Laboratory Activity No. 10	
The Selection Widgets using Pycharm	
Course Code: CPE103	**Program:** BSCPE
Course Title: Object-Oriented Programming	**Date Performed: 25-03-26**
Section: 1-A	**Date Submitted: 25-03-28**
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1. Objective(s):

This activity aims to familiarize students with the Pycharm framework and selection widget

2. Intended Learning Outcomes (ILOs):

The students should be able to:
2.1 To create a Python program that use selection widget like Combobox
2.2 To use ttk function as part of Tk ( ) in the Tkinter module

3. Discussion:

A Graphical User Interface (GUI) application is a program that the user can interact with through graphics (windows, buttons, text fields, checkboxes, images, icons, etc..) such as the Desktop GUI of Windows OS by using a mouse and keyboard unlike with a Command-line program or Terminal program that support keyboard inputs only.

Pycharm is an integrated development environment used for programming in Python. It provides code analysis, a graphical debugger, an integrated unit tester, integration with version control systems, and supports web development with Django.

4. Materials and Equipment:

Desktop Computer with Anaconda Python or Pycharm
Windows Operating System

5. Procedure:

```
# 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)
```

1.

```
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()
```

2. Run the program and observe the output.

Adding an icon

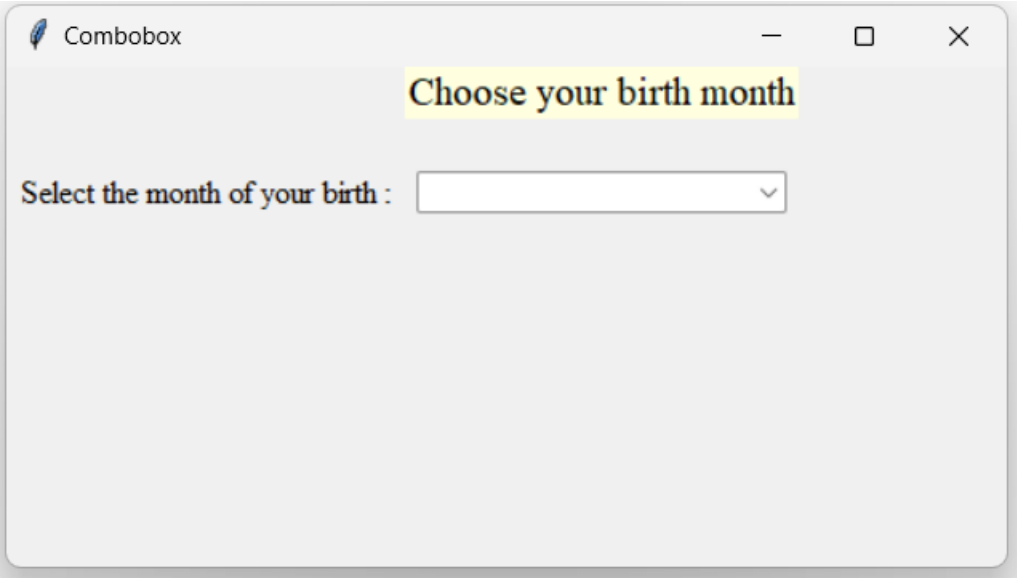
3. Download any .ico picture from https://icon-icons.com/ or any similar sites.
4. Place the icon in your folder (ex. Oopfa1<lastname>_lab10)

```
# 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')
```

5. Run the program again, the program should now have an icon similar to the program below.



6. Supplementary Activity:

Task

1. Create label widgets below to label your birth date <dd>, birth year <yyyy>
2. Create combobox to drop down your birth date <dd>, birth year <yyyy>
3. Create another method to show info about your birth date <dd>, birth year <yyyy>

Note: You may also use additional selection (listbox, radio button, check button) or common widgets to improve the design of your GUI.

Please refer to this link: Supplementary Act No.10 - Github

Questions

1. What are selection widgets?

- Selection Widget are interactive elements in user interface that allows the user to choose from pre-determined set of options, often displayed as a list, dropdown, or buttons.

2. Which Python libraries provide selection widgets?

- Libraries that offer selection widgets in Python are Tkinter, PyQt, and Kivy. The Tkinter library has widgets such as Listbox, Radiobutton, and Combobox, whereas PyQt has QComboBox, QRadioButton, and QListWidget. Kivy offers Spinner and DropDown to support current, touch-based interfaces.

3. How do selection widgets enhance user interaction in GUI applications?

- Selection widgets enhance user interaction through intuitive input options, minimizing errors, and maximizing accessibility. They make navigation simpler, enabling users to choose options without having to manually input data, resulting in a more user-friendly and effective GUI experience.

7. Conclusion:

- Selection widgets are an essential component of GUI applications as they enhance user interaction, minimize errors, and increase accessibility. Python libraries such as Tkinter, PyQt, and Kivy offer several selection widgets that make applications more intuitive and efficient.

8. Assessment Rubric: