

| Experiment No. 8 |
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| Creating GUI with python containing widgets such as labels,  textbox, radio, checkboxes and custom dialog boxes |
| Date of Performance: |
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# Experiment No. 7

**Title:** Creating GUI with python containing widgets such as labels, textbox, radio, checkboxes and custom dialog boxes

**Aim:** To study and create GUI with python containing widgets such as labels, textbox, radio, checkboxes and custom dialog boxes

**Objective:** To introduce GUI, TKinter in python

### Theory:

Python offers multiple options for developing GUI (Graphical User Interface). Out of all the GUI methods, tkinter is the most commonly used method. It is a standard Python interface to the Tk GUI toolkit shipped with Python. Python with tkinter is the fastest and easiest way to create the GUI applications. Creating a GUI using tkinter is an easy task.

To create a tkinter app:

Importing the module – tkinter Create the main window (container)

Add any number of widgets to the main window Apply the event Trigger on the widgets.

Importing tkinter is same as importing any other module in the Python code. Note that the name of the module in Python 2.x is ‘Tkinter’ and in Python 3.x it is ‘tkinter’.

### Code:

### Program 01 : -

### from tkinter import \*

### master = Tk()

### master.geometry("300x200")

### v = StringVar(master, "1")

### values = {"Sonu" : "1",

### "Arisu" : "2",

### "Namra" : "3",

### "Lufy" : "4",

### "Katara" : "5"}

### for (text, value) in values.items():

### Radiobutton(master, text = text, variable = v,

### value = value, indicator = 0,

### background = "light blue").pack(fill = X, ipady = 5)

### mainloop()

### Output : -

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### Program 02 : -

### import tkinter

### from tkinter import ttk

### from tkinter import messagebox

### def enter\_data():

### accepted = accept\_var.get()

### if accepted == "Accepted":

### firstname = first\_name\_entry.get()

### lastname = last\_name\_entry.get()

### if firstname and lastname:

### title = title\_combobox.get()

### age = age\_spinbox.get()

### nationality = nationality\_combobox.get()

### registration\_status = reg\_status\_var.get()

### numcourses = numcourses\_spinbox.get()

### numsemesters = numsemesters\_spinbox.get()

### print("First name: ", firstname, "Last name: ", lastname)

### print("Title: ", title, "Age: ", age, "Nationality: ", nationality)

### print("# Courses: ", numcourses, "# Semesters: ", numsemesters)

### print("Registration status", registration\_status)

### print("------------------------------------------")

### else:

### tkinter.messagebox.showwarning(title="Error", message="First name and last name are required.")

### else:

### tkinter.messagebox.showwarning(title="Error", message="You have not accepted the terms")

### window = tkinter.Tk()

### window.title("Data Entry Form")

### frame = tkinter.Frame(window)

### frame.pack()

### user\_info\_frame = tkinter.LabelFrame(frame, text="User Information")

### user\_info\_frame.grid(row=0, column=0, padx=20, pady=10)

### first\_name\_label = tkinter.Label(user\_info\_frame, text="First Name")

### first\_name\_label.grid(row=0, column=0)

### last\_name\_label = tkinter.Label(user\_info\_frame, text="Last Name")

### last\_name\_label.grid(row=0, column=1)

### first\_name\_entry = tkinter.Entry(user\_info\_frame)

### last\_name\_entry = tkinter.Entry(user\_info\_frame)

### first\_name\_entry.grid(row=1, column=0)

### last\_name\_entry.grid(row=1, column=1)

### title\_label = tkinter.Label(user\_info\_frame, text="Title")

### title\_combobox = ttk.Combobox(user\_info\_frame, values=["", "Mr.", "Ms.", "Dr."])

### title\_label.grid(row=0, column=2)

### title\_combobox.grid(row=1, column=2)

### age\_label = tkinter.Label(user\_info\_frame, text="Age")

### age\_spinbox = ttk.Spinbox(user\_info\_frame, from\_=1, to=110)

### age\_spinbox.set(19)

### age\_label.grid(row=2, column=0)

### age\_spinbox.grid(row=3, column=0)

### nationality\_label = tkinter.Label(user\_info\_frame, text="Nationality")

### nationality\_combobox = ttk.Combobox(user\_info\_frame, values=["India", "United States", "China"])

### nationality\_label.grid(row=2, column=1)

### nationality\_combobox.grid(row=3, column=1)

### for widget in user\_info\_frame.winfo\_children():

### widget.grid\_configure(padx=10, pady=5)

### courses\_frame = tkinter.LabelFrame(frame)

### courses\_frame.grid(row=1, column=0, sticky="news", padx=20, pady=10)

### registered\_label = tkinter.Label(courses\_frame, text="Registration Status")

### reg\_status\_var = tkinter.StringVar(value="Not Registered")

### registered\_check = tkinter.Checkbutton(courses\_frame, text="Currently Registered",

### variable=reg\_status\_var, onvalue="Registered", offvalue="Not registered")

### registered\_label.grid(row=0, column=0)

### registered\_check.grid(row=1, column=0)

### numcourses\_label = tkinter.Label(courses\_frame, text="# Completed Courses")

### numcourses\_spinbox = tkinter.Spinbox(courses\_frame, from\_=0, to='infinity')

### numcourses\_label.grid(row=0, column=1)

### numcourses\_spinbox.grid(row=1, column=1)

### numsemesters\_label = tkinter.Label(courses\_frame, text="# Semesters")

### numsemesters\_spinbox = tkinter.Spinbox(courses\_frame, from\_=0, to="infinity")

### numsemesters\_label.grid(row=0, column=2)

### numsemesters\_spinbox.grid(row=1, column=2)

### for widget in courses\_frame.winfo\_children():

### widget.grid\_configure(padx=10, pady=5)

### terms\_frame = tkinter.LabelFrame(frame, text="Terms & Conditions")

### terms\_frame.grid(row=2, column=0, sticky="news", padx=20, pady=10)

### accept\_var = tkinter.StringVar(value="Not Accepted")

### terms\_check = tkinter.Checkbutton(terms\_frame, text="I accept the terms and conditions.",

### variable=accept\_var, onvalue="Accepted", offvalue="Not Accepted")

### terms\_check.grid(row=0, column=0)

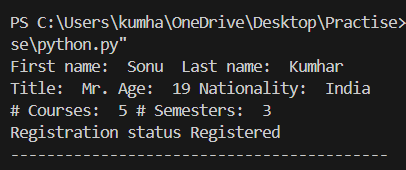
### button = tkinter.Button(frame, text="Enter data", command=enter\_data)

### button.grid(row=3, column=0, sticky="news", padx=20, pady=10)

### window.mainloop()

### Output : -

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**Conclusion:**

GUI package TKinter has been studied and implemented.

