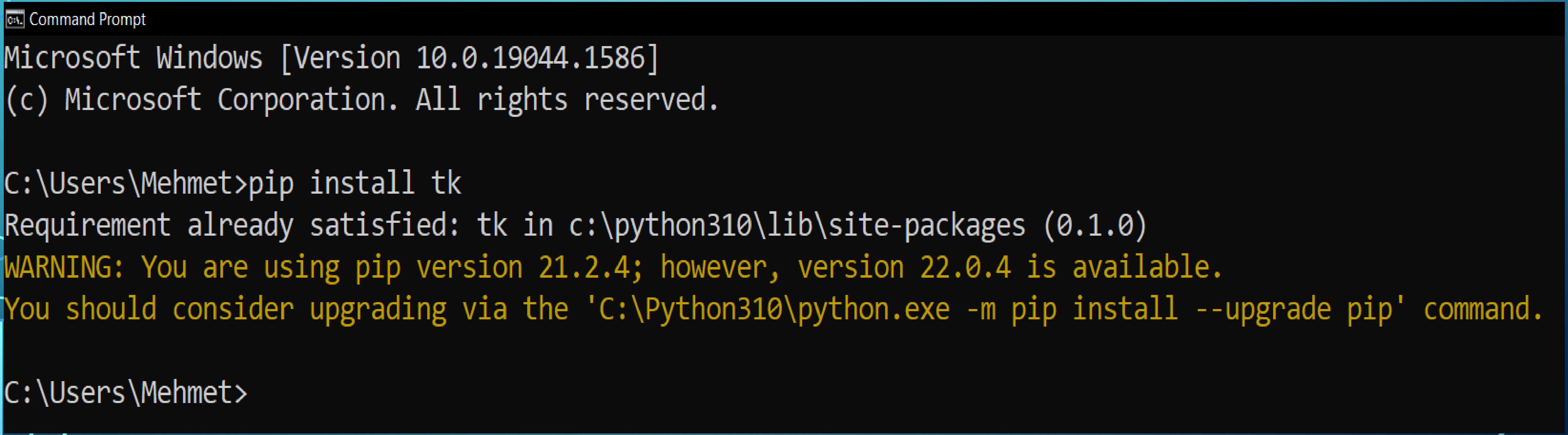
TKINTER MODULE

WHAT IS TKINTER?

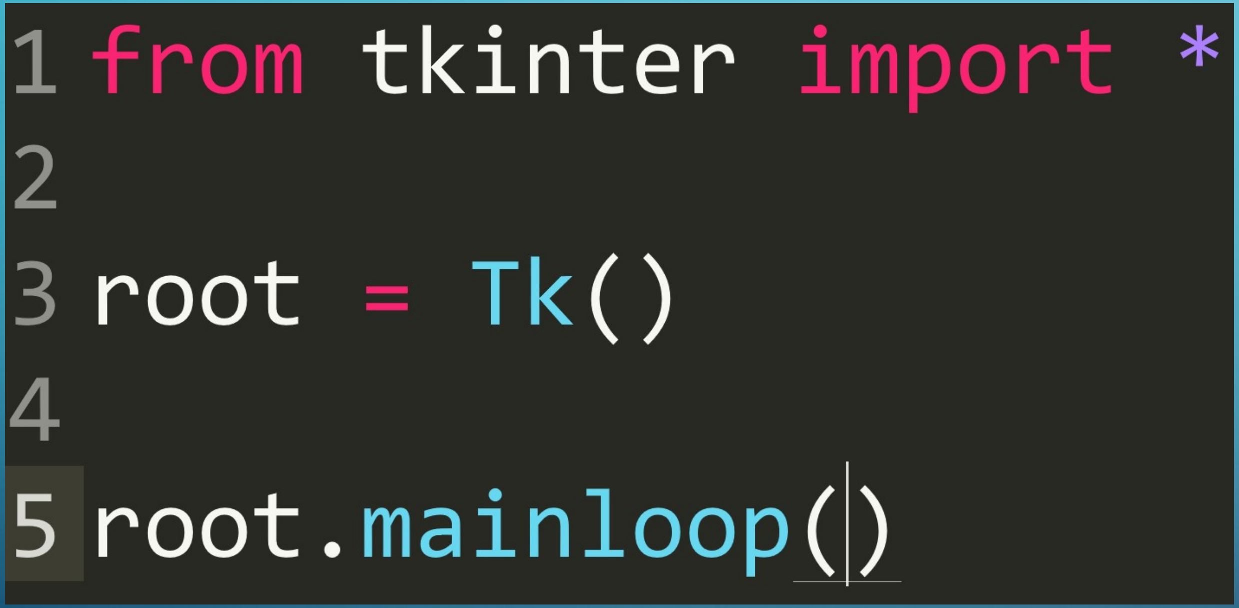
- The tkinter package (“Tk interface”) is the standard Python interface to the Tcl/Tk GUI toolkit. Both Tk and tkinter are available on most Unix platforms, including macOS, as well as on Windows systems.

HOW TO DOWNLOAD TKINTER MODULE?

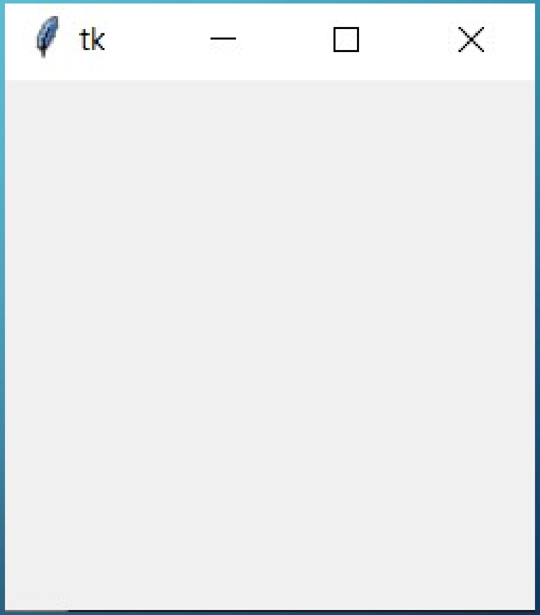


```
Microsoft Windows [Version 10.0.19044.1586]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Mehmet>pip install tk
Requirement already satisfied: tk in c:\python310\lib\site-packages (0.1.0)
WARNING: You are using pip version 21.2.4; however, version 22.0.4 is available.
You should consider upgrading via the 'C:\Python310\python.exe -m pip install --upgrade pip' command.

C:\Users\Mehmet>
```

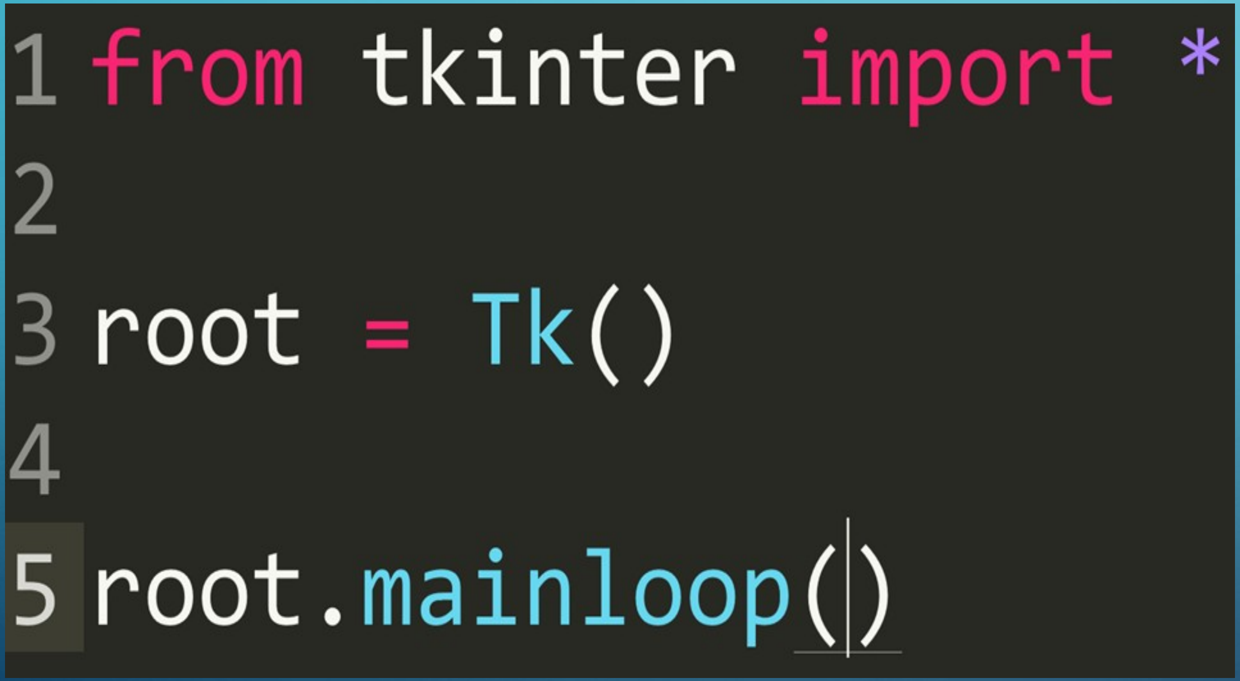
LET’S START WITH A SIMPLE PROGRAM THAT CONSISTS OF A WINDOW:



```python
from tkinter import *

root = Tk()

root.mainloop()
```



LET ME EXPLAIN CODE TO YOU:



```python
from tkinter import *

root = Tk()

root.mainloop()
```

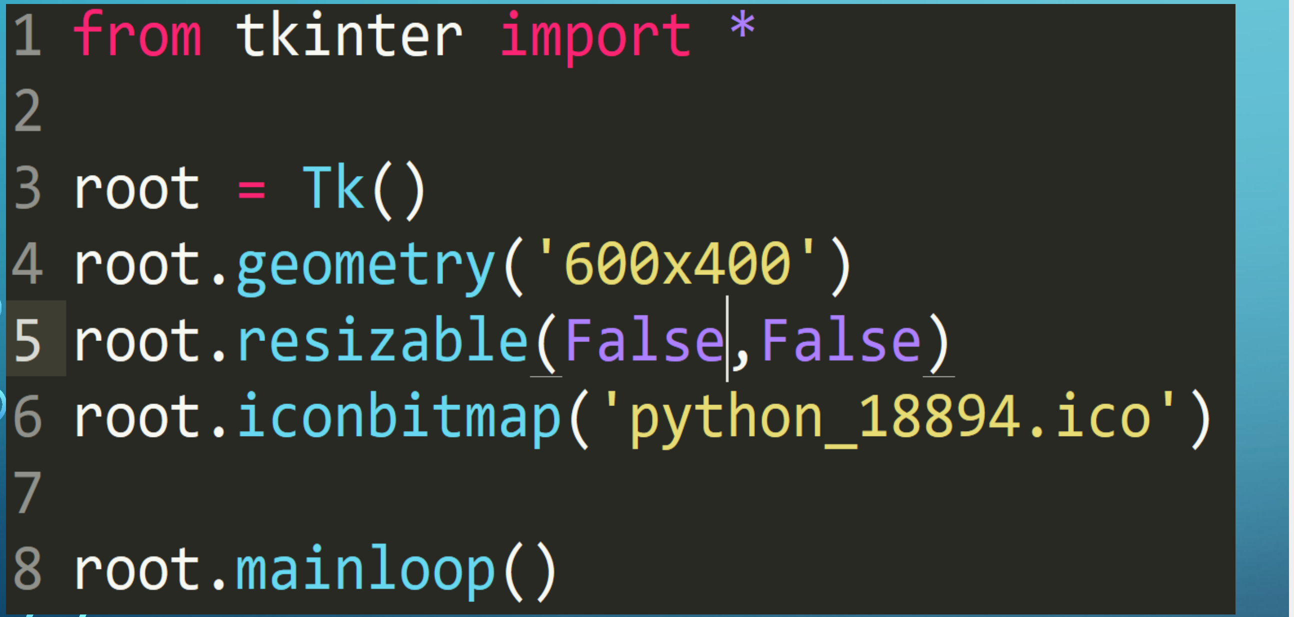
- This help us to import tkinter module.

→ Creates root master

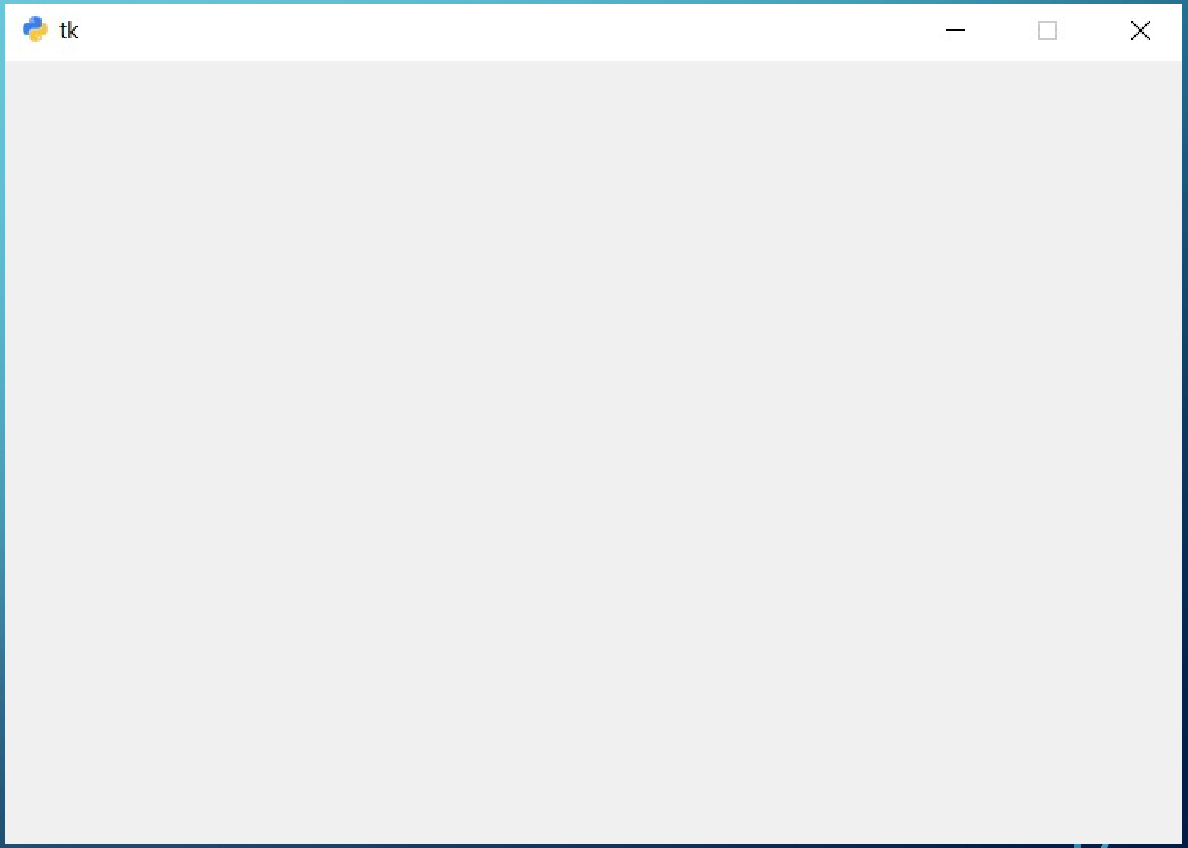
With the Tk() contructor.

→ Main event loop

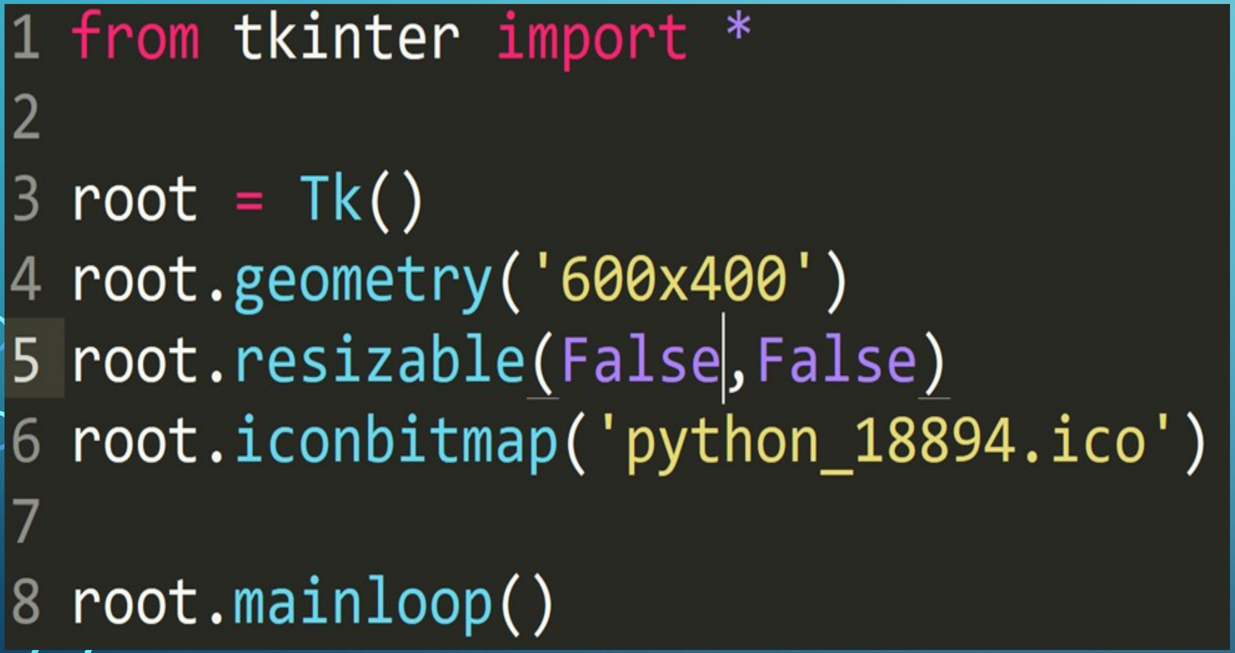
SOME ANOTHER COMMANDS FOR CREATE A WINDOW:



```
from tkinter import *

root = Tk()
root.geometry('600x400')
root.resizable(False,False)
root.iconbitmap('python_18894.ico')

root.mainloop()
```



WHAT’S MEAN TO THIS COMMANDS?



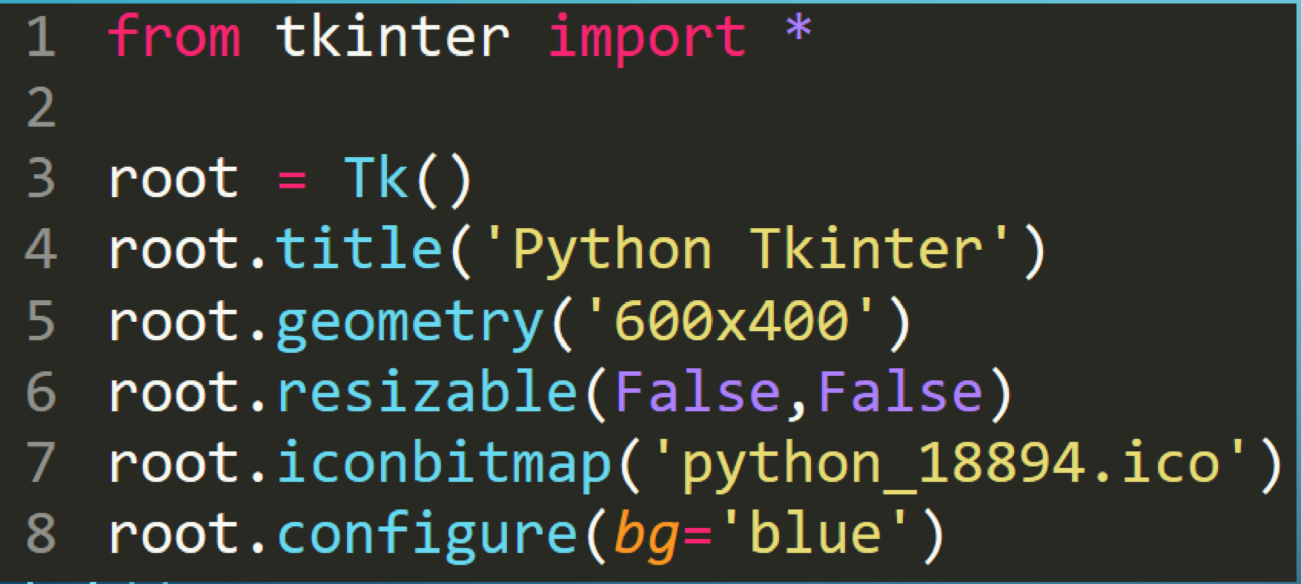
```
from tkinter import *

root = Tk()
root.geometry('600x400')
root.resizable(False,False)
root.iconbitmap('python_18894.ico')

root.mainloop()
```

→Use the geometry() method to change the size and location of the window.

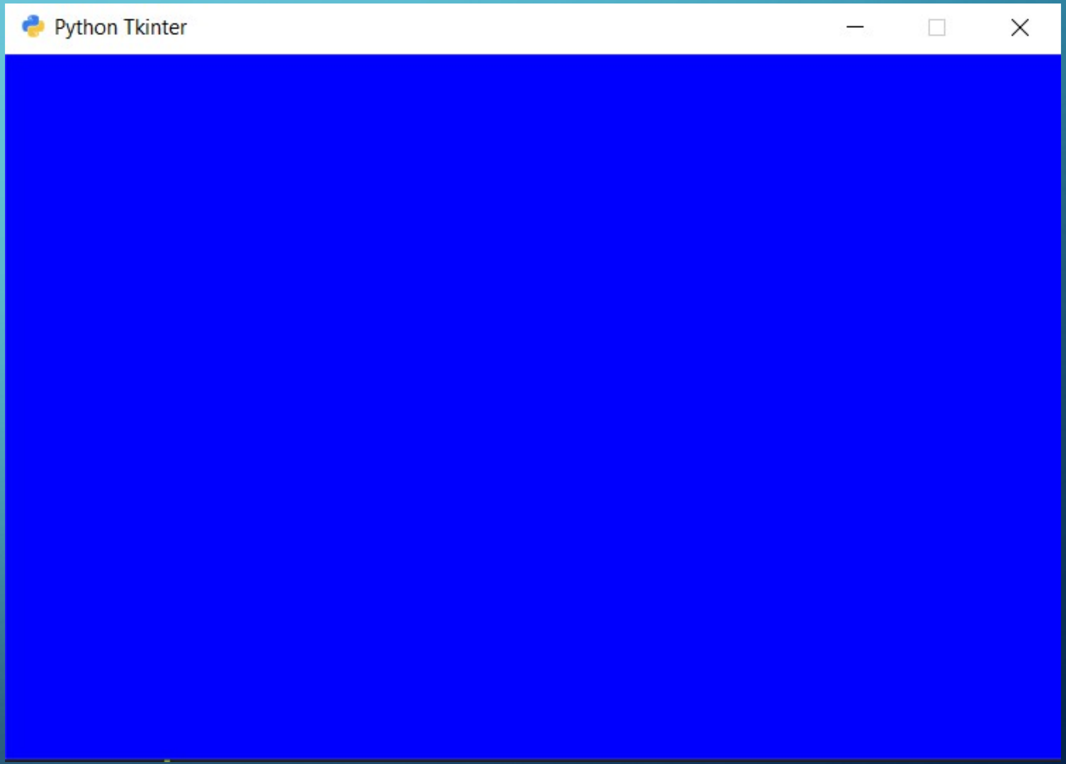
→Use the resizable() method to specify whether a window can be resizable horizontally or vertically.

→Use the iconbitmap() method to change the default icon of the window.

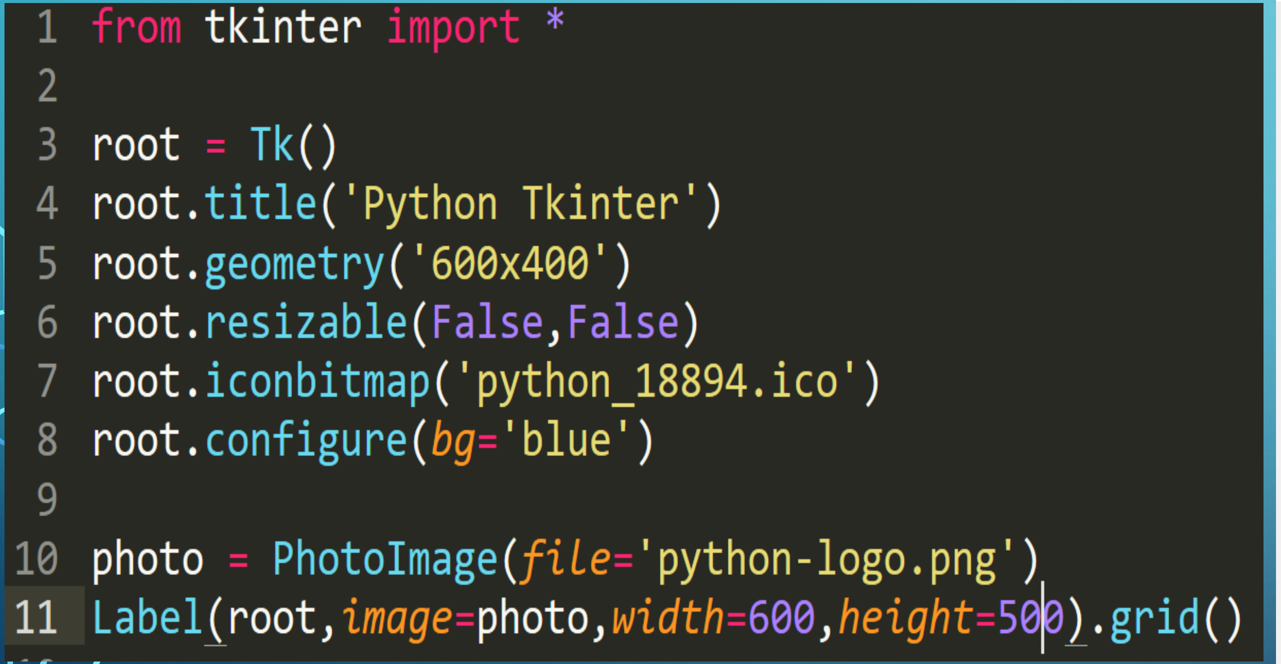
HOW TO CHANGE BACKGROUND COLOR?



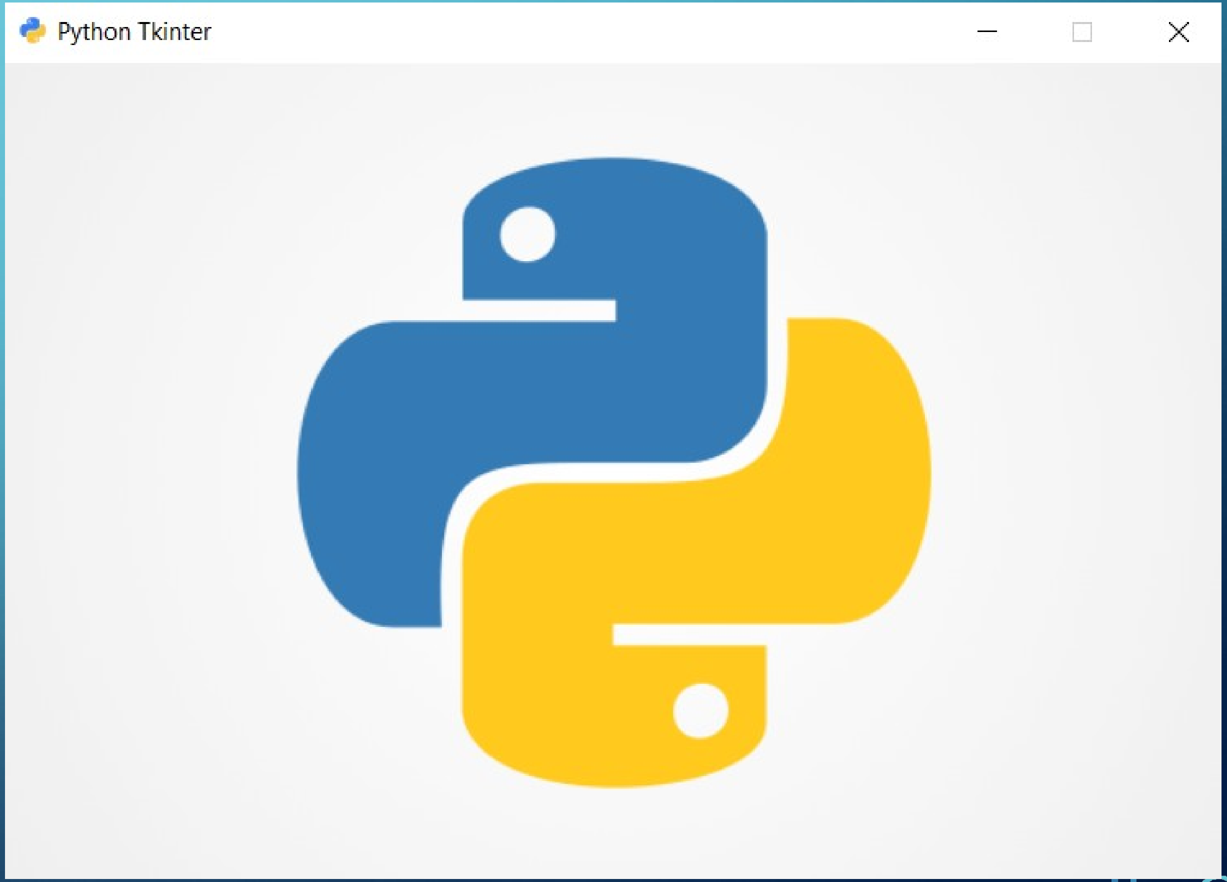
```python
from tkinter import *

root = Tk()
root.title('Python Tkinter')
root.geometry('600x400')
root.resizable(False,False)
root.iconbitmap('python_18894.ico')
root.configure(bg='blue')
```



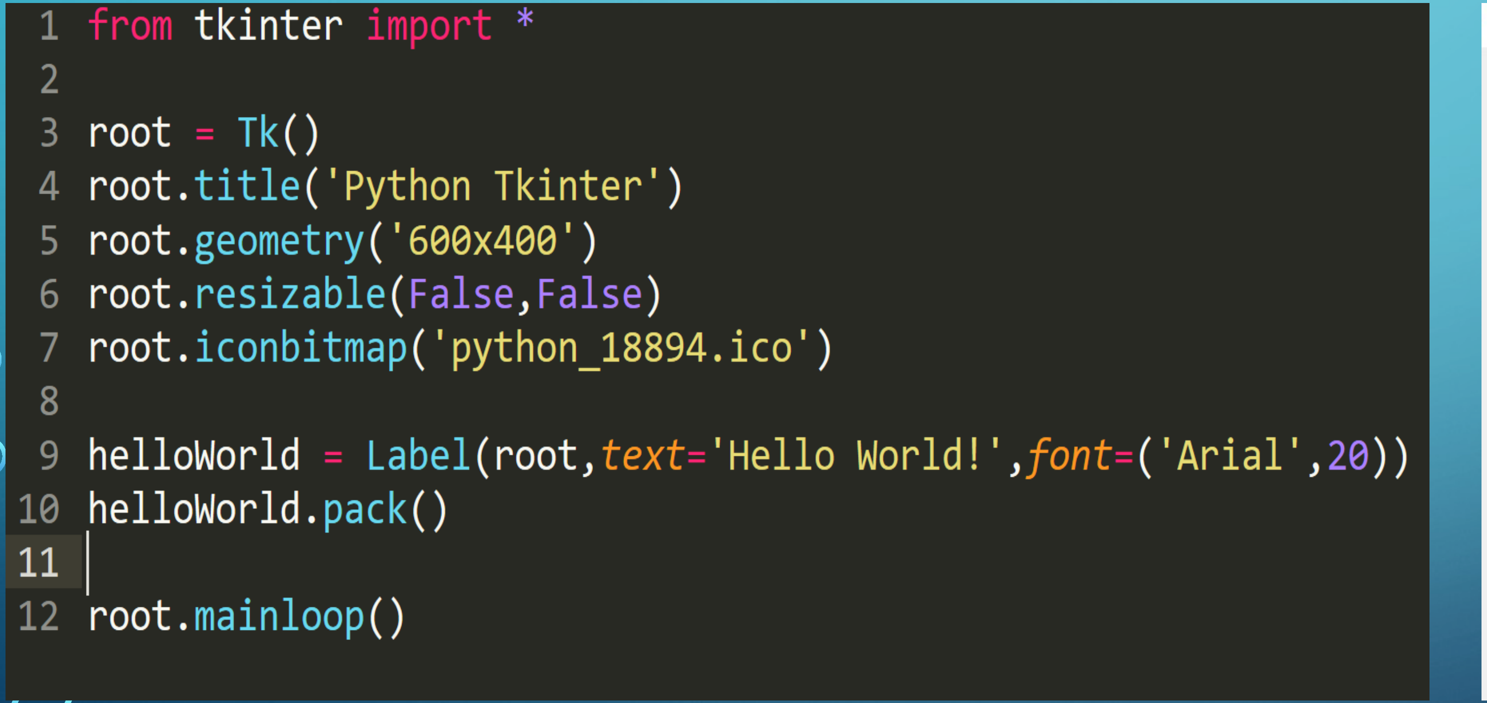
ADD PHOTO USING TKINTER TO GUI:



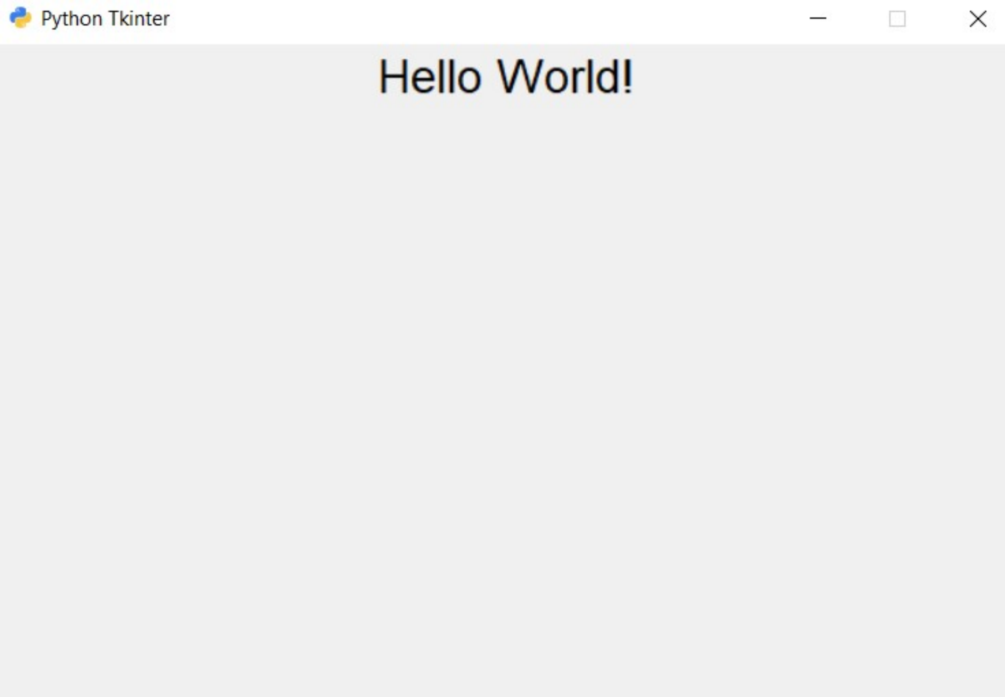
```
from tkinter import *

root = Tk()
root.title('Python Tkinter')
root.geometry('600x400')
root.resizable(False,False)
root.iconbitmap('python_18894.ico')
root.configure(bg='blue')

photo = PhotoImage(file='python-logo.png')
Label(root,image=photo,width=600,height=500).grid()
```



HELLO WORLD WITH USE TKINTER MODULE:

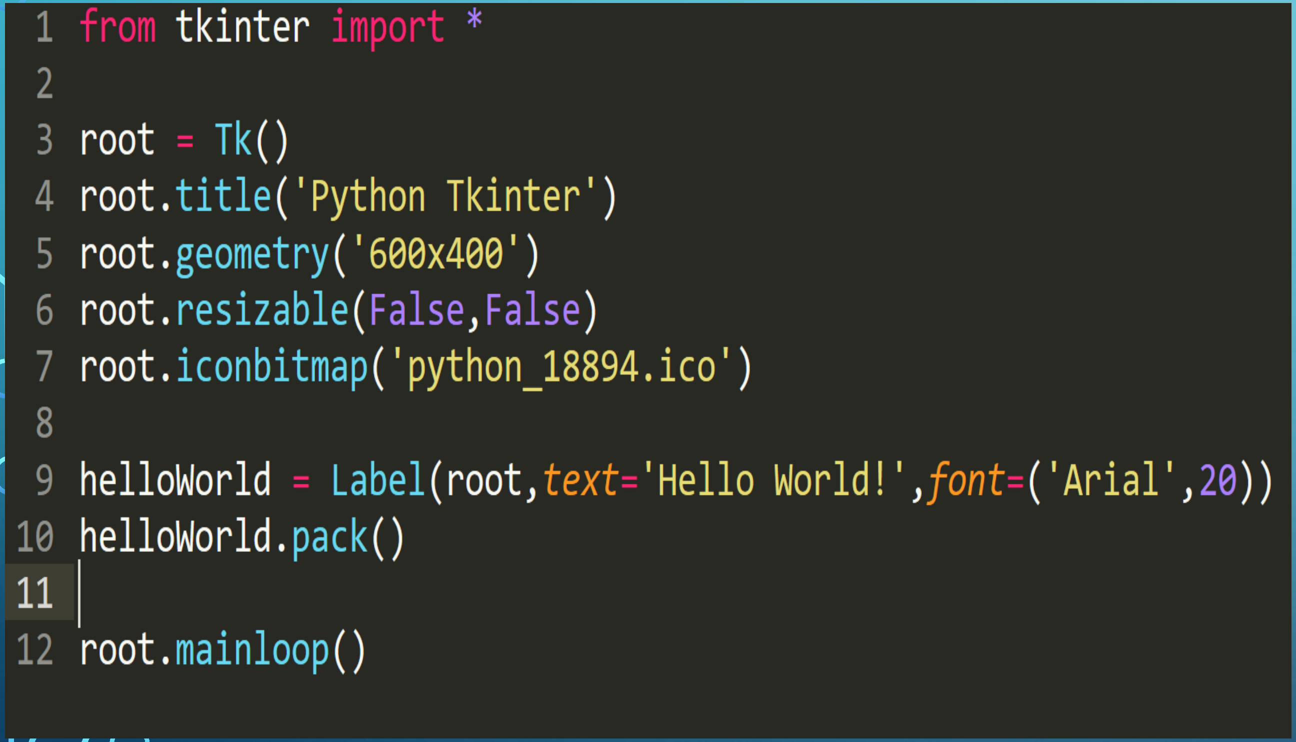


```python
from tkinter import *

root = Tk()
root.title('Python Tkinter')
root.geometry('600x400')
root.resizable(False,False)
root.iconbitmap('python_18894.ico')

helloWorld = Label(root,text='Hello World!',font=('Arial',20))
helloWorld.pack()

root.mainloop()
```



Hello World!

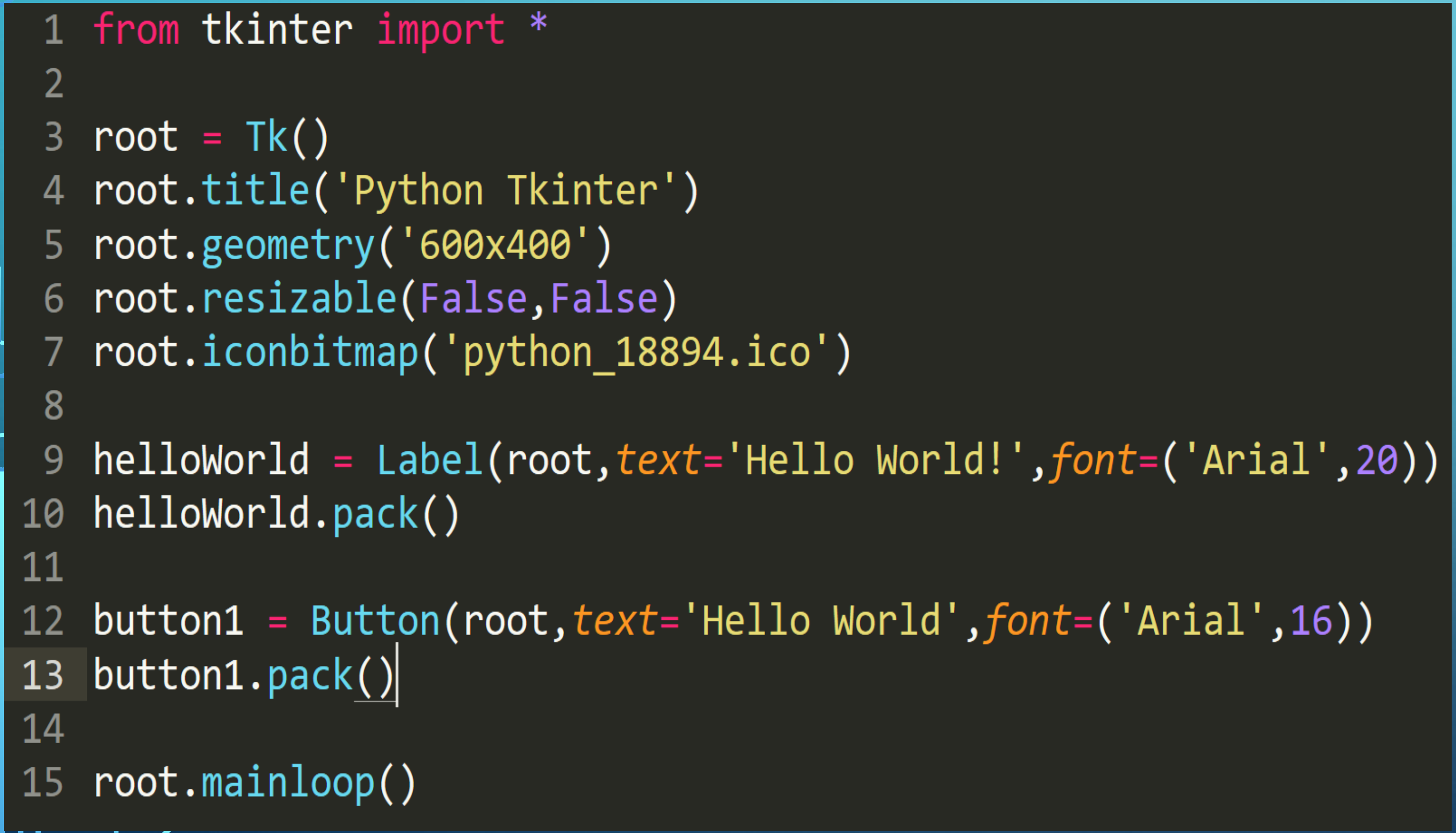
EXPLAIN TO CODE:



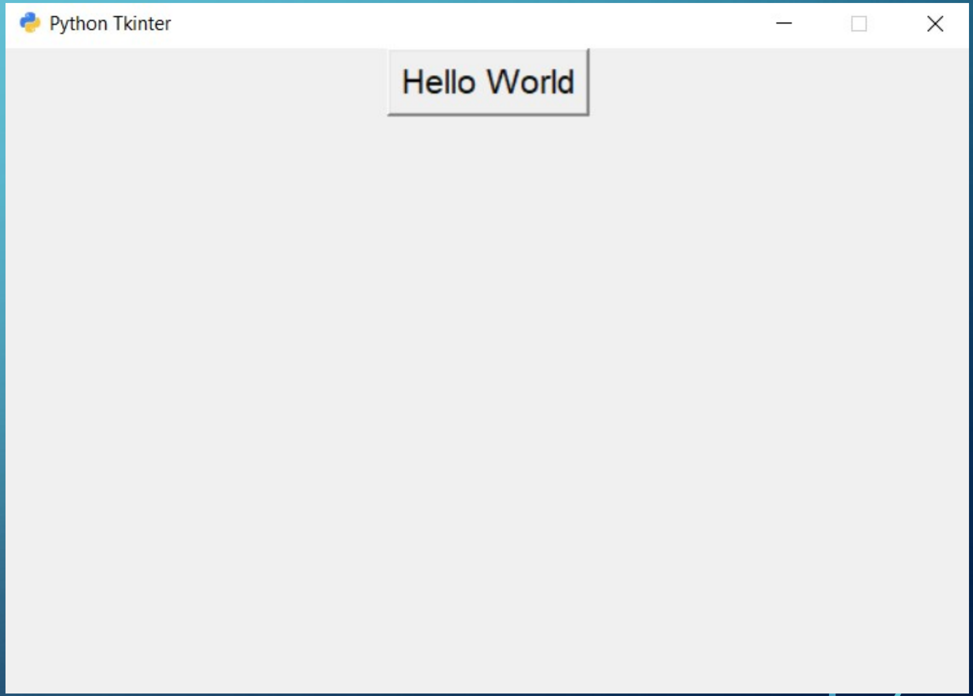
```python
from tkinter import *

root = Tk()
root.title('Python Tkinter')
root.geometry('600x400')
root.resizable(False,False)
root.iconbitmap('python_18894.ico')

helloWorld = Label(root,text='Hello World!',font=('Arial',20))
helloWorld.pack()

root.mainloop()
```

- We are using title() for set a name to application.
- We set a variable to use Label(). But its not necessary. We can use without a variable.
- What we want to write text to on screen we must use text=‘’.
- If we want to bring middle the text on screen we are using pack() function.

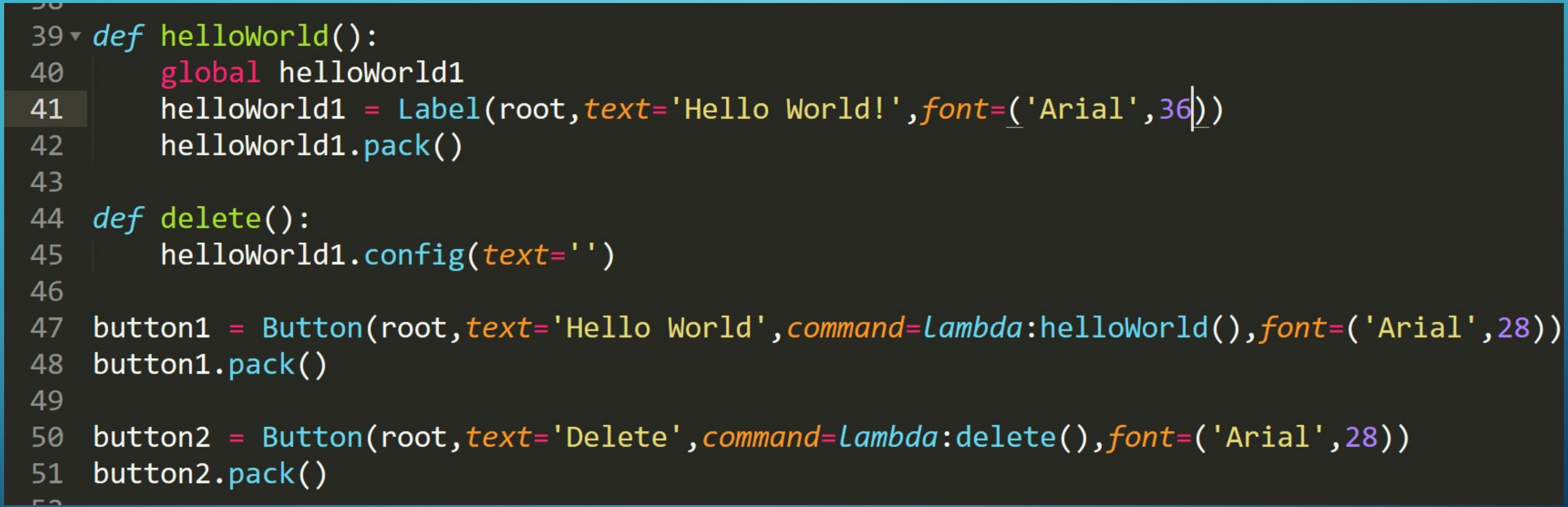
HOW ARE WE USING BUTTON?



```python
from tkinter import *

root = Tk()
root.title('Python Tkinter')
root.geometry('600x400')
root.resizable(False,False)
root.iconbitmap('python_18894.ico')

helloWorld = Label(root,text='Hello World!',font=('Arial',20))
helloWorld.pack()

button1 = Button(root,text='Hello World',font=('Arial',16))
button1.pack()

root.mainloop()
```

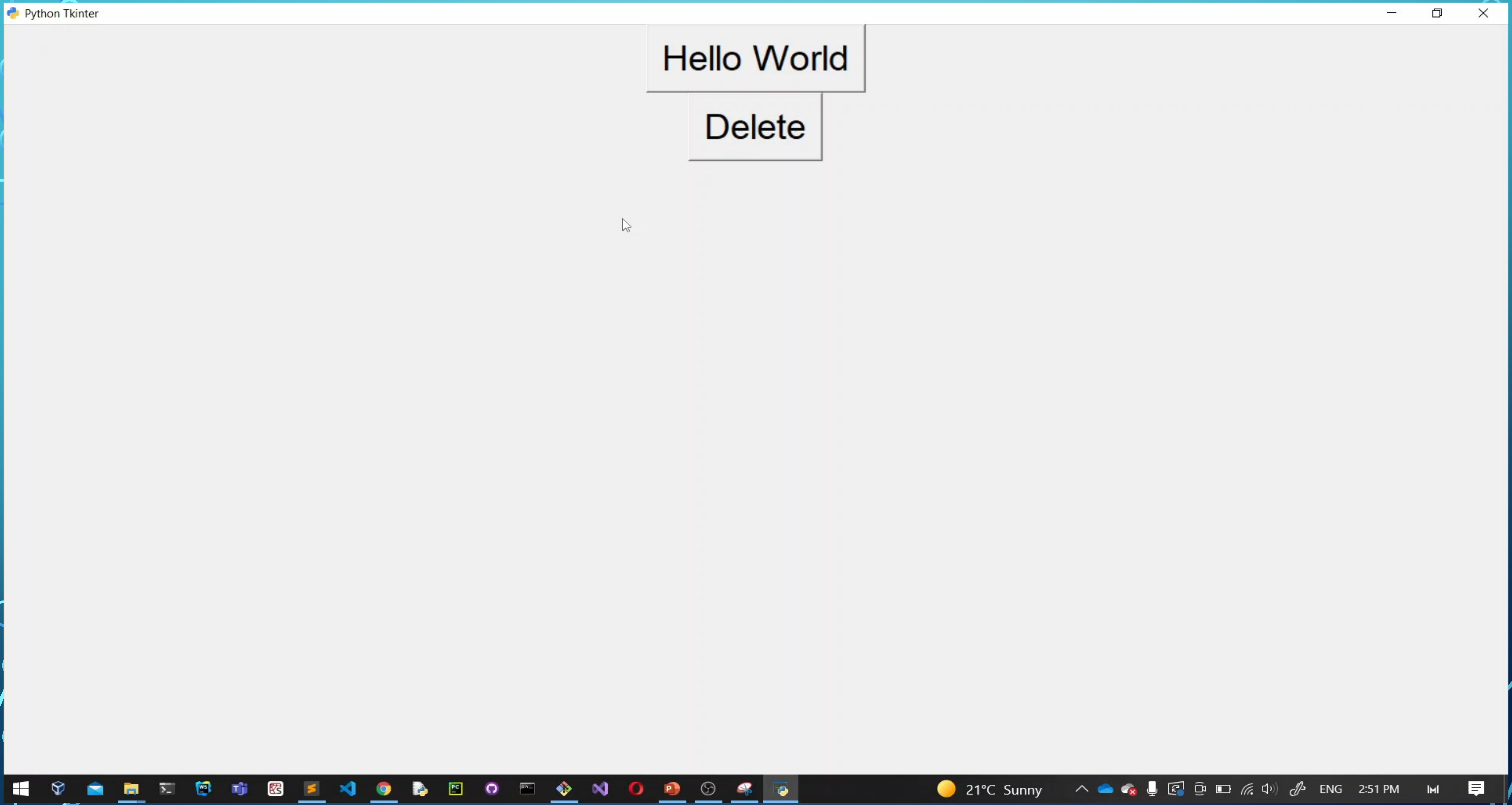


HOW TO USE COMMAND IN BUTTON?

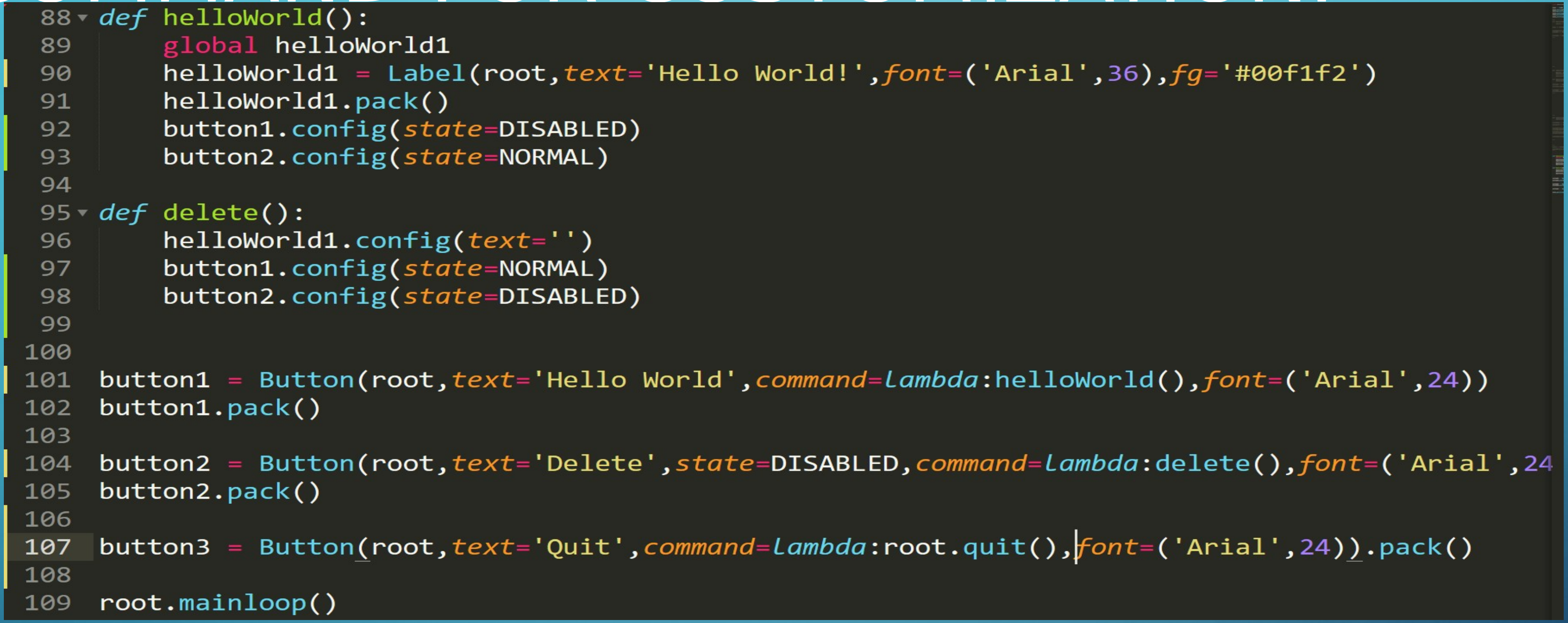


```
def helloWorld():
    global helloWorld1
    helloWorld1 = Label(root,text='Hello World!',font=('Arial',36))
    helloWorld1.pack()

def delete():
    helloWorld1.config(text='')

button1 = Button(root,text='Hello World',command=lambda:helloWorld(),font=('Arial',28))
button1.pack()

button2 = Button(root,text='Delete',command=lambda:delete(),font=('Arial',28))
button2.pack()
```

- ✉ Lambda : In button command, lambda is used to pass the data to a callback function.

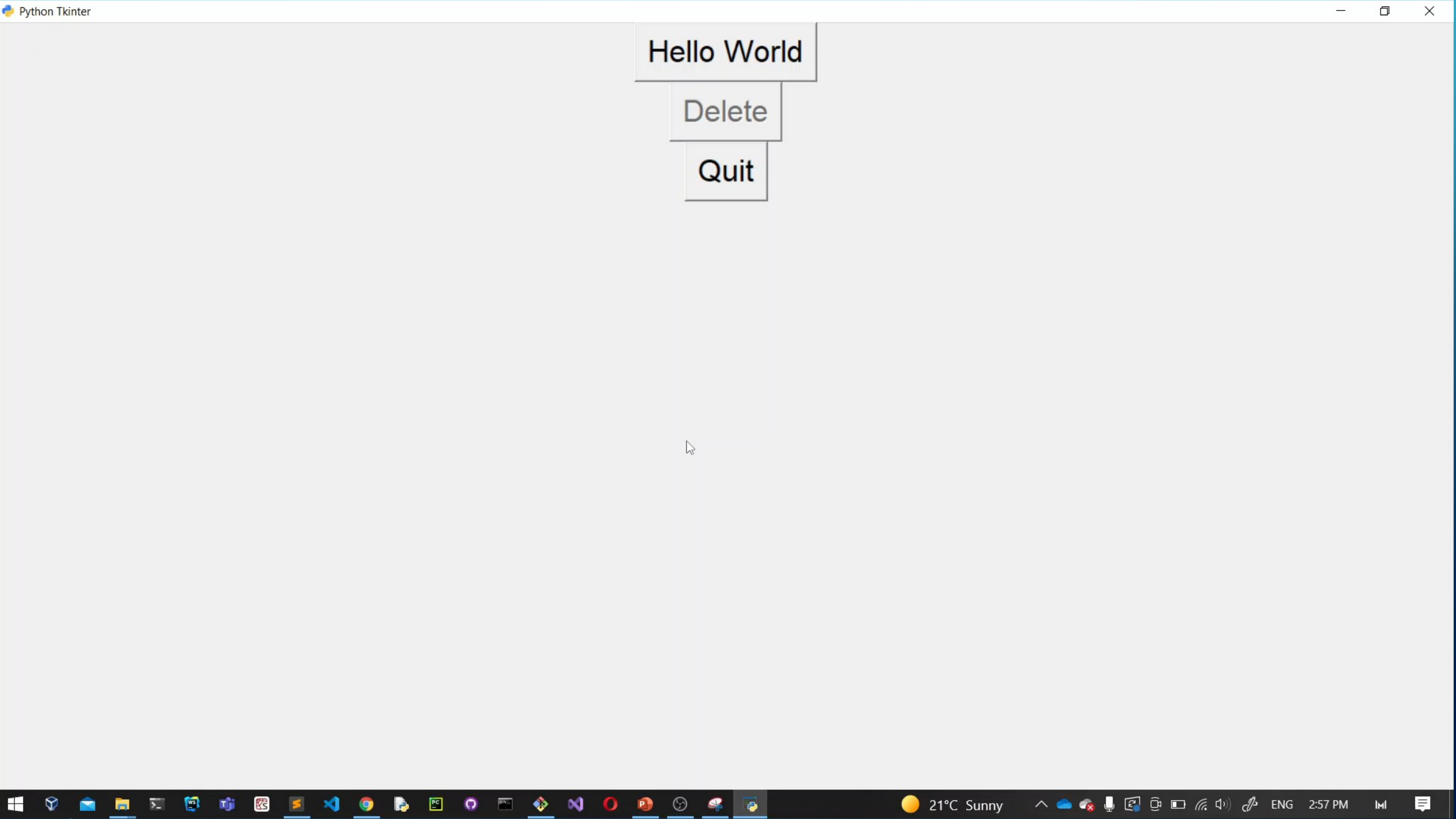

Python Tkinter
Hello World
Delete
21°C Sunny
ENG
2:51 PM

USE STATE COMMAND AND SOME COMMAND FOR CUSTOMIZATION:

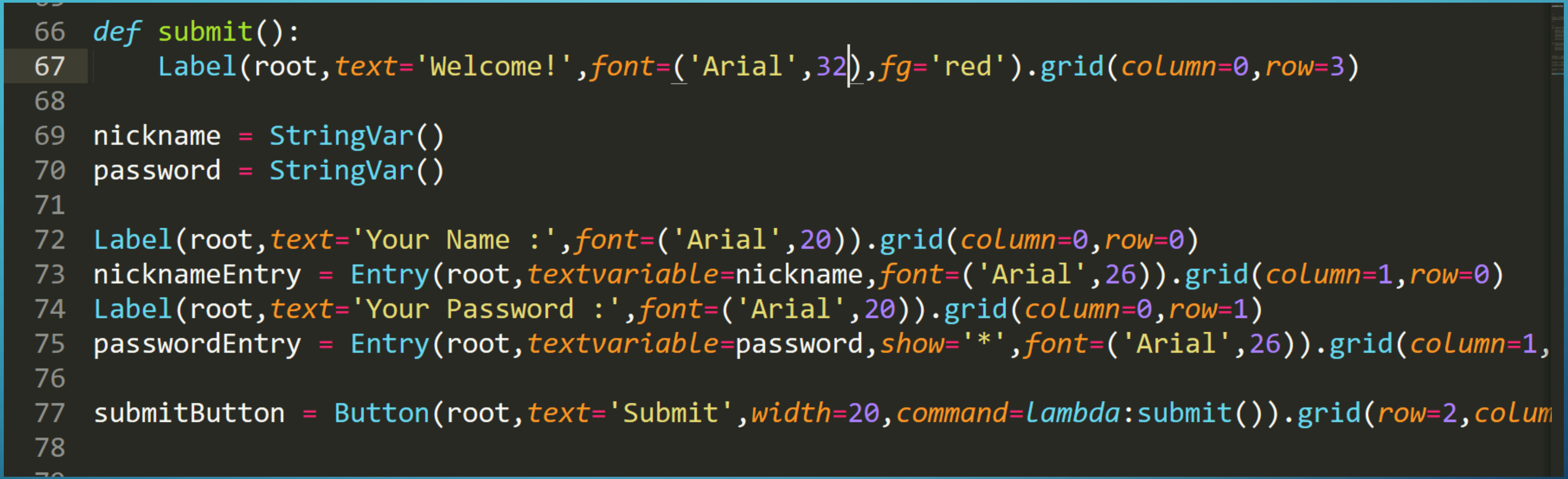


```python
def helloWorld():
    global helloWorld1
    helloWorld1 = Label(root,text='Hello World!',font=('Arial',36),fg='#00f1f2')
    helloWorld1.pack()
    button1.config(state=DISABLED)
    button2.config(state=NORMAL)

def delete():
    helloWorld1.config(text='')
    button1.config(state=NORMAL)
    button2.config(state=DISABLED)


button1 = Button(root,text='Hello World',command=lambda:helloWorld(),font=('Arial',24))
button1.pack()

button2 = Button(root,text='Delete',state=DISABLED,command=lambda:delete(),font=('Arial',24
button2.pack()

button3 = Button(root,text='Quit',command=lambda:root.quit(),font=('Arial',24)).pack()

root.mainloop()
```

- To control the state of a button, you use the state() method.
- We are using fg=‘’ for customization a text in the label.

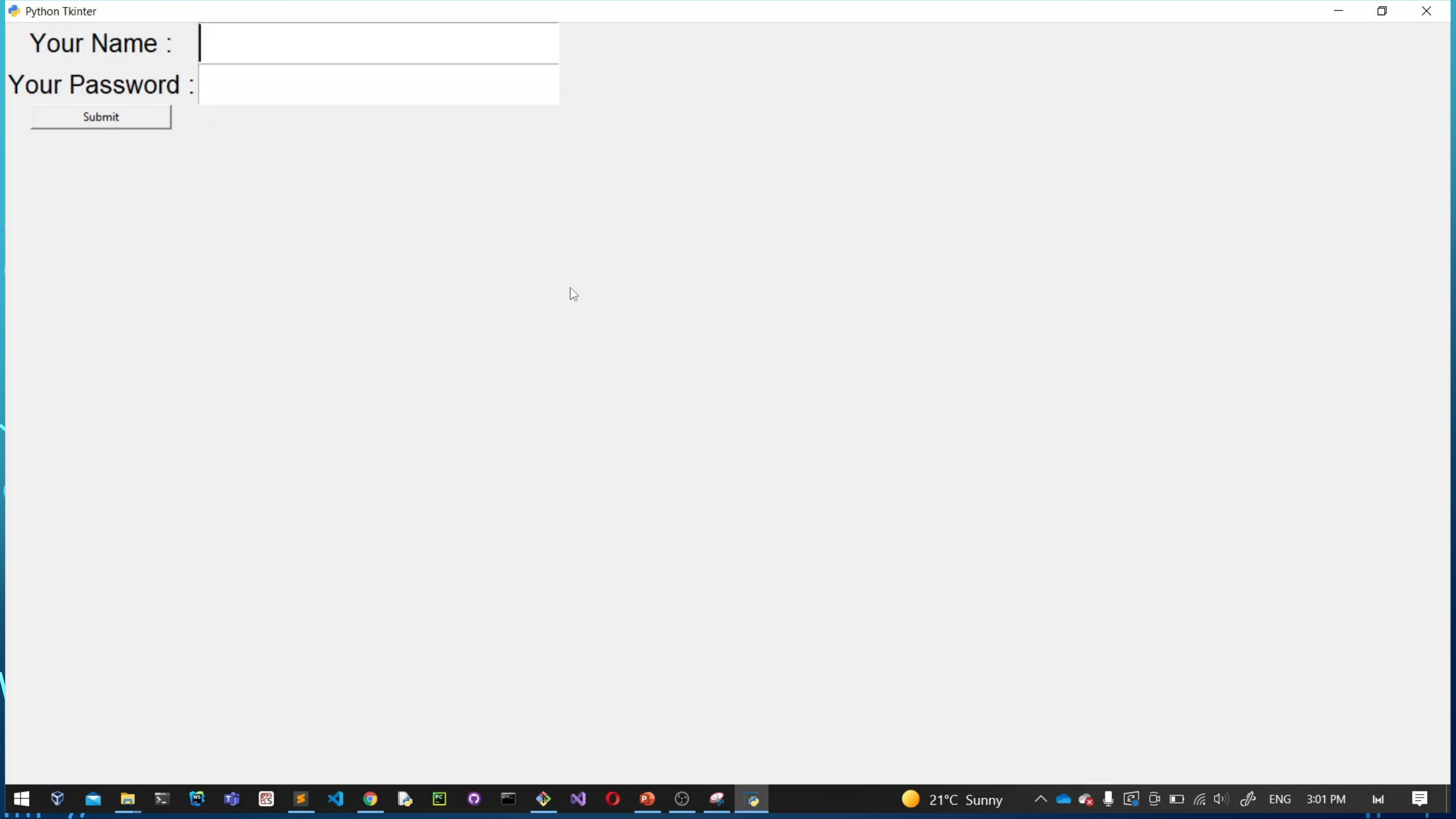

Python Tkinter
Hello World
Delete
Quit
21°C Sunny
ENG
2:57 PM

INTRODUCTION TO TKINTER ENTRY WIDGET:

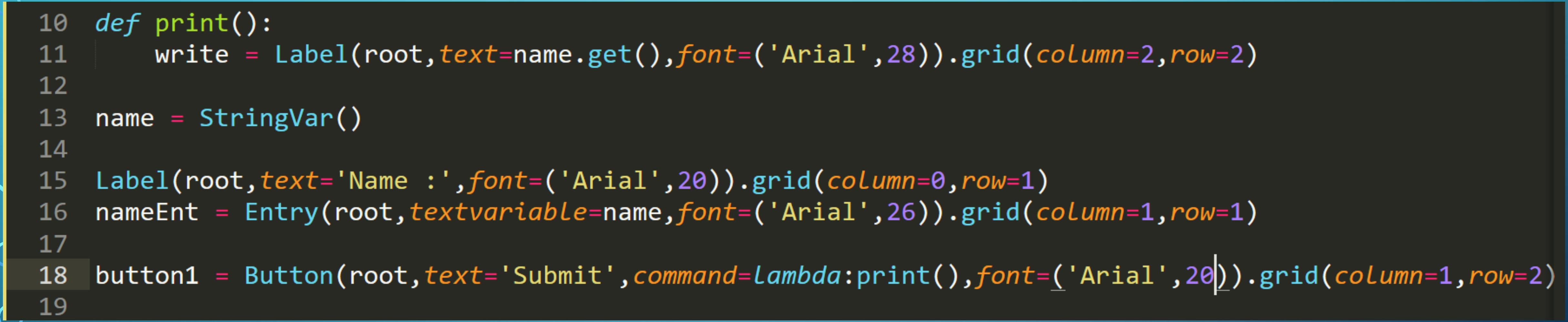


```python
def submit():
    Label(root,text='Welcome!',font=('Arial',32),fg='red').grid(column=0,row=3)

nickname = StringVar()
password = StringVar()

Label(root,text='Your Name :',font=('Arial',20)).grid(column=0,row=0)
nicknameEntry = Entry(root,textvariable=nickname,font=('Arial',26)).grid(column=1,row=0)
Label(root,text='Your Password :',font=('Arial',20)).grid(column=0,row=1)
passwordEntry = Entry(root,textvariable=password,show='*',font=('Arial',26)).grid(column=1,

submitButton = Button(root,text='Submit',width=20,command=lambda:submit()).grid(row=2,colum

```

- ✉Firstly, create a new instance of the StringVar() class. The text will be the value holder for a string variable.
- ✉Second, assign the text variable to the

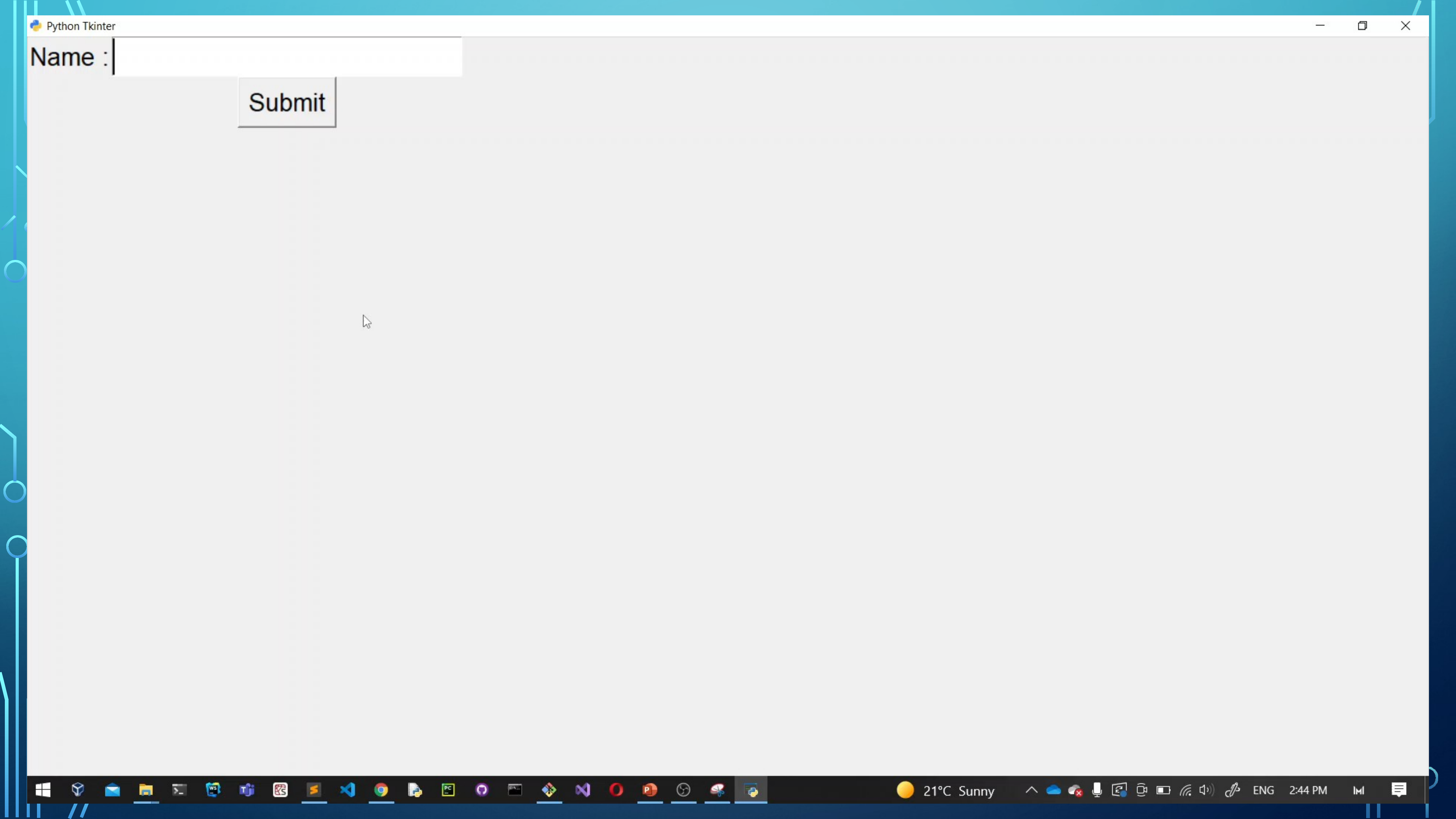

Python Tkinter
Your Name :
Your Password :
Submit
21°C Sunny
ENG
3:01 PM

HOW TO USE GET()?

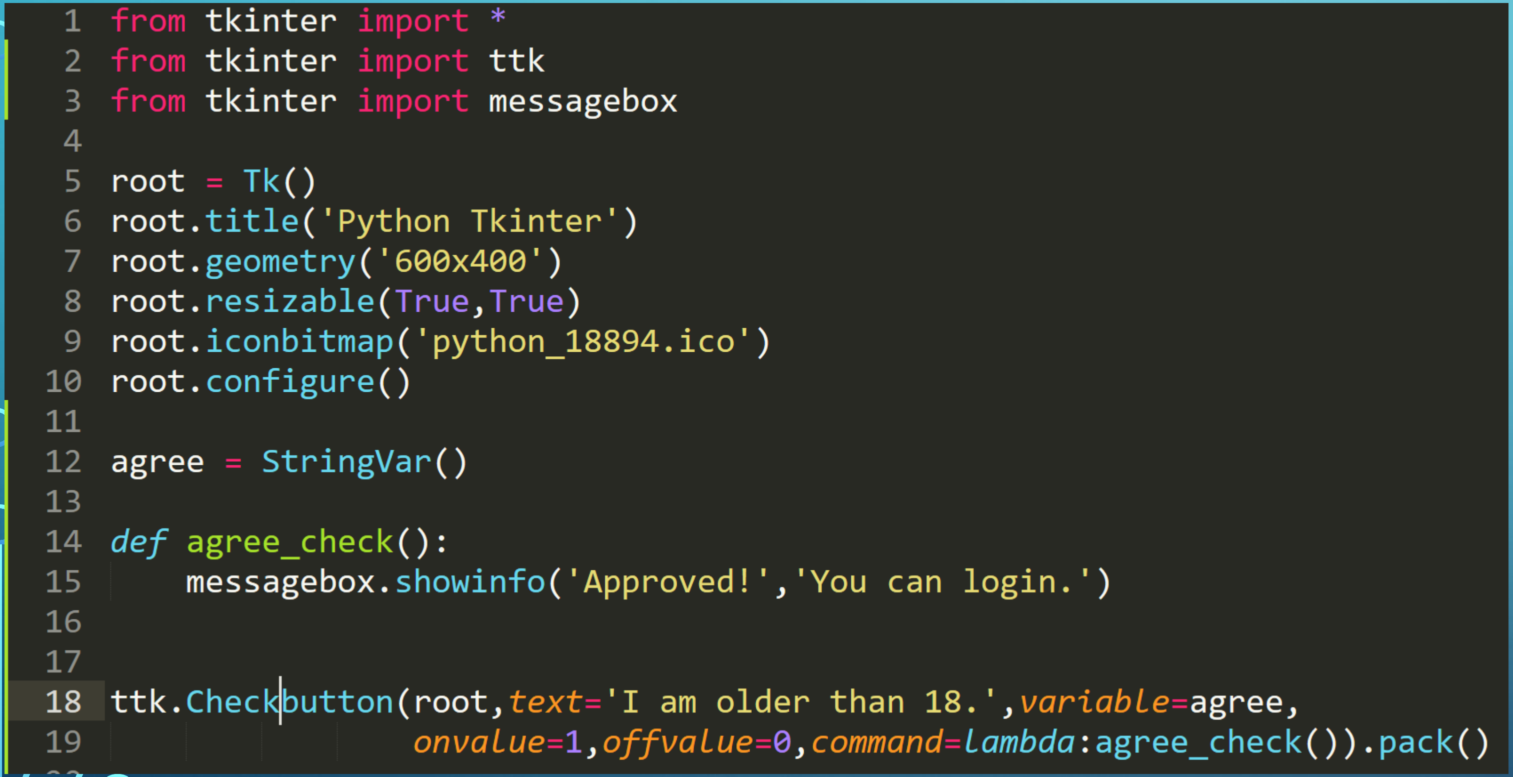


```
def print():
    write = Label(root,text=name.get(),font=('Arial',28)).grid(column=2,row=2)

name = StringVar()

Label(root,text='Name :',font=('Arial',20)).grid(column=0,row=1)
nameEnt = Entry(root,textvariable=name,font=('Arial',26)).grid(column=1,row=1)

button1 = Button(root,text='Submit',command=lambda:print(),font=('Arial',20)).grid(column=1,row=2)

```

- In this case, you can use call the get() method of the StringVar() object to get the current value of the entry widget.

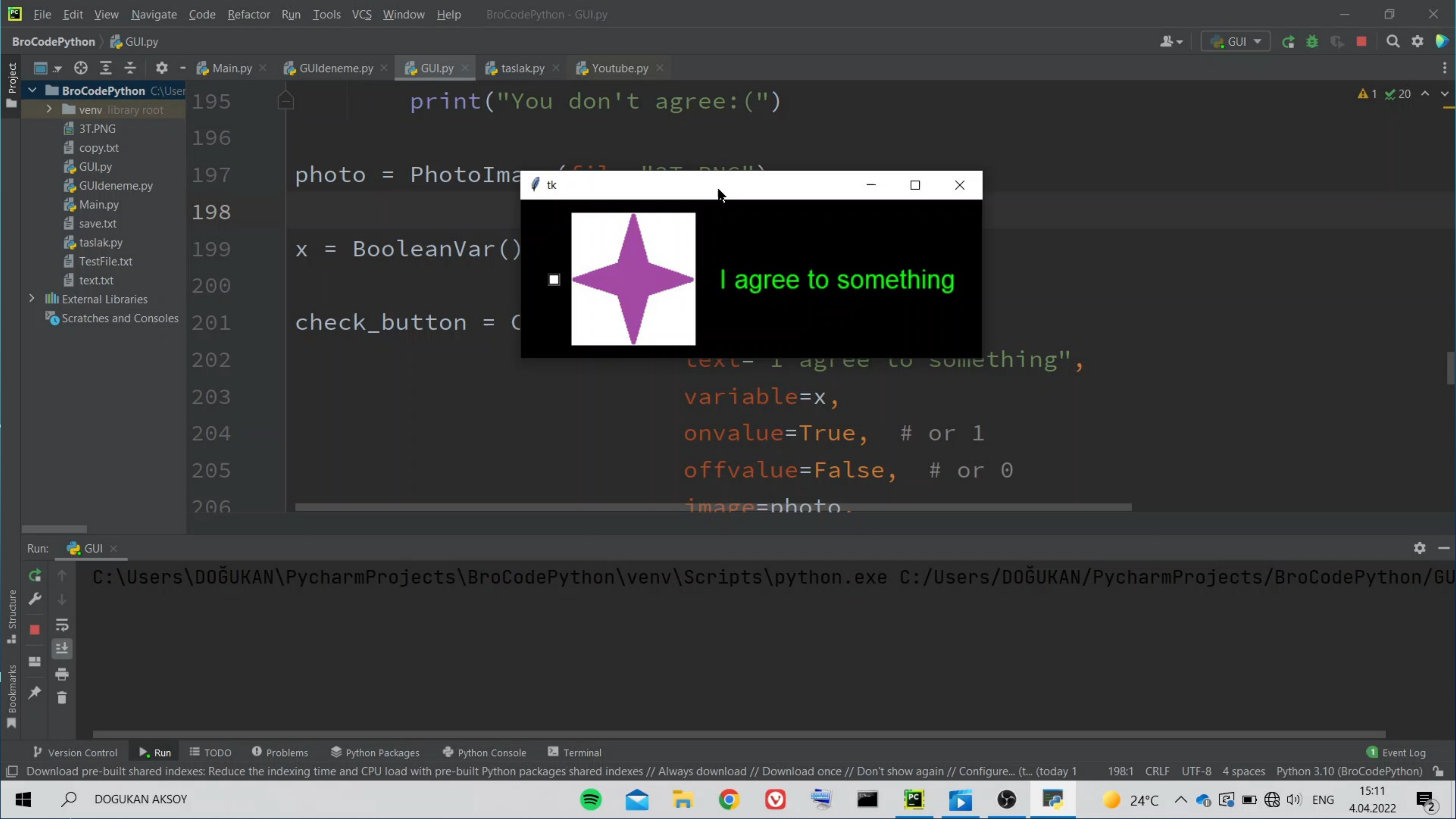

Python Tkinter
Name :
Submit
21°C Sunny
ENG
2:44 PM

HOW WE USE CHECKBUTTON AND SHOWINFO?



```python
from tkinter import *
from tkinter import ttk
from tkinter import messagebox

root = Tk()
root.title('Python Tkinter')
root.geometry('600x400')
root.resizable(True,True)
root.iconbitmap('python_18894.ico')
root.configure()

agree = StringVar()

def agree_check():
    messagebox.showinfo('Approved!','You can login.')


ttk.Checkbutton(root,text='I am older than 18.',variable=agree,
                onvalue=1,offvalue=0,command=lambda:agree_check()).pack()
```

- ✉ The variable holds the the current value of the checkbox. If the checkbox is checked, the value of the variable is 1. Otherwise, it is 0.
- ✉ We must call messagebox to use showinfo().



```
        print("You don't agree:(")

photo = PhotoIma

x = BooleanVar()

check_button = C
                    text="I agree to something",
                    variable=x,
                    onvalue=True,  # or 1
                    offvalue=False,  # or 0
                    image=photo,
```

□ I agree to something

```
C:\Users\DOĞUKAN\PycharmProjects\BroCodePython\venv\Scripts\python.exe C:/Users/DOĞUKAN/PycharmProjects/BroCodePython/GU
```

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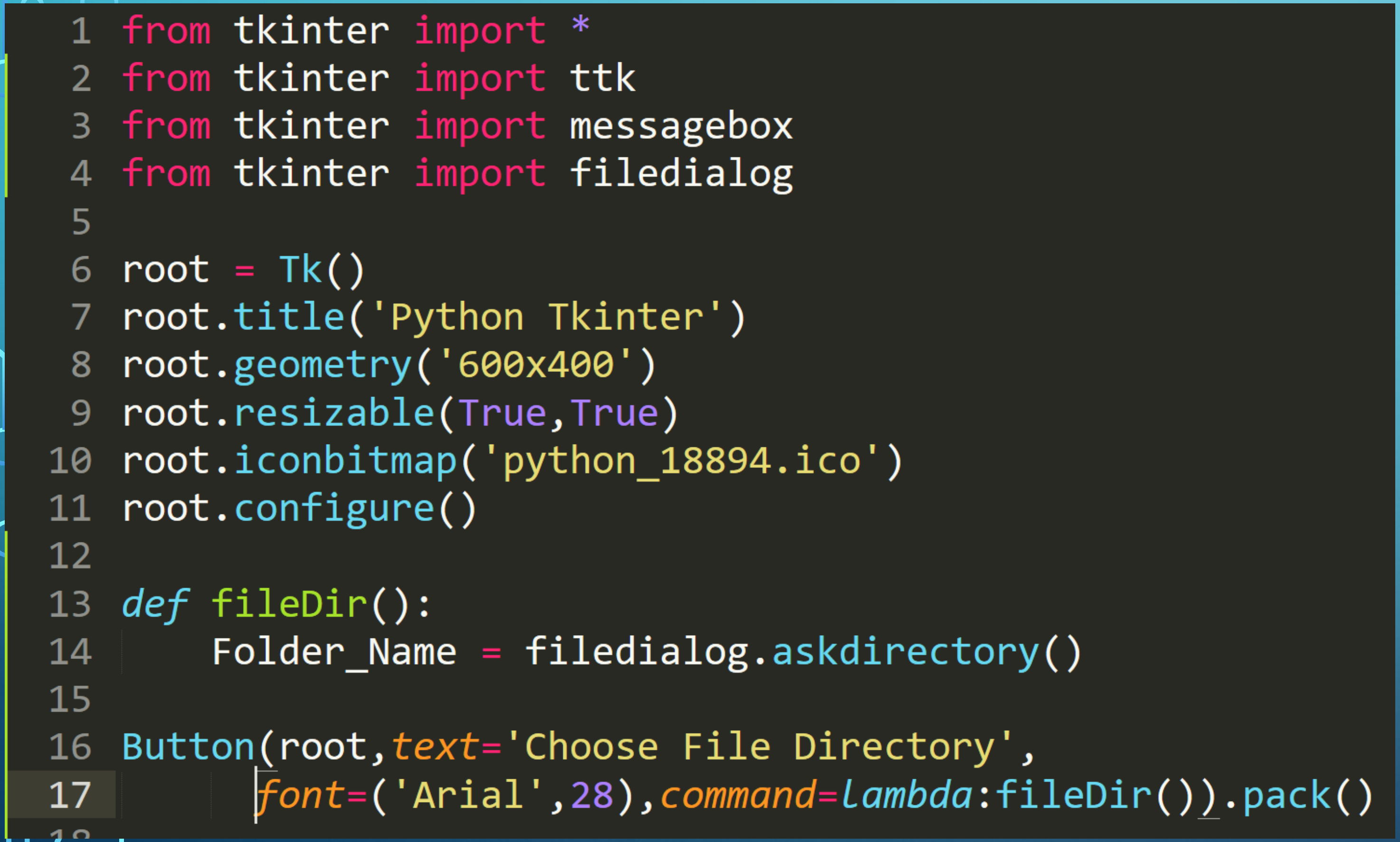
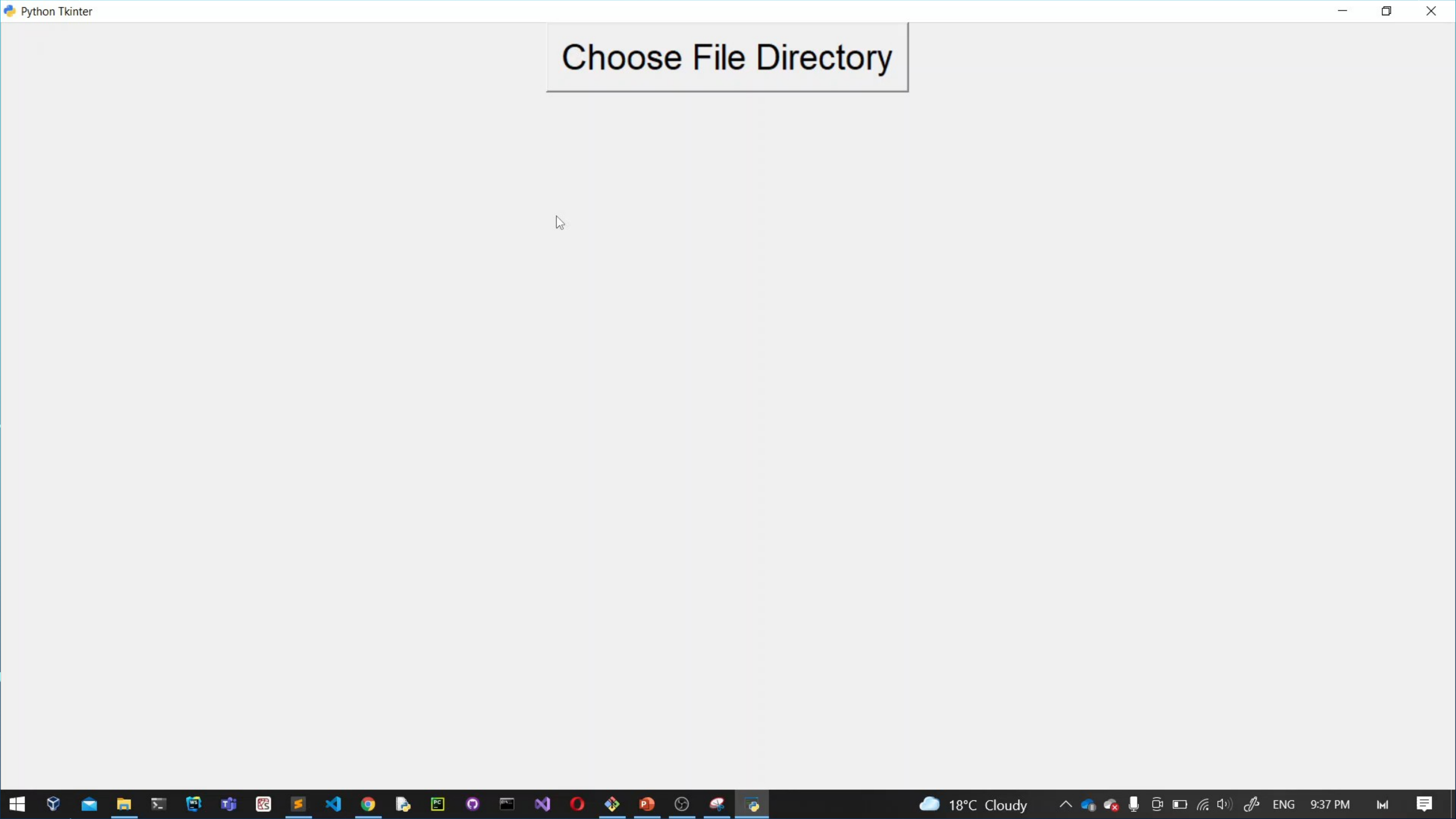
HOW WE CHOOSE FILE DIRECTORY?

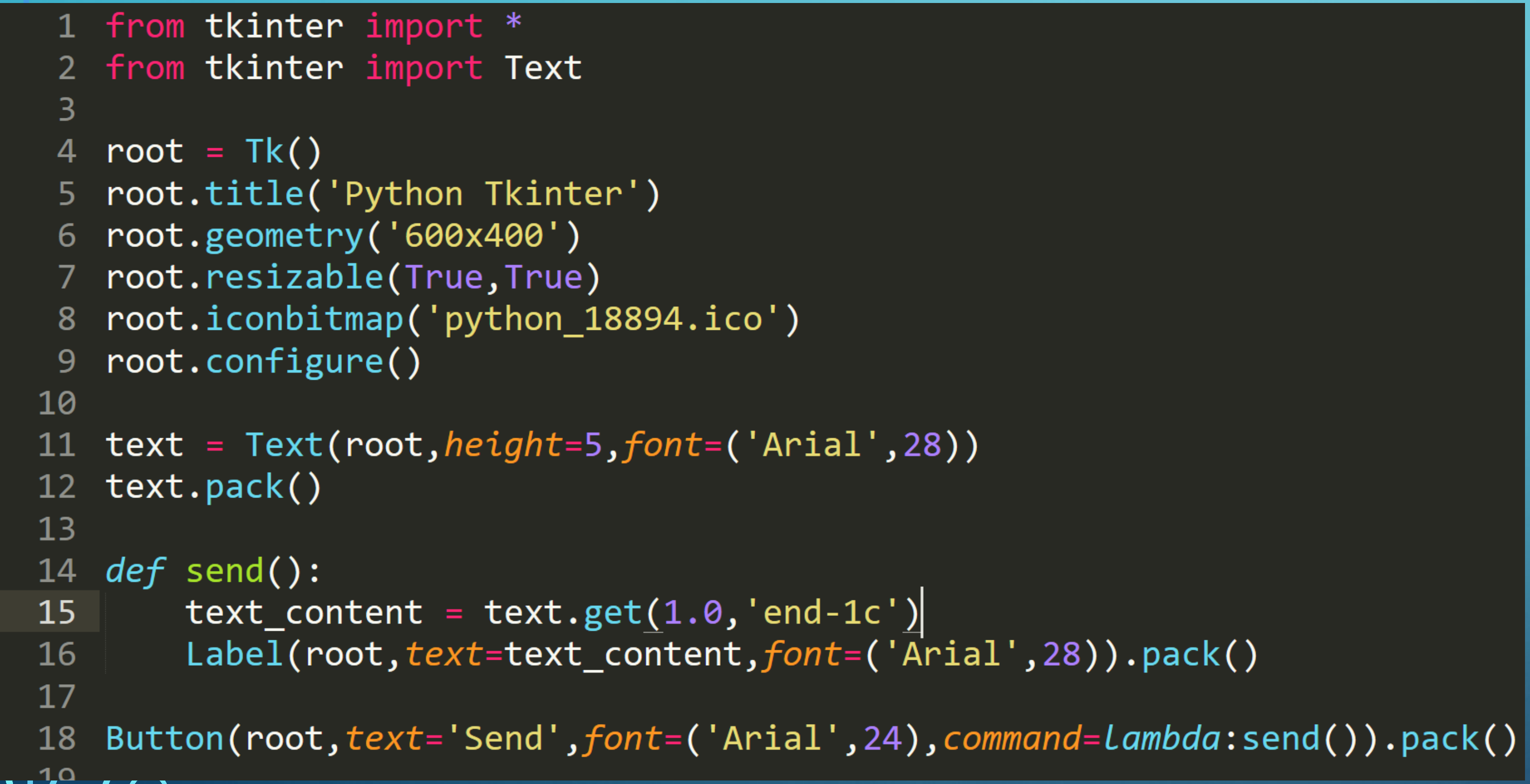


```
from tkinter import *
from tkinter import ttk
from tkinter import messagebox
from tkinter import filedialog

root = Tk()
root.title('Python Tkinter')
root.geometry('600x400')
root.resizable(True,True)
root.iconbitmap('python_18894.ico')
root.configure()

def fileDir():
    Folder_Name = filedialog.askdirectory()

Button(root,text='Choose File Directory',
      font=('Arial',28),command=lambda:fileDir()).pack()
```

- ✉ We must import ‘filedialog’ to choose file directory.

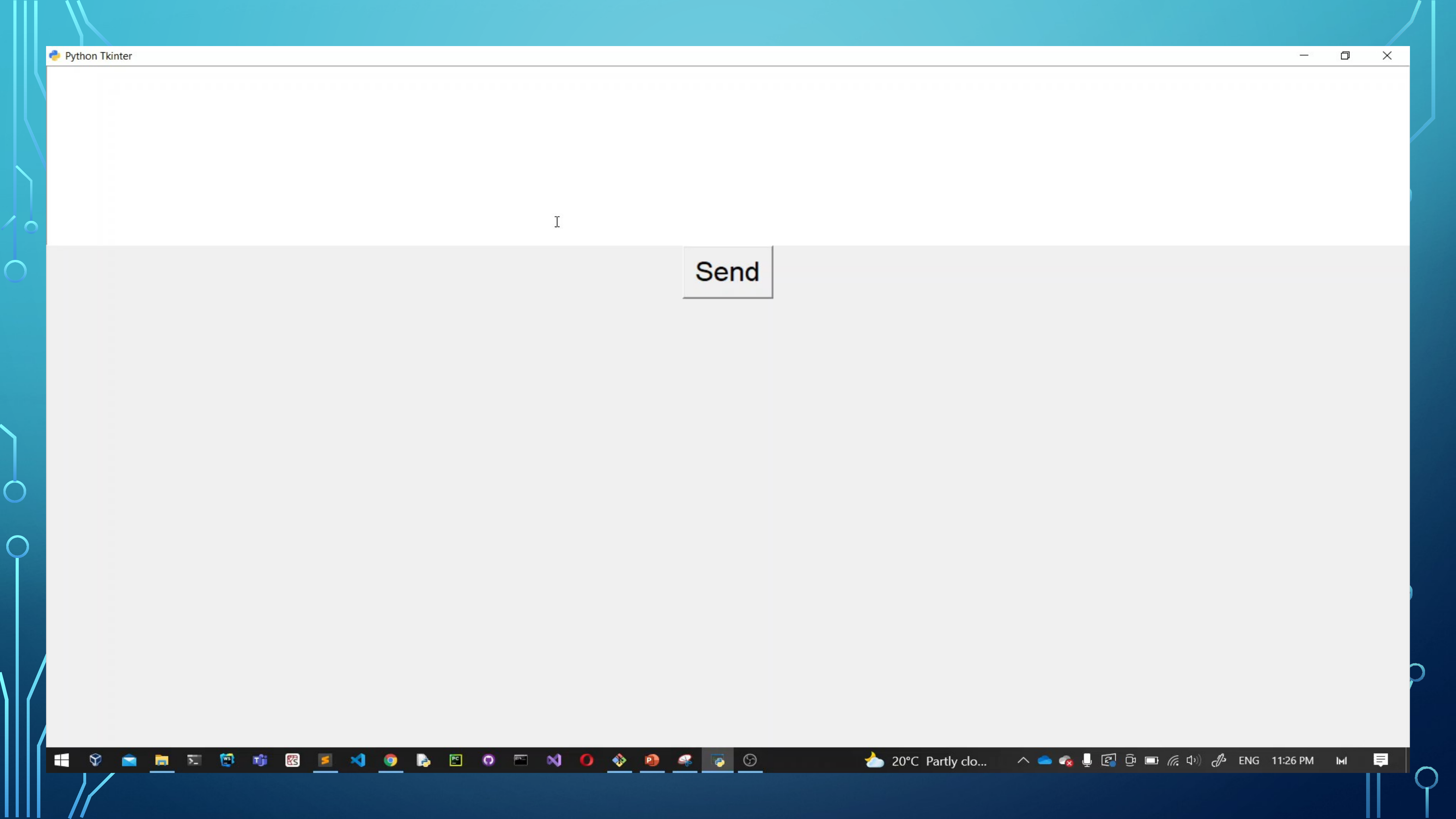

Python Tkinter
Choose File Directory
18°C Cloudy
ENG
9:37 PM

HOW WE CREATE TEXT AREA AND USE GET()?

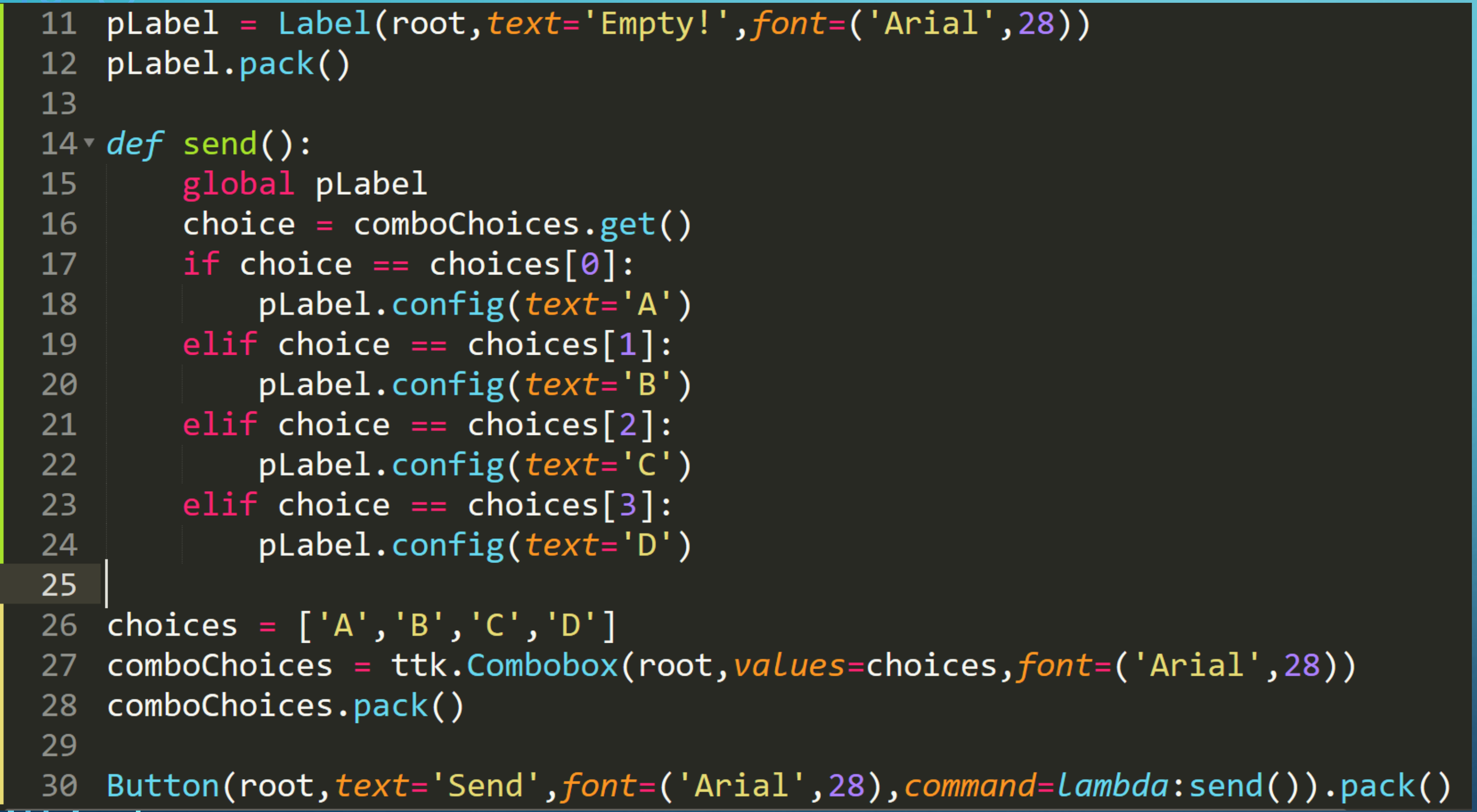


```python
from tkinter import *
from tkinter import Text

root = Tk()
root.title('Python Tkinter')
root.geometry('600x400')
root.resizable(True,True)
root.iconbitmap('python_18894.ico')
root.configure()

text = Text(root,height=5,font=('Arial',28))
text.pack()

def send():
    text_content = text.get(1.0,'end-1c')
    Label(root,text=text_content,font=('Arial',28)).pack()

Button(root,text='Send',font=('Arial',24),command=lambda:send()).pack()
```

- The Text widget allows you to display and edit multi-line textarea with various styles.
- The get() method accepts two arguments. The first argument is the start position, and the second is the end

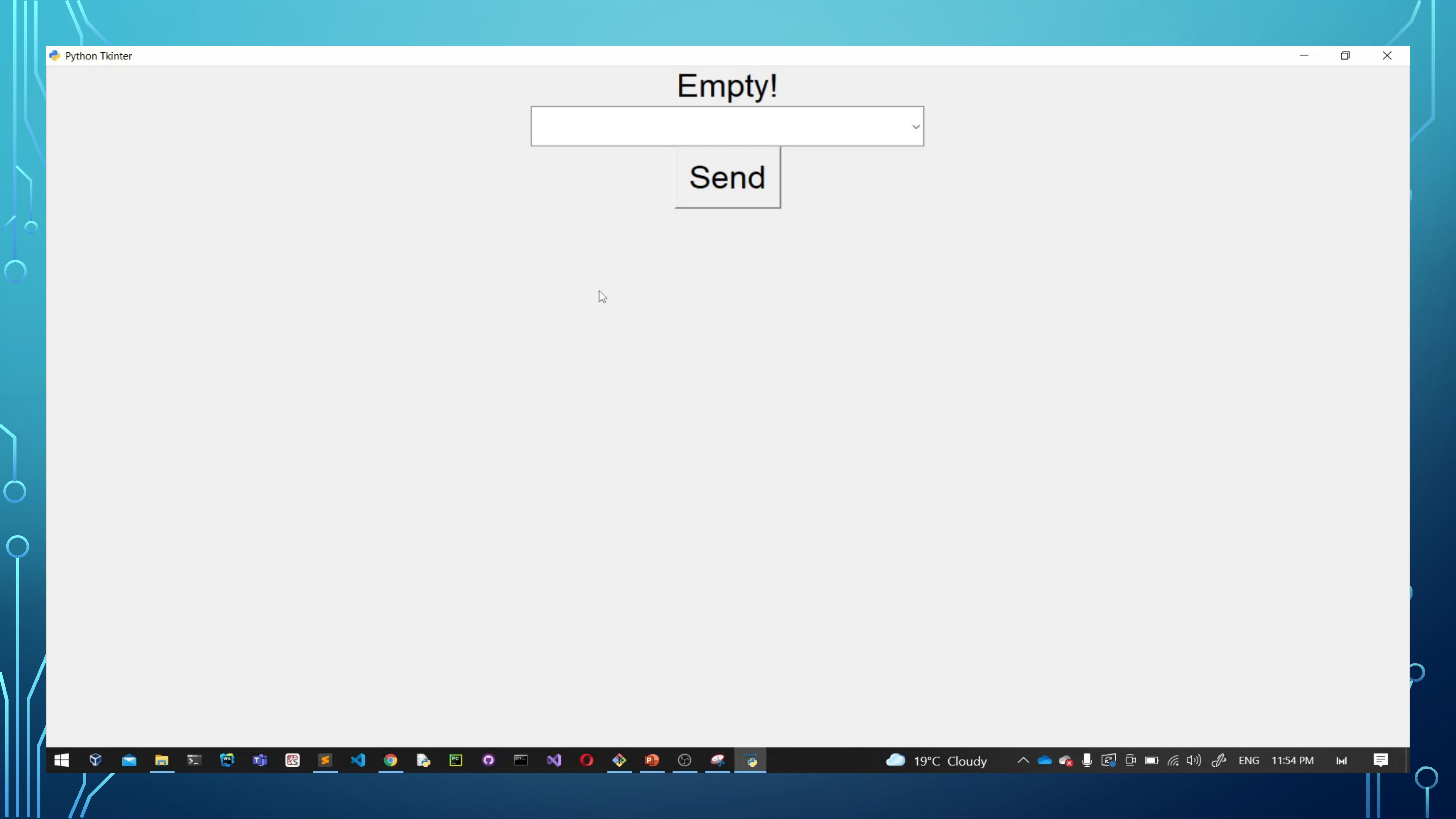

Python Tkinter
Send
20°C Partly clo...
ENG
11:26 PM

HOW ARE WE USING COMBOBOX?



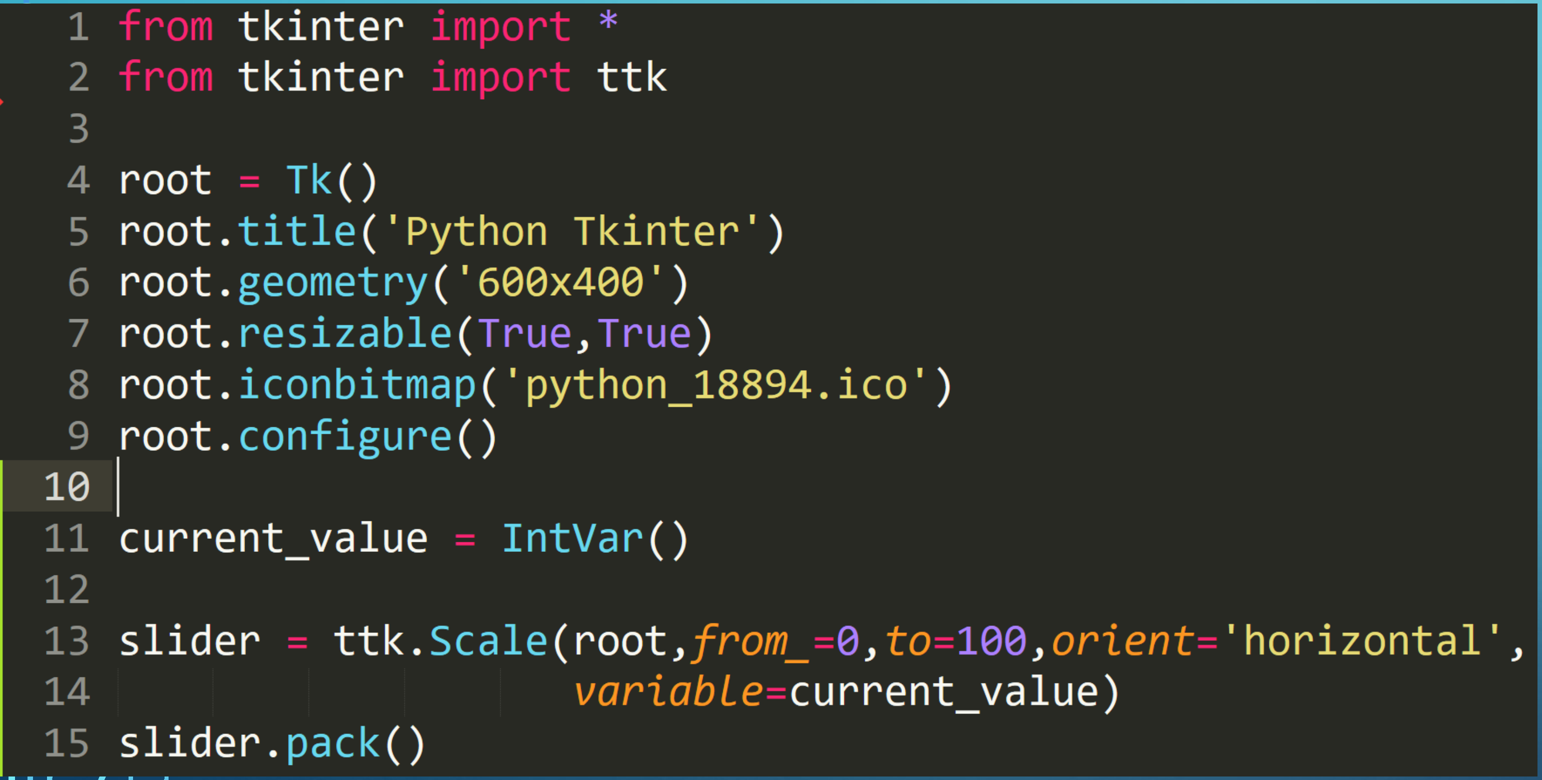
```python
pLabel = Label(root,text='Empty!',font=('Arial',28))
pLabel.pack()

def send():
    global pLabel
    choice = comboChoices.get()
    if choice == choices[0]:
        pLabel.config(text='A')
    elif choice == choices[1]:
        pLabel.config(text='B')
    elif choice == choices[2]:
        pLabel.config(text='C')
    elif choice == choices[3]:
        pLabel.config(text='D')

choices = ['A','B','C','D']
comboChoices = ttk.Combobox(root,values=choices,font=('Arial',28))
comboChoices.pack()

Button(root,text='Send',font=('Arial',28),command=lambda:send()).pack()
```

- We must use pLabel.pack() because if we don’t use and we click send button probably we see a error.
- We are using ‘from tkinter import ttk’ to use combobox.



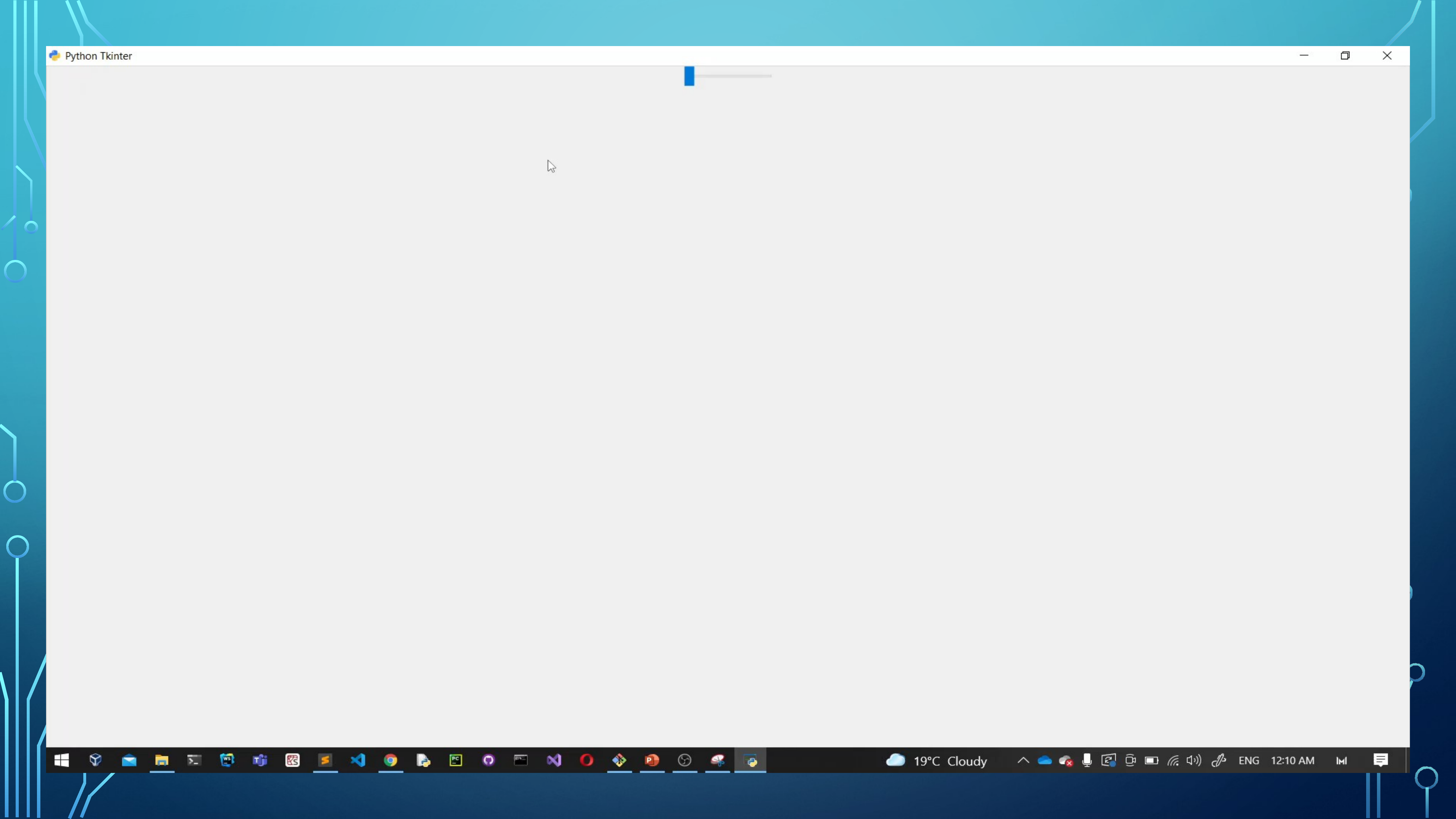
Empty!

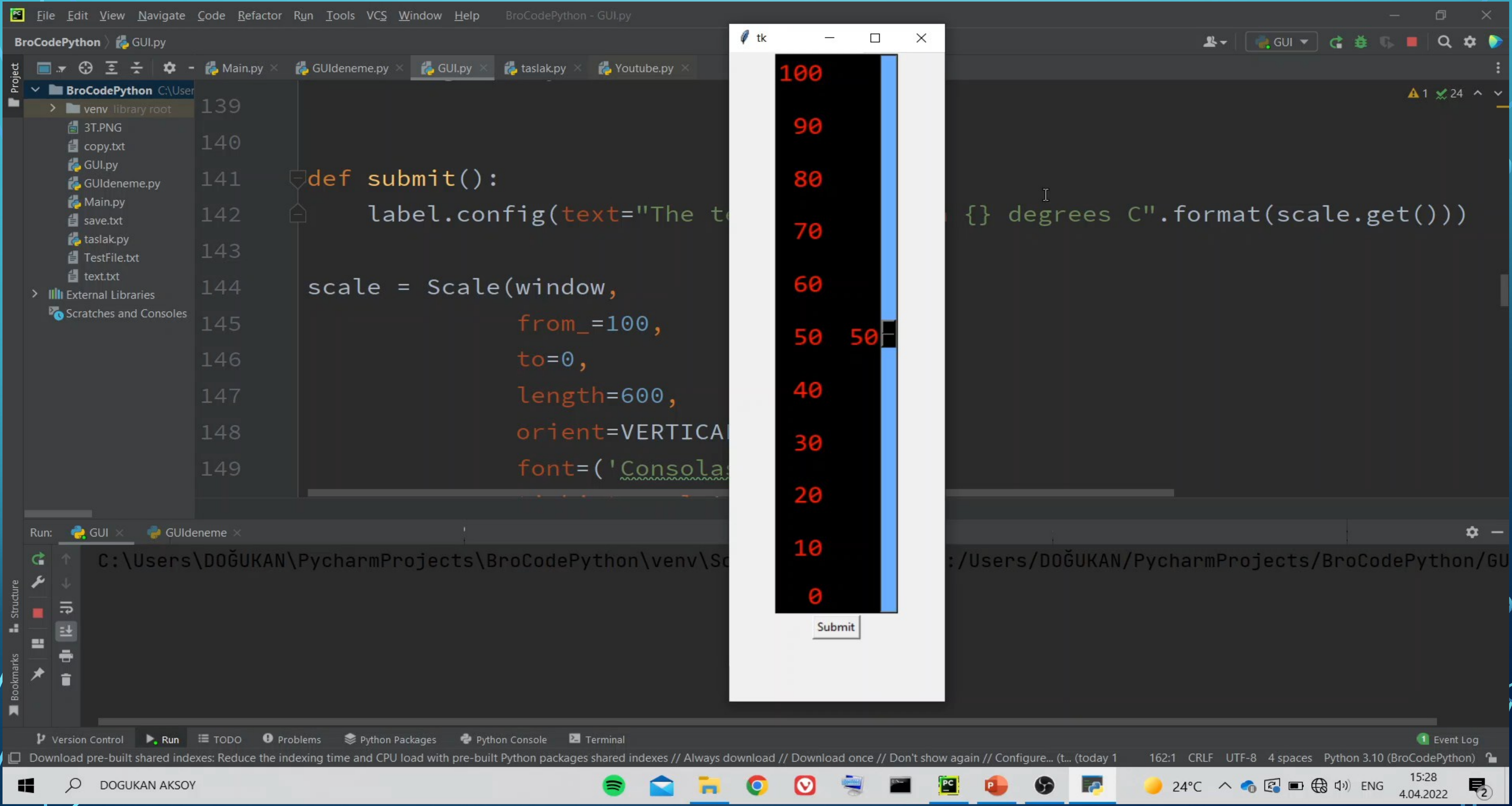
HOW ARE WE USING SLIDER?



```python
from tkinter import *
from tkinter import ttk

root = Tk()
root.title('Python Tkinter')
root.geometry('600x400')
root.resizable(True,True)
root.iconbitmap('python_18894.ico')
root.configure()

current_value = IntVar()

slider = ttk.Scale(root,from_=0,to=100,orient='horizontal',
                   variable=current_value)
slider.pack()
```

- ✉ The from_ and to options specify the minimum and maximum values of the slider. Since from is a keyword in Python, Tkinter uses from_ instead.
- ✉ By default, a slider is horizontal. To specify how the slider is arranged, you use the


Python Tkinter
19°C Cloudy
ENG
12:10 AM



```
def submit():
    label.config(text="The te                 {} degrees C".format(scale.get()))

scale = Scale(window,
              from_=100,
              to=0,
              length=600,
              orient=VERTICA
              font=('Consola
```

```
C:\Users\DOĞUKAN\PycharmProjects\BroCodePython\venv\Sc          :/Users/DOĞUKAN/PycharmProjects/BroCodePython/GU
```

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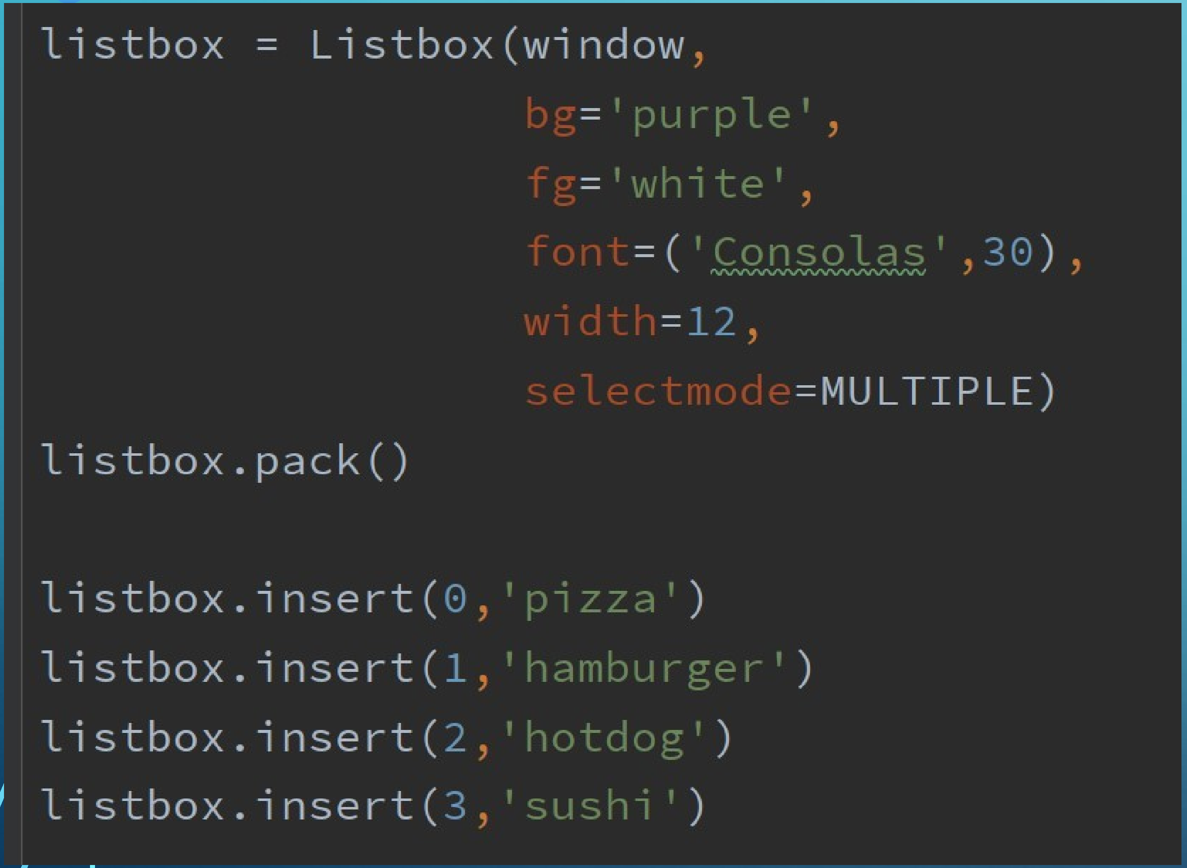
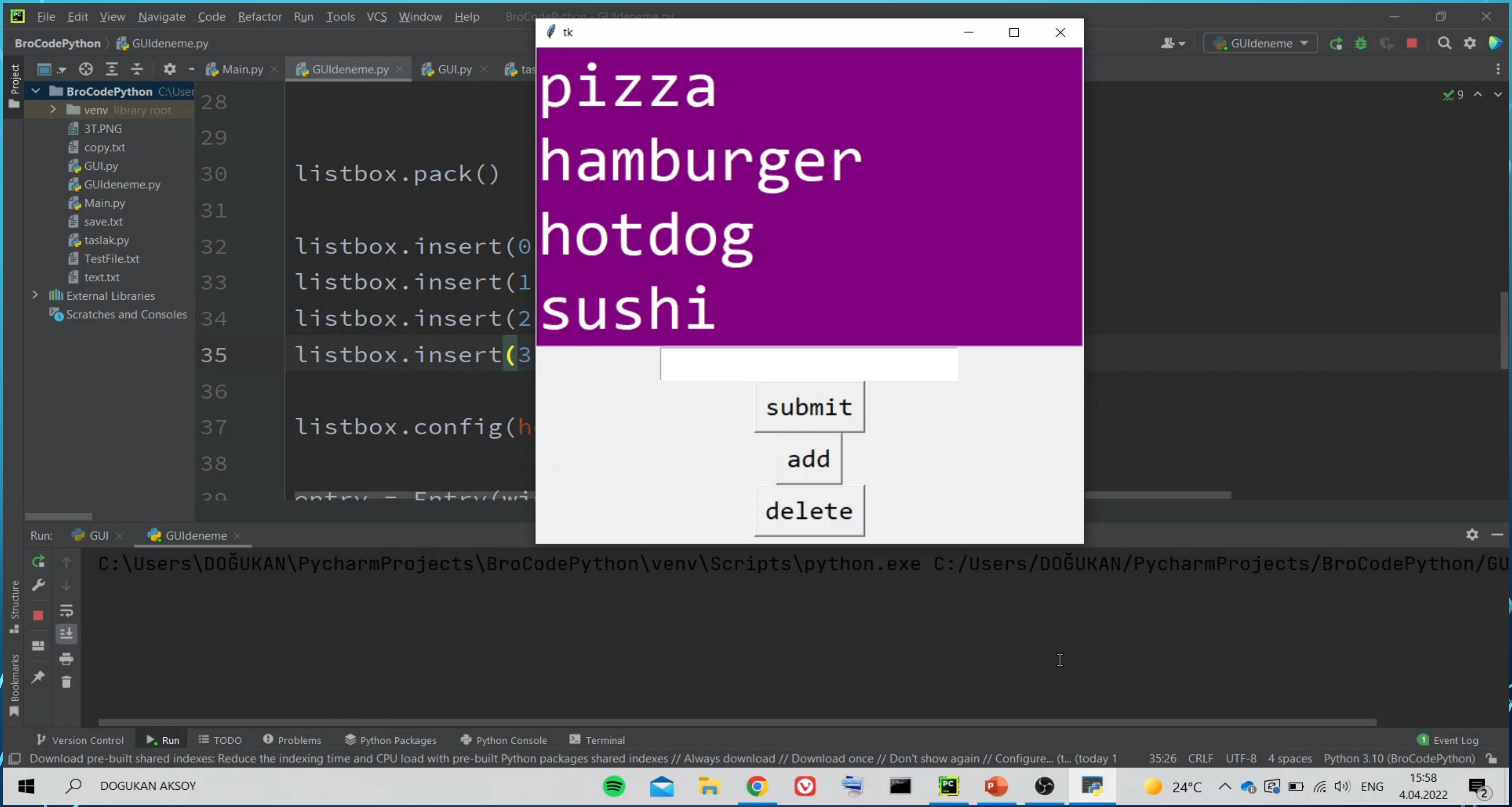
HOW ARE WE USING LISTBOX?



```
listbox = Listbox(window,
                  bg='purple',
                  fg='white',
                  font=('Consolas',30),
                  width=12,
                  selectmode=MULTIPLE)
listbox.pack()

listbox.insert(0,'pizza')
listbox.insert(1,'hamburger')
listbox.insert(2,'hotdog')
listbox.insert(3,'sushi')
```

A Listbox widget displays a list of single-line text items. A Listbox allows you to browse through the items and select one or multiple



```
listbox.pack()

listbox.insert(0
listbox.insert(1
listbox.insert(2
listbox.insert(3

listbox.config(h

entry = Entry(wi
```

```
pizza
hamburger
hotdog
sushi
```

```
C:\Users\DOĞUKAN\PycharmProjects\BroCodePython\venv\Scripts\python.exe C:/Users/DOĞUKAN/PycharmProjects/BroCodePython/GU
```

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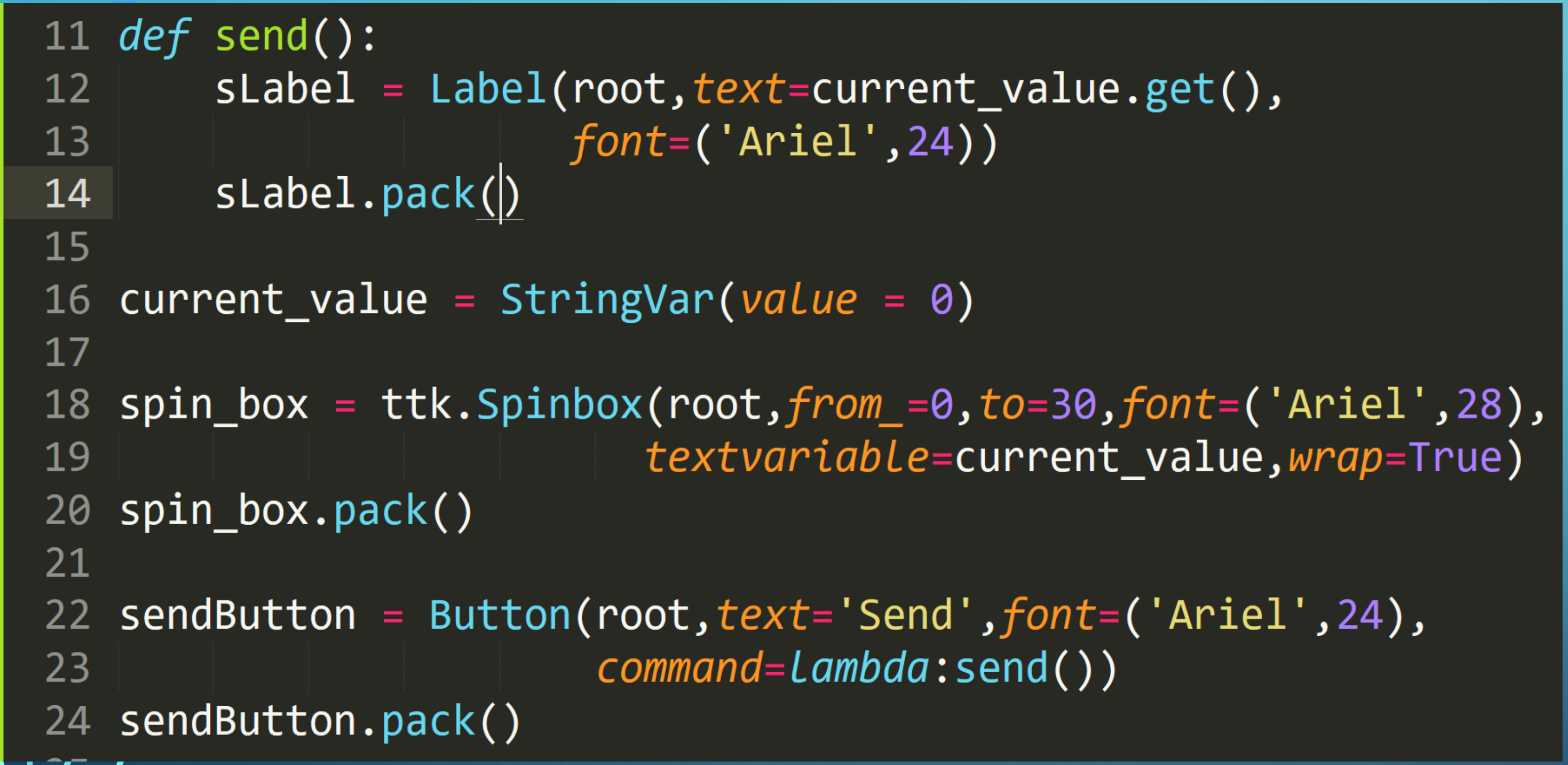
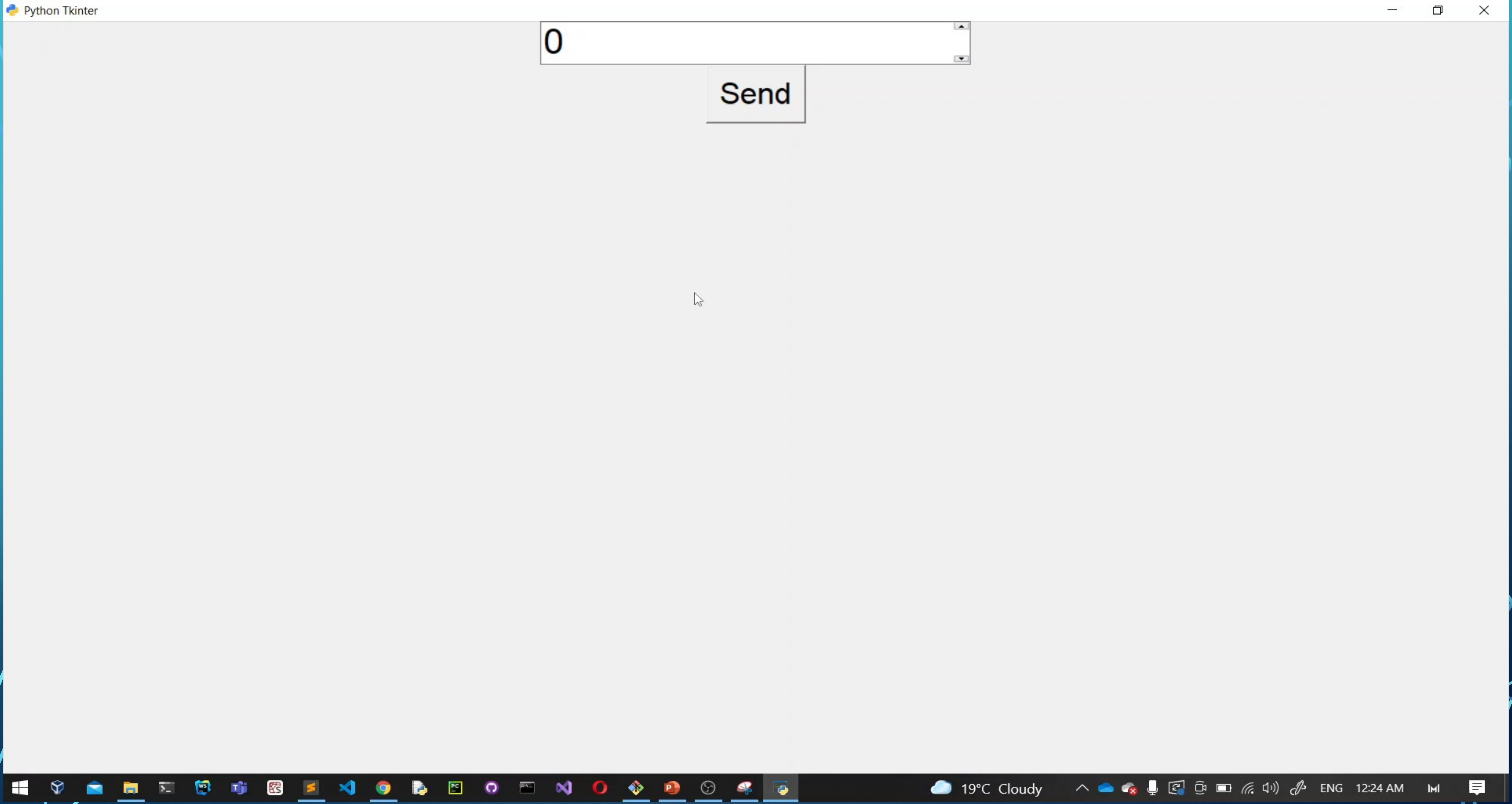
HOW ARE WE USING SPINBOX?

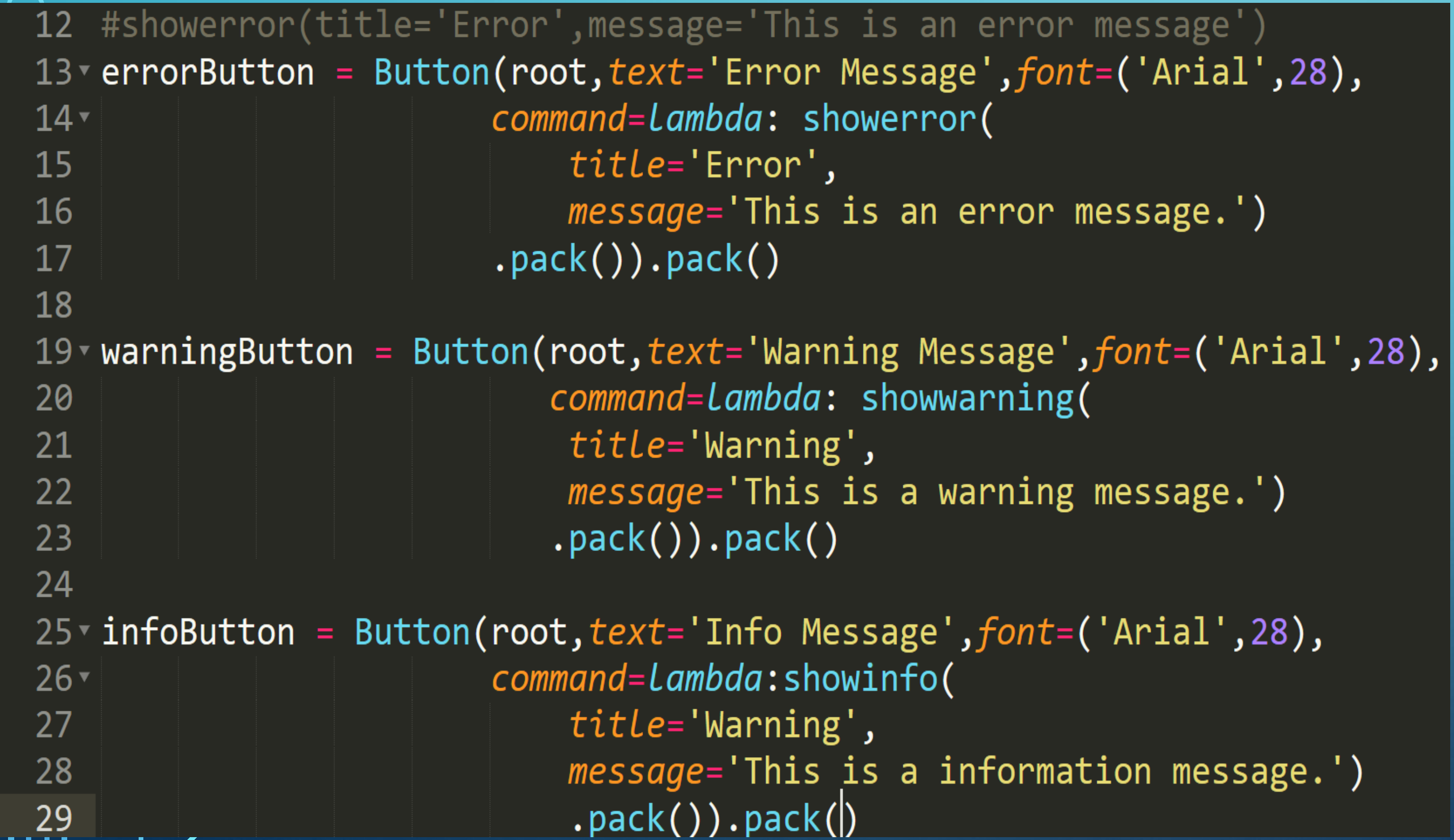


```python
def send():
    sLabel = Label(root,text=current_value.get(),
                   font=('Ariel',24))
    sLabel.pack()

current_value = StringVar(value = 0)

spin_box = ttk.Spinbox(root,from_=0,to=30,font=('Ariel',28),
                      textvariable=current_value,wrap=True)
spin_box.pack()

sendButton = Button(root,text='Send',font=('Ariel',24),
                    command=lambda:send())
sendButton.pack()
```

- ✉ The wrap is a Boolean value. If wrap equals True, when the current value reaches the maximum value, its set to the lowest value if you click the upward-pointing arrowhead and vice versa. Else its set to the max. value if you

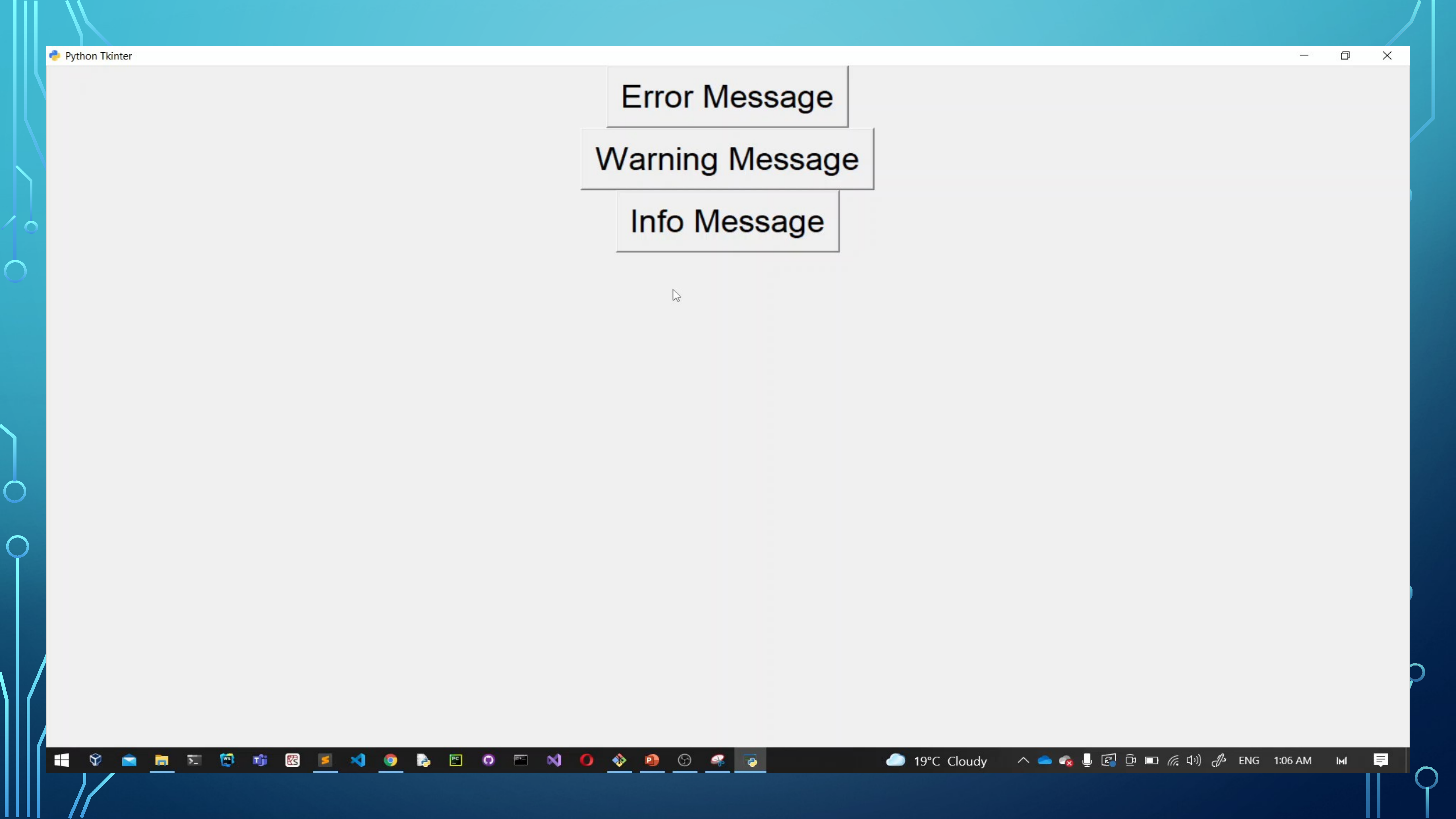

Python Tkinter
0
Send
19°C Cloudy
ENG
12:24 AM

HOW ARE WE USING MESSAGEBOX?

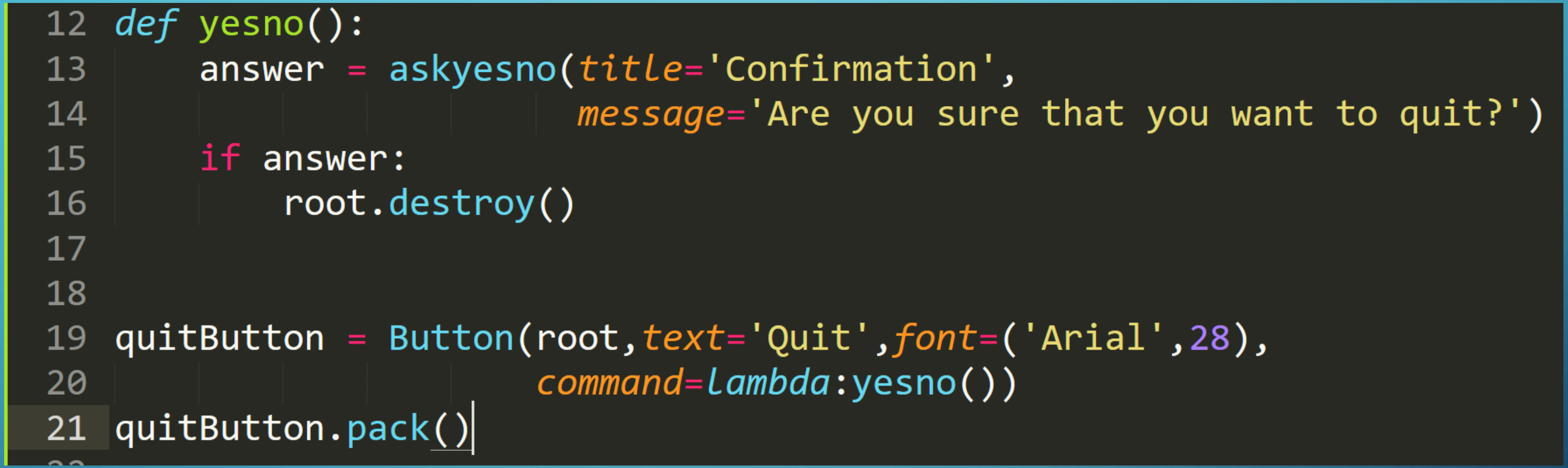


```
#showerror(title='Error',message='This is an error message')
errorButton = Button(root,text='Error Message',font=('Arial',28),
                    command=lambda: showerror(
                        title='Error',
                        message='This is an error message.')
                    .pack()).pack()

warningButton = Button(root,text='Warning Message',font=('Arial',28),
                       command=lambda: showwarning(
                        title='Warning',
                        message='This is a warning message.')
                       .pack()).pack()

infoButton = Button(root,text='Info Message',font=('Arial',28),
                    command=lambda:showinfo(
                        title='Warning',
                        message='This is a information message.')
                        .pack()).pack()
```

- ✉ We are using ‘from tkinter.messagebox import showerror, showwarning, showinfo’ to use show message.
- ✉ Title is a name of the window.
- ✉ Message is a write anything on the window.

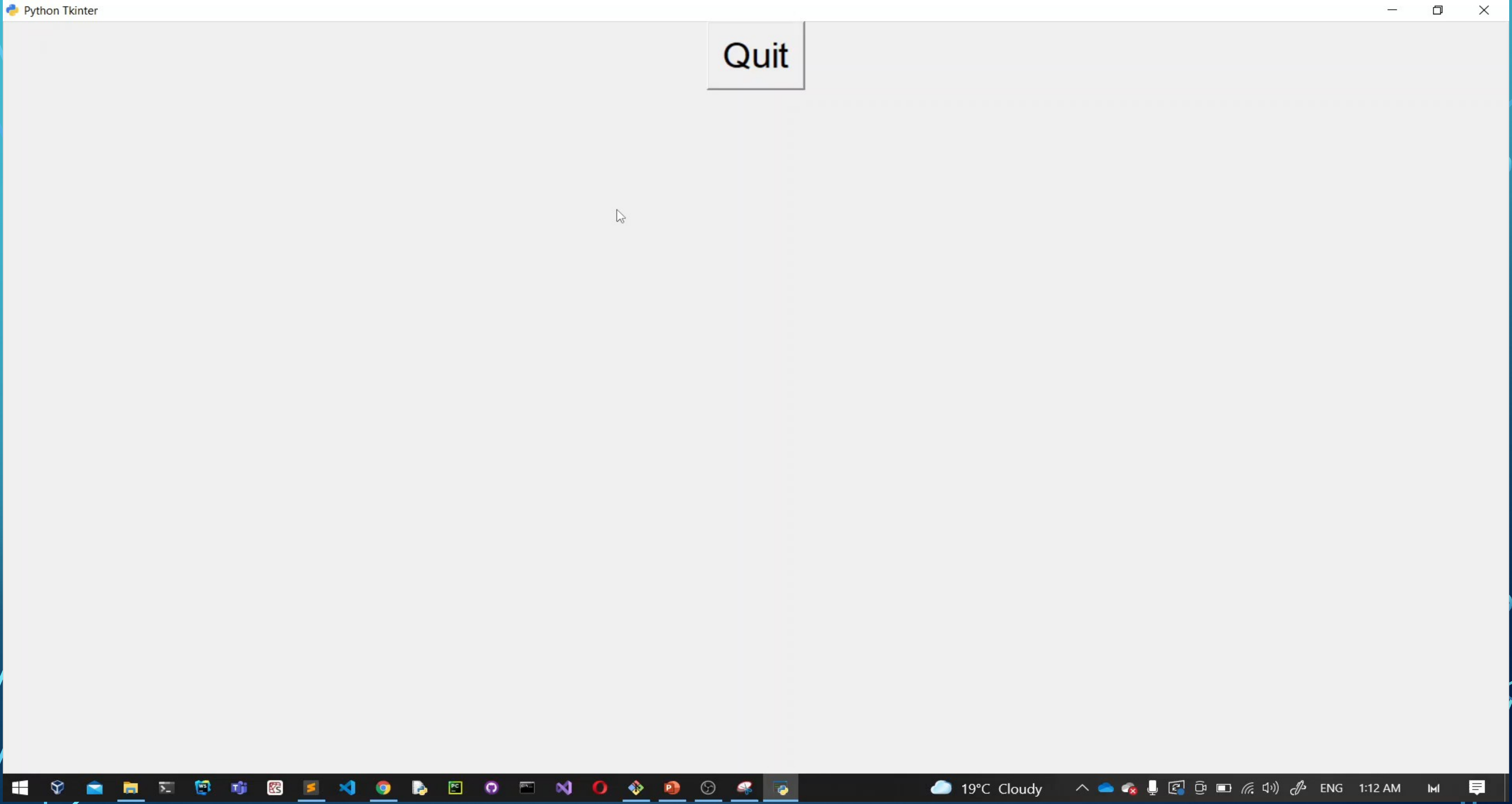

Python Tkinter
Error Message
Warning Message
Info Message
19°C Cloudy
ENG
1:06 AM

HOW ARE WE USING ASKYESNO()?

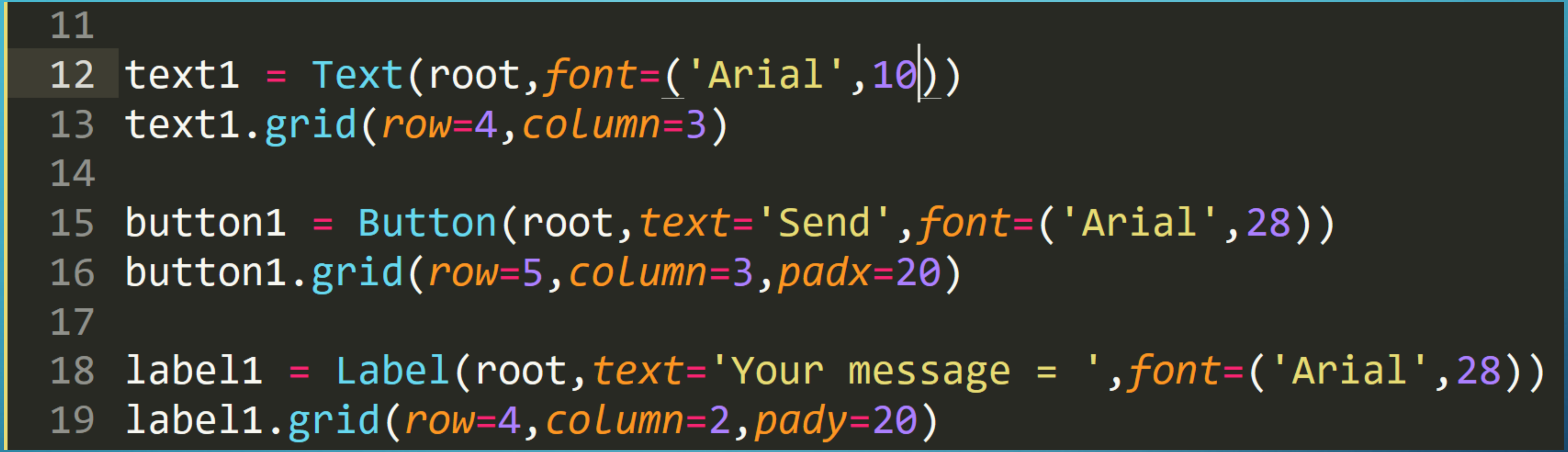


```
def yesno():
    answer = askyesno(title='Confirmation',
                      message='Are you sure that you want to quit?')
    if answer:
        root.destroy()


quitButton = Button(root,text='Quit',font=('Arial',28),
                    command=lambda:yesno())
quitButton.pack()
```

- Firstly, we must import askyesno. So we are writing ‘from tkinter.messagebox import askyesno’.
- title = Name of the window, Message = What do you want to write on the screen, you write here.


Python Tkinter
Quit
19°C Cloudy
ENG
1:12 AM

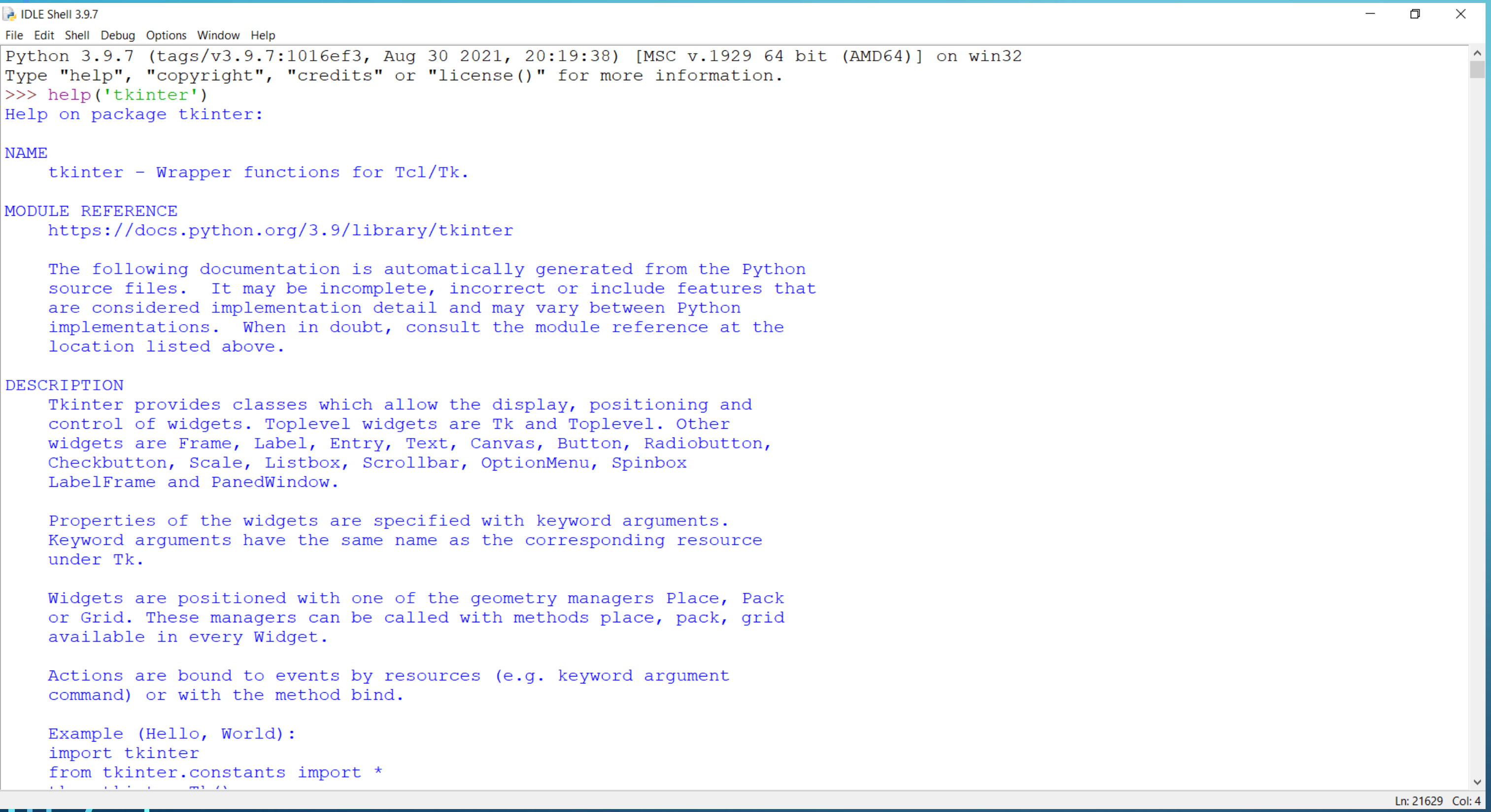
MORE INFORMATION ABOUT GRID() FUNCTION:



```python

text1 = Text(root,font=('Arial',10))
text1.grid(row=4,column=3)

button1 = Button(root,text='Send',font=('Arial',28))
button1.grid(row=5,column=3,padx=20)

label1 = Label(root,text='Your message = ',font=('Arial',28))
label1.grid(row=4,column=2,pady=20)
```

- The top line is row=1 and second line is row=2, similarly first vertical column is column=1 and next vertical column is column=2.
- padx and pady adds padding from the widget to the grid border.

HOW DO I GET HELP ABOUT TKINTER FROM IDLE?

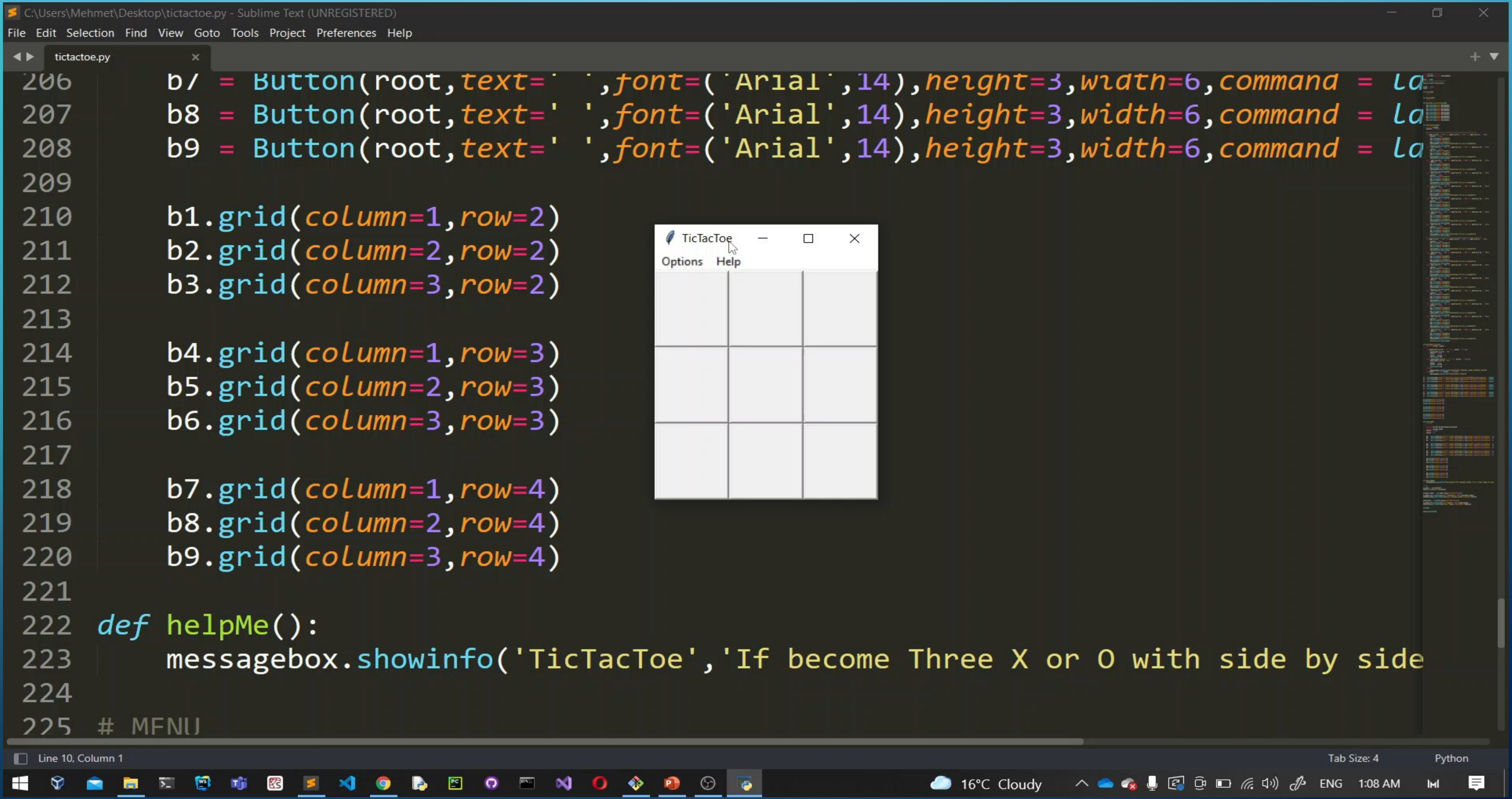


```
Python 3.9.7 (tags/v3.9.7:1016ef3, Aug 30 2021, 20:19:38) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> help('tkinter')
Help on package tkinter:

NAME
    tkinter - Wrapper functions for Tcl/Tk.

MODULE REFERENCE
    https://docs.python.org/3.9/library/tkinter

    The following documentation is automatically generated from the Python
    source files.  It may be incomplete, incorrect or include features that
    are considered implementation detail and may vary between Python
    implementations.  When in doubt, consult the module reference at the
    location listed above.

DESCRIPTION
    Tkinter provides classes which allow the display, positioning and
    control of widgets. Toplevel widgets are Tk and Toplevel. Other
    widgets are Frame, Label, Entry, Text, Canvas, Button, Radiobutton,
    Checkbutton, Scale, Listbox, Scrollbar, OptionMenu, Spinbox
    LabelFrame and PanedWindow.

    Properties of the widgets are specified with keyword arguments.
    Keyword arguments have the same name as the corresponding resource
    under Tk.

    Widgets are positioned with one of the geometry managers Place, Pack
    or Grid. These managers can be called with methods place, pack, grid
    available in every Widget.

    Actions are bound to events by resources (e.g. keyword argument
    command) or with the method bind.

    Example (Hello, World):
    import tkinter
    from tkinter.constants import *
```

- If we write help(‘tkinter’) on the idle, Absolutely Its helping us.

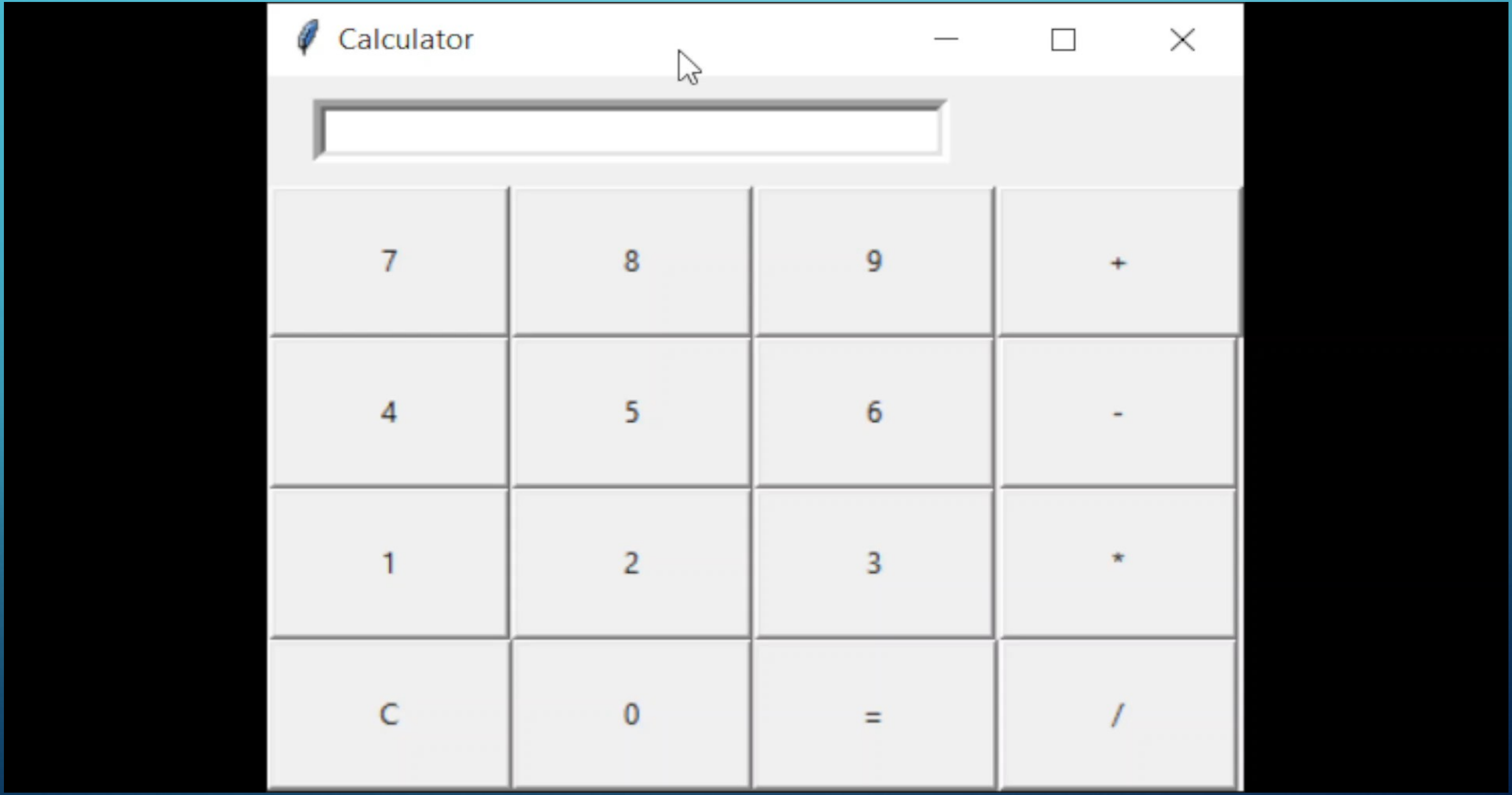
EXAMPLES

CODING TICTACTOE WITH TKINTER:

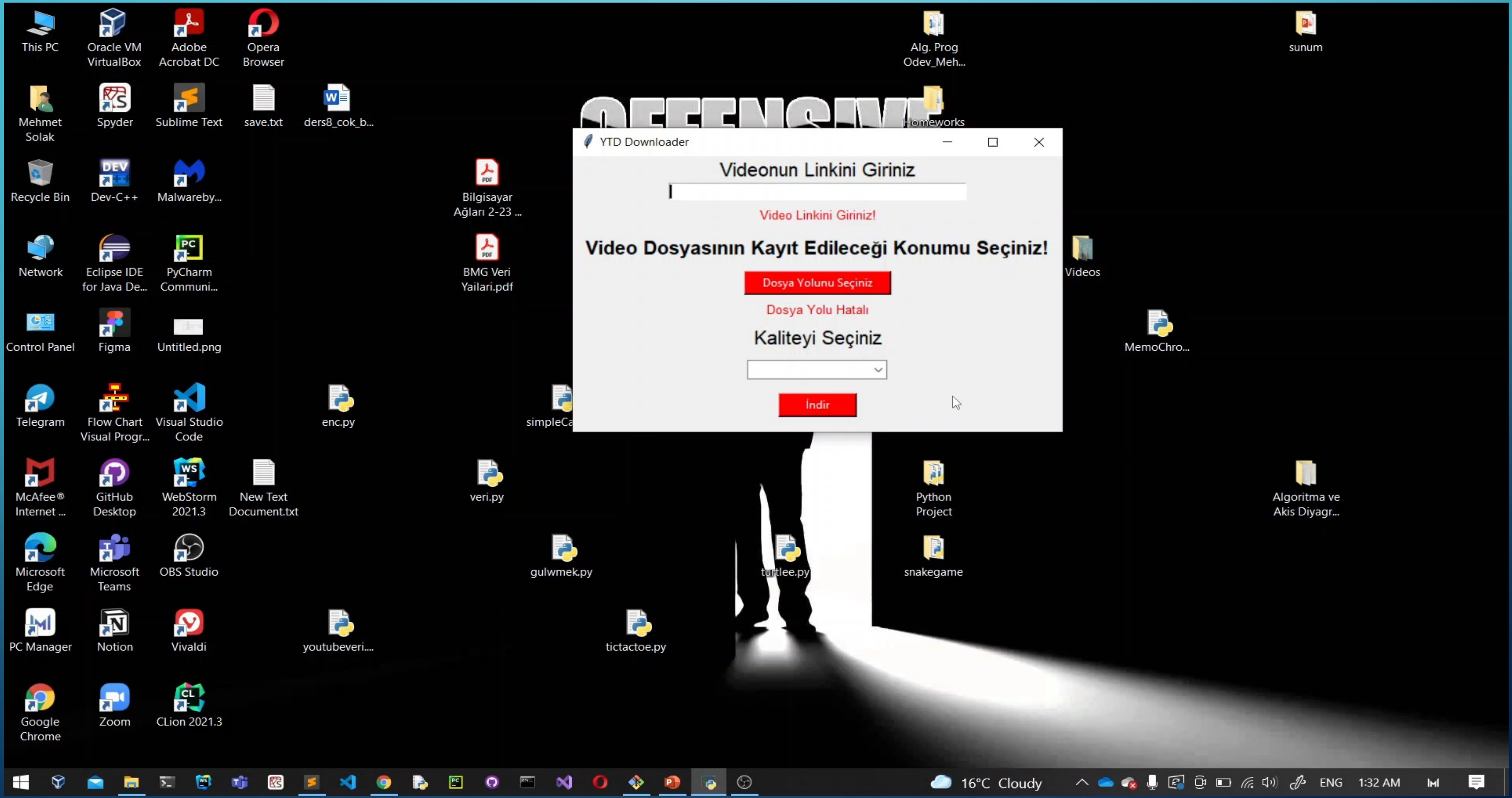

C:\Users\Mehmet\Desktop\tictactoe.py - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
tictactoe.py
TicTacToe
Options Help
Line 10, Column 1
Tab Size: 4
Python
16°C Cloudy
ENG
1:08 AM

```
    b7 = Button(root,text=' ',font=('Arial',14),height=3,width=6,command = la
    b8 = Button(root,text=' ',font=('Arial',14),height=3,width=6,command = la
    b9 = Button(root,text=' ',font=('Arial',14),height=3,width=6,command = la

    b1.grid(column=1,row=2)
    b2.grid(column=2,row=2)
    b3.grid(column=3,row=2)

    b4.grid(column=1,row=3)
    b5.grid(column=2,row=3)
    b6.grid(column=3,row=3)

    b7.grid(column=1,row=4)
    b8.grid(column=2,row=4)
    b9.grid(column=3,row=4)

def helpMe():
    messagebox.showinfo('TicTacToe','If become Three X or O with side by side

# MENU
```

CODING CALCULATOR WITH TKINTER:



CODING YOUTUBE VIDEO DOWNLOADER:



YTD Downloader

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Video Linkini Giriniz!

Video Dosyasının Kayıt Edileceği Konumu Seçiniz!

Dosya Yolu Hatalı

Kaliteyi Seçiniz

EXTRA:

- ✉ Thanks For Watching!
- Github ✉ https://github.com/knetic0
- Github ✉ https://github.com/Dredogu