ACTIVITY NO. 8

The Selection Widget	
Course Code: CPE009B	**Program:** Computer Engineering
Course Title: Object Oriented Programming	**Date Performed:** 11 / 25 / 2024
Section: CPE21S4	**Date Submitted:** 11 / 25 / 2024
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1. Objective(s)

In this section, the goals in this laboratory are:
- To create a Python program that use selection widget like Combobox
- To use ttk function as part of Tk() in the Tkinter module

2. Intended Learning Outcomes (ILOs)

After this activity, the student should be able to:
- Utilize and implement Tkinter module in Python programs
- Use selection widgets and prompts from the Tkinter module

3. Discussion

Tkinter is one of few Python modules/libraries that can be used for making Graphical User Interfaces or GUIs. These libraries are used for implementing basic buttons, menus and input fields for a more intuitive and easy to understand interface. One of its GUI components is the ComboBox. A ComboBox is a combination of a text input field and a drop-down list. This lets the user either type a valid selection in the text field or select an option from within the drop-down menu.

4. Materials and Equipment

- Personal or Laboratory Computer
- Python IDE, preferably PyCharm or Spyder

5. Procedure

Copy these Python codes into your PyCharm and save it as *test.py*

```python
import tkinter as tk
from tkinter import ttk
from tkinter import messagebox
from tkinter.messagebox import showinfo

# Creating tkinter window and set dimensions
window = tk.Tk()
window.title('Combobox')
window.geometry('500x250')

def choice(event):
    month = event.widget.get()
    print("Your birth month", month)

# label text for title
ttk.Label(window, text="Choose your birth month",
    background='light yellow', foreground="black",
    font=("Times New Roman", 15)).grid(row=0, column=1)

# Set label
ttk.Label(window, text="Select the month of your birth :",
    font=("Times New Roman", 12)).grid(column=0,
    row=5, padx=5, pady=25)

# Create Combobox
n = tk.StringVar()
month = ttk.Combobox(window, width=27, textvariable=n)

# Adding combobox drop down list
month['values'] = (' January', ' February', ' March', ' April', ' May', ' June',
            ' July', ' August', 'September', 'October', 'November', 'December')
month.grid(column=1, row=5)
month.current()

def choice(event):
    showinfo(title="Selection", message=f'You selected{n.get()}')

month.bind("<<ComboboxSelected>>", choice)
window.mainloop()
```

6. Output

```python
import tkinter as tk
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Figure 1: Python Code of Activity

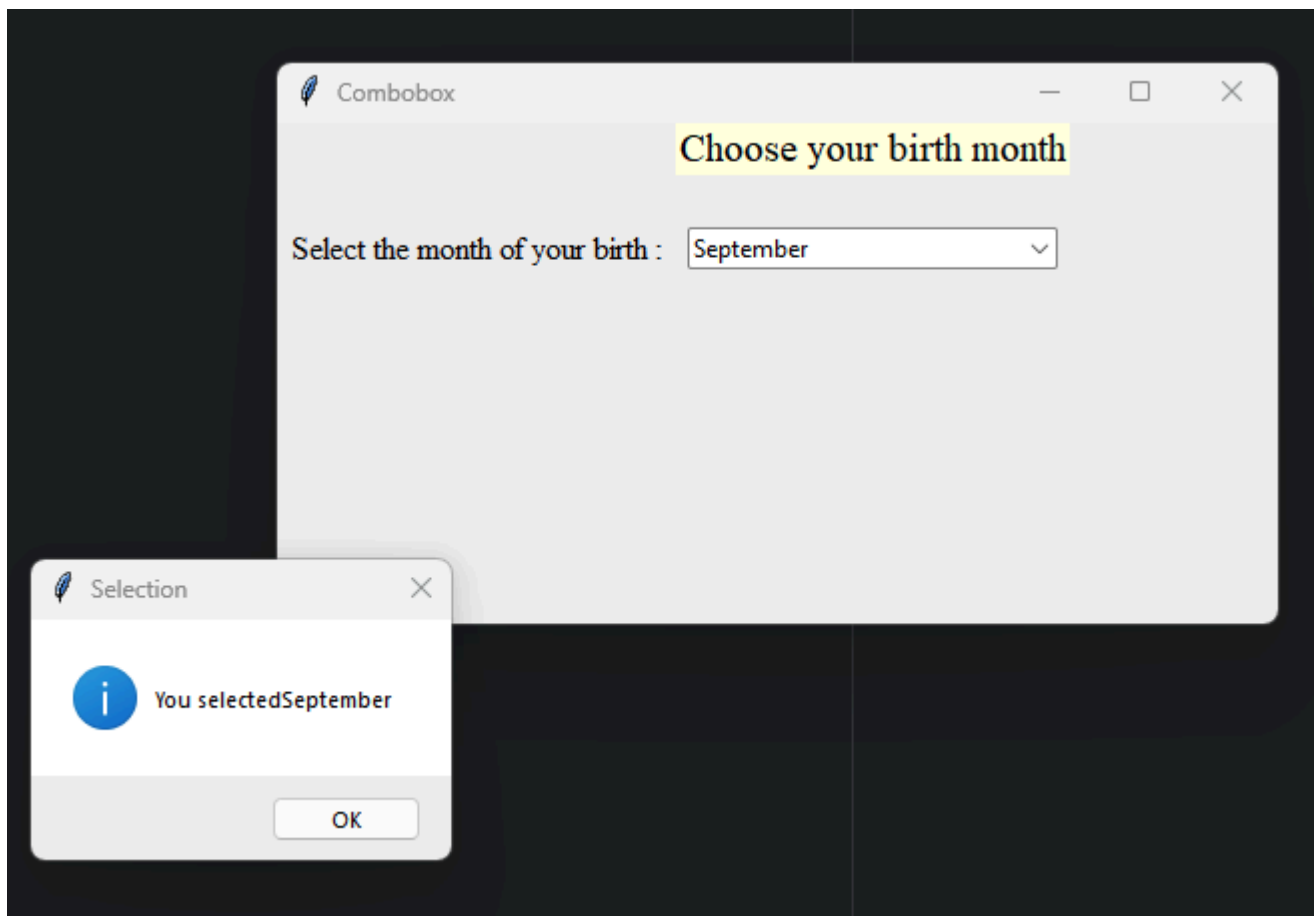Figure 2: Combo Box in GUI using Python's Tkinter library

Figure 3: Prompt after selecting a choice within the Combo Box

7. Conclusion

In conclusion, this laboratory activity helped us in utilizing a ComboBox in a Python program with the use of the Tkinter module. Using ttk functions as labels within the window to clearly instruct the users on what to do. Knowing the code for the ComboBox can help us implement it in other Python-based GUI projects.

8. References

- *"List of Python GUI Library and Packages," GeeksforGeeks, Jan. 15, 2018.*
  https://www.geeksforgeeks.org/python3-gui-application-overview/

- *"Combobox Widget in tkinter | Python," GeeksforGeeks, Jan. 09, 2020.*
  https://www.geeksforgeeks.org/combobox-widget-in-tkinter-python/

- *"Combobox Widget in Python Tkinter," www.tutorialspoint.com.*
  https://www.tutorialspoint.com/combobox-widget-in-python-tkinter