Laboratory Activity No. 10	
The Selection Widgets using Pycharm	
Course Code: CPE103	**Program:** BSCPE
Course Title: Object-Oriented Programming	**Date Performed:**
Section: BSCpE 1A	**Date Submitted:**
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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

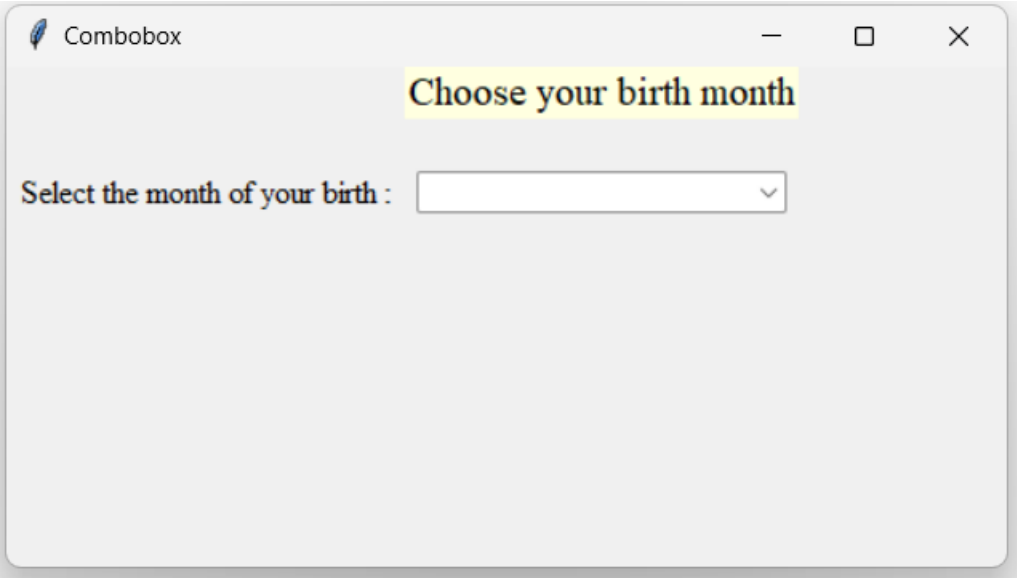
3. Download any .ico picture from https://icon-icons.com/ or any similar sites.
4. Place the icon in your folder (ex. Oopfa1<lastname>_lab10)

```
# 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.

Questions

1. What are selection widgets?

   Selection widgets are GUI elements in programming, particularly in frameworks like Tkinter (used in Python), that allow users to choose from a predefined set of options. These widgets enable the user to select a value or option from a list, a dropdown, or a set of radio buttons, checkboxes, etc.

2. Which Python libraries provide selection widgets?

   Tkinter is the standard GUI library in Python and comes pre-installed with Python. It provides a variety of selection widgets. **PyQt** and **PySide** are Python bindings for the Qt application framework. These libraries provide more advanced and feature-rich selection widgets.

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

   Selection widgets enhance user interaction in GUI applications by providing a way for users to easily and efficiently choose from a set of options. They are an essential part of creating a responsive and user-friendly interface, improving both the functionality and the overall experience of the application.

7. Conclusion:

In my laboratory conclusion, I learned about how to utilize the selection widgets and how to properly use them. It helps me to grow knowledge about programming in Python. Moreover, It helps me to gain more skills to use it at my academic and career journey and to be a successful and skillful professional.

8. Assessment Rubric: