event loop.
8. **End the program.**

**Program**

import tkinter as tk

from tkinter import messagebox

def submit\_form():

name = entry\_name.get()

age = entry\_age.get()

course = entry\_course.get()

if name == "" or age == "" or course == "":

messagebox.showwarning("Input Error", "All fields are required!")

else:

messagebox.showinfo("Form Submitted", f"Name: {name}\nAge: {age}\nCourse: {course}")

root = tk.Tk()

root.title("Student Registration Form")

root.geometry("350x250")

tk.Label(root, text="Student Registration", font=("Arial", 14, "bold")).pack(pady=10)

tk.Label(root, text="Name:").pack()

entry\_name = tk.Entry(root, width=30)

entry\_name.pack()

tk.Label(root, text="Age:").pack()

entry\_age = tk.Entry(root, width=30)

entry\_age.pack()

tk.Label(root, text="Course:").pack()

entry\_course = tk.Entry(root, width=30)

entry\_course.pack()

tk.Button(root, text="Submit", command=submit\_form, bg="blue", fg="white").pack(pady=15)

root.mainloop()

**Case 1: When all fields are filled**

**Input:**

Name: John

Age: 20

Course: B.Tech

**Output Message Box:**

Form Submitted

Name: John

Age: 20

Course: B.Tech

**Case 2: When any field is empty**

**Input:**

Name: John

Age:

Course: B.Tech

**Output Message Box:**

Input Error

All fields are required!