

Laboratory Activity No. 10	
The Selection Widgets using Pycharm	
<b>Course Code:</b> CPE103	<b>Program:</b> BSCPE
<b>Course Title:</b> Object-Oriented Programming	<b>Date Performed:</b> 03/22/2025
<b>Section:</b> 1A	<b>Date Submitted:</b> 03/22/2025
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<b>1. Objective(s):</b>	
This activity aims to familiarize students with the Pycharm framework and selection widget	
<b>2. Intended Learning Outcomes (ILOs):</b>	
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	
<b>3. Discussion:</b>	
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.	
<b>4. Materials and Equipment:</b>	
Desktop Computer with Anaconda Python or Pycharm Windows Operating System	
<b>5. Procedure:</b>	
Please refer to this link: <a href="https://github.com/AmpongJKevin2/CPE-103-OOP-1-A/blob/main/lab10/gui.py">CPE-103-OOP-1-A/lab10/gui.py at main · AmpongJKevin2/CPE-103-OOP-1-A</a>	

```

# 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.

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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

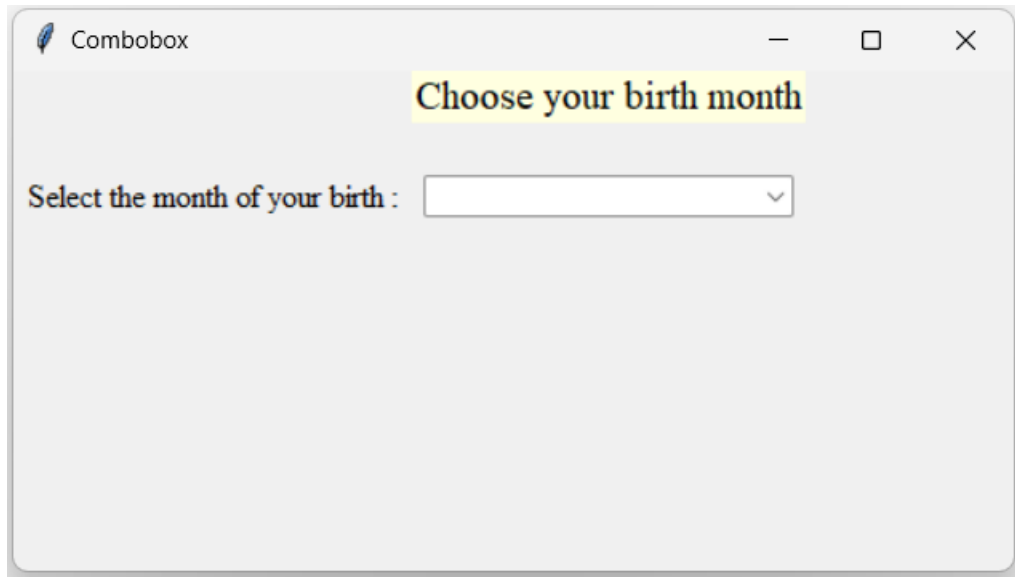
3. Download any .ico picture from <https://icon-icons.com/> or any similar sites.
4. Place the icon in your folder (ex. Oopfa1<lastname>\_lab10)

```
# 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: [CPE-103-OOP-1-A/lab10/supplementary.py at main · AmpongJKevin2/CPE-103-OOP-1-A](https://github.com/AmpongJKevin2/CPE-103-OOP-1-A/blob/main/lab10/supplementary.py)

### Questions

1. What are selection widgets?

It's a special widget that allows you to add options, making it very convenient for the user since it eliminates the need to type it manually; instead, they can just scroll it. It's a very neat feature that allows your users for a more friendly user interface.

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2. Which Python libraries provide selection widgets?

Both PyQt5 and tkinter provide many different types of widgets for different use cases.

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

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Mentioning earlier, it allows the user to not need to type the input many times, reducing the manual typing on each field.

## 7. Conclusion:

Both tkinter and pyqt5 can be used on different GUI applications; both of those have commonality with one another and have advantages and disadvantages between those libraries. It depends on the situation on which should be used to maximize their potential when it comes to creating a reliable application.

## 8. Assessment Rubric: