GIRIC MEL HAPSAY

BSCS – 1B

"A DOCUMENTATION OF MY GRAPHIC USER INTERFACE"

DESCRIPTION OF THE STUDY:

•This is a short, concise, and simple documentation of my GUI(Graphic User Interface) which is a Data Entry Form written in Phyton using and importing the Tkinter library to create windows, buttons, textboxes, labels and other GUI elements. A data entry form GUI includes fields for users to input data, labels to identify each field, buttons for submitting or clearing data, and error messages for validation. This Tkinter is a versatile used library built in Phyton it provides a simple and easy to use interface to the Tk GUI toolkit. It's a popular cross-platform toolkit which allows developers to build interactive apps in Phyton. Tkinter apps can run on various Operating System without modification it is simple and easy to use, customizable and integration with Phyton.

While GUIs allows users to interact with electronic devices using graphical icons and visual indicators. It utilizes windows, menus, buttons, and other graphical elements to facilitate user interaction with software apps or OS. It also provides visual representations of functions and options.

Widgets also plays a crucial role in GUI development it is a graphical element used in GUI to interact with users or display information. It can include buttons, checkboxes, radio buttons, menus, labels, sliders and etc. Widgets are the building blocks of GUI applications. It allow users to input data, make selections, view information and interact with the applications functionality. Widgets are objects that represent various GUI components that developers can create, manipulate and arrange to design the user interface of their applications.

BENEFITS OF THE CODE:

This code creates a GUI interface using tkinter, making it easier for users to interact with the data entry form. The code ensures that essential fields like first name, last name, and acceptance of terms and conditions are filled out before processing the data. This helps maintain data integrity. Users can select their gender, year level, and registration status using dropdown menus and spinboxes, providing flexibility in data entry.

The code includes error messages to prompt users when required fields are not filled out or terms and conditions are not accepted, enhancing user experience and preventing data submission errors. Upon submission, the code prints out the entered data, allowing for easy review and verification. The code is well-structured into functions, making it modular and easier to maintain or extend in the future. The GUI elements such as colors, fonts, and layout can be customized to suit specific design preferences or branding requirements.

OBJECTIVES THE CODE:

The objectives of the code are:

• Create a data entry form using Tkinter.

•Collect user information including first name, last name, gender, age, year level, registration status, number of completed courses, and number of semesters.

• Display warning messages if the first name and last name are not provided or if the terms and conditions are not accepted.

• Print the entered data if all required fields are provided and the terms and conditions are accepted.

PURPOSE OF THE CODE:

The purpose of the provided code is to create a data entry form using the Tkinter library in Python. This form allows users to input their personal information such as first name, last name, gender, age, nationality, registration status, number of completed courses, and number of semesters.

Additionally, the form includes a checkbox for users to accept the terms and conditions. When the "Enter Data" button is clicked, the entered data is validated, and if all required fields are filled and the terms are accepted, the data is printed to the console. Otherwise, appropriate warning messages are displayed.

SIGNIFICANCE OF THE CODE:

This code creates a GUI (Graphical User Interface) for a data entry form using Tkinter in Python. The form allows users to input personal information like first name, last name, gender, age, year level, registration status, number of completed courses, and number of semesters. It includes validation checks for required fields and acceptance of terms and conditions before submitting the data. When the "Enter Data" button is clicked, it prints the entered information if all required fields are filled and terms are accepted; otherwise, it displays error messages.

FEATURES OF THE CODE:

•GUI Elements:

- Labels: First Name, Last Name, Gender, Age, Yr. Level, Registration Status, # Completed Courses, # Semesters, Terms & Conditions.

- Entry: First Name, Last Name.

- Combobox: Gender (Male, Female, LGBTQ+), Yr. Level (1st yr., 2nd yr., 3rd yr., 4th yr.).

- Spinbox: Age (from 18 to 110), # Completed Courses, # Semesters.

- Checkbutton: Currently Enrolled (Registration Status), Terms & Conditions.

•Functionality:

- Data entry form for users.

- Validation checks for required fields (First Name, Last Name, and Acceptance of Terms & Conditions).

- Printing user data if all required fields are provided.

•User Interaction:

- Clicking the "Enter Data" button triggers the `enter_data` function.

- Message boxes for displaying errors if required fields are not filled or terms are not accepted.

•Styling:

- Background color: #333333 for the window, #FF3399 for the user information frame.

- Font: Arial, size 12 for user information frame, size 8 for the First Name label.

•Control Variables:

- `accept_var` to store the acceptance status of terms and conditions.

- `reg_status_var` to store the registration status.

•Modularity:

- The code is organized into functions for better readability and maintainability.

- Widgets are grouped within frames to organize the layout.

•Event Handling:

- Clicking the "Enter Data" button triggers the `enter_data` function to process the user's input.

CODE:

```
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()
            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)
            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 and Conditions")

window = tkinter.Tk()
window.title("Data Entry Form")
window.configure(bg="#333333")
```

```
frame = tkinter.Frame(window, bg="#FF3399")
frame.pack()

user_info_frame = tkinter.LabelFrame(frame, text="User Information", font=("Arial, 12"))
user_info_frame.grid(row=0, column=0, padx=20, pady=10)

first_name_label = tkinter.Label(user_info_frame, text="First Name", font=("Arial, 8"))
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="Gender")
title_combobox = ttk.Combobox(user_info_frame, values=["", "Male", "Female", "LGBTQ+"])
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 = tkinter.Spinbox(user_info_frame, from_=18, to=110)
age_label.grid(row=2, column=0)
age_spinbox.grid(row=3, column=0)

nationality_label = tkinter.Label(user_info_frame, text="Yr. Level")
nationality_combobox = ttk.Combobox(user_info_frame, values=["1st yr.", "2nd yr.", "3rd yr.", "4th yr."])
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 Enrolled", 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=7)
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=7)
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")

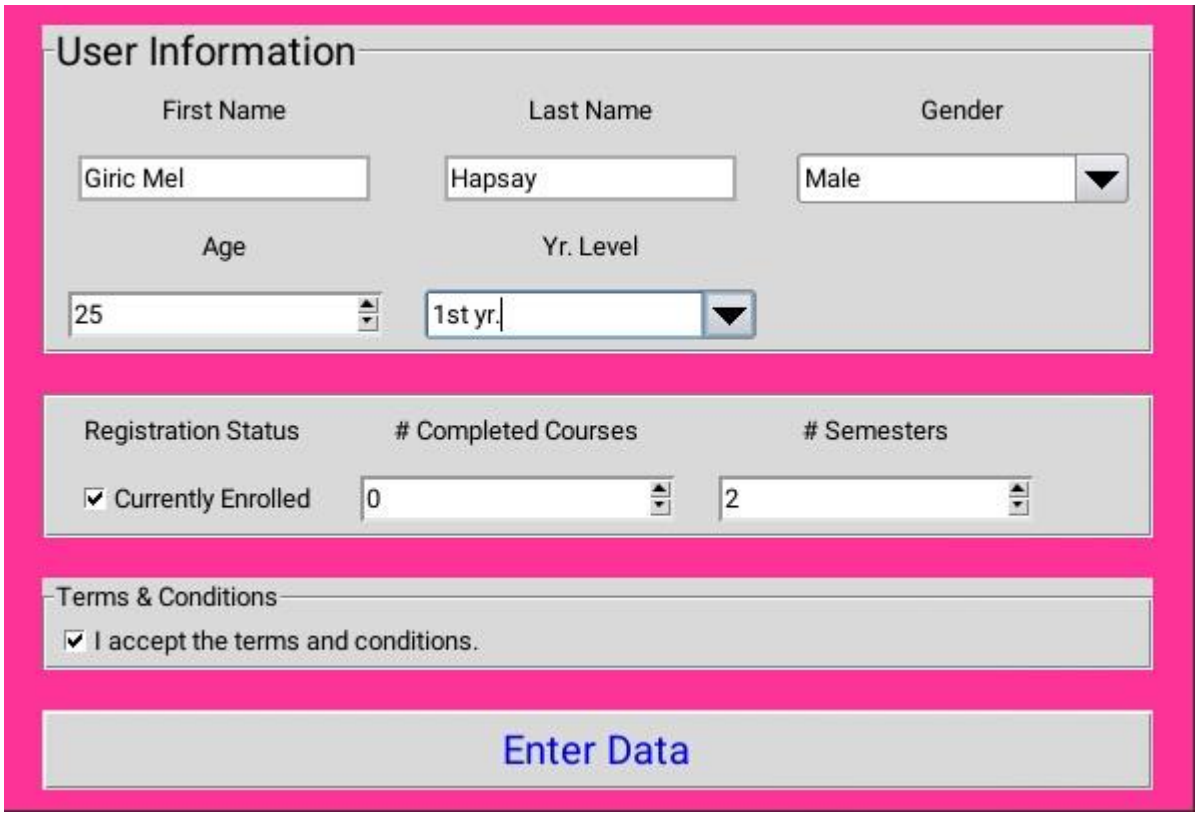
terms_check.grid(row=0, column=0)

button = tkinter.Button(frame, text="Enter Data", command= enter_data, font=("Arial, 12"), fg="blue")

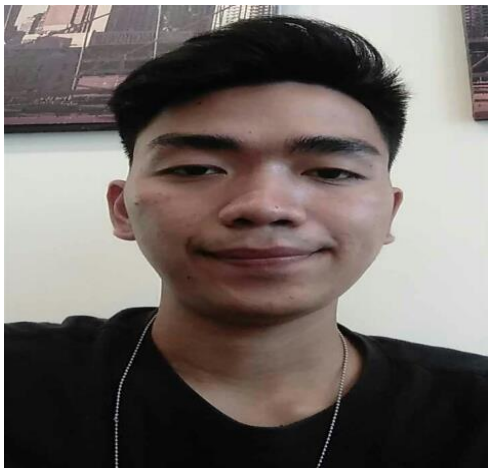
button.grid(row=3, column=0, sticky="news", padx=20, pady=10)

window.mainloop()

OUTPUT OF THE CODE:



BIODATA



PERSONAL INFORMATION

Name: Giric Mel Hapsay

Contact Number: 09631412420

Email Address: peacer38@gmail.com

Date of Birth: April 22, 1999

Place of Birth: Loay, Bohol

Address: Purok 5 Malipayon, Barangay Taft, SC

Age: 25

Nationality: Filipino

Religion: Roman Catholic

Civil Status: Single

Father's Name: Ricardo L. Hapsay Sr.

Mother's Name: Virginia D. Hapsay

EDUCATIONAL BACKGROUND

ELEMENTARY: MARIANO ESPINA MEMORIAL ELEMENTARY SCHOOL

Navarro Street Brgy. Taft Surigao City

HIGHSCHOOL: SURIGAO NORTE NATIONAL HIGHSCHOOL(SNNHS)

Peñaranda Street Brgy. Taft Surigao City