```python
from tkinter import *

# create new window
root = Tk()


# determine the size of the window
# geometry("[width] x [height] + [left] + [top]")
root.geometry("600x400+400+200")


# change the background
root.config(background="#000010")


# make the user unable to resize the window
root.resizable(False, False)


# to appear the window
root.mainloop()
```

```python
from tkinter import *

# create new window
root = Tk()


root.title("1")


# determine the size of the window
# geometry("[width] x [height] + [left] + [top]")
root.geometry("600x400+400+200")


# change the background
root.config(background="red")


# make the user unable to resize the window
root.resizable(False, False)

# change the icon of the window
root.iconbitmap("D:\images\Icons\python.ico")


# make new window
root2 = Tk()

root2.title("2")
```

```
# make the specific window main loop
root.lift()


# to Hide the window
root.state("withdrawn")


# make the window minimized window
root.iconify()


# make the window minimized window
root.lower()


# make the window minimized window
root.state("iconic")



# change the background
root2.config(background="blue")


# determine the minimum size
# minsize(width, height)
root2.minsize(650, 450)


# determine the maximum size
# maxsize(width, height)
root2.maxsize(700, 500)


# to appear the window
root.mainloop()
```

```
from tkinter import *

# create new window
root = Tk()

# determine the size and position of the main window
root.geometry("800x500+200+100")

# determine the title of the window
root.title("Main Window")

# make the user unable tto resize the window
root.resizable(False, False)
```

```
# determine the background of the main window
root.config(bg="white")


# make new frame, and determine the width, height, background color
frame1 = Frame(width='390', height='499', bg='red')

# determine the position of the frame inside the window
frame1.place(x=1, y=1)



# make new frame, and determine the width, height, background color
frame2 = Frame(width='399', height='499', bg='blue')

# determine the position of the frame inside the window
frame2.place(x=400, y=1)

# to appear the window
root.mainloop()
```

```
from tkinter import *

root = Tk()
root.title("Main window")
root.resizable(False, False)
root.geometry("800x500+300+100")
root.config(bg="white")

fr1 = Frame(width='390', height='499', bg='blue')
fr1.place(x=1, y=1)

fr2 = Frame(width='390', height='499', bg='red')
fr2.place(x=393, y=1)

# ============
# === rule ===
# ============
# variable = tool(master, option)

# padx, pady: to make space around the element
# bg: this is the background color
# fg: this is the font color
# text: this is the text that will appear in the element
# font: this used to determine the type, size of the font
# cursor: to change the cursor type
# ==> man, arrow, circle, clock, cross, dotbx, star, trek,
# tcross, target, spider, mouse, heart, fleur, exchange, ...
```

```
btn1 = Button(fr1, text='this is button 1',
              fg="red", bg="black", cursor="spider",
              pady=10, padx=10, font=("arial", 22))

# determine the position of the Button
btn1.place(x=10, y=10)

btn2 = Button(fr2, text='this is button 1', cursor="heart",
              fg="red", bg="black",
              pady=10, padx=10, font=("arial", 22))

# determine the position of the Button
btn2.place(x=10, y=10)


# to appear the window
root.mainloop()
```

```
from tkinter import *

root = Tk()
root.title("Main window")
root.resizable(False, False)
root.geometry("800x500+300+100")
root.config(bg="white")

fr1 = Frame(width='390', height='499', bg='blue')
fr1.place(x=1, y=1)

fr2 = Frame(width='390', height='499', bg='red')
fr2.place(x=393, y=1)

# ============
# === rule ===
# ============
# variable = tool(master, option)

# padx, pady: to make space around the element
# bg: this is the background color
# fg: this is the font color
# text: this is the text that will appear in the element
# font: this used to determine the type, size of the font
# cursor: to change the cursor type
# ==> man, arrow, circle, clock, cross, dotbx, star, trek,
# tcross, target, spider, mouse, heart, fleur, exchange, ...
# width: determine the width of the button
# height: determine the height of the button

btn1 = Button(fr1, text='this is button 1',
              fg="yellow", bg="black", cursor="spider", width='30', height="2")
```

```
# determine the position of the Button
btn1.place(x=10, y=10)

btn2 = Button(fr2, text='this is button 1', cursor="heart",
              fg="yellow", bg="black")

# determine the position of the Button
btn2.place(x=10, y=10)


# make new label
lbl1 = Label(fr1, text="Hello", fg="white", bg='blue')

# determine the position of the label
lbl1.place(x=10, y=55)


# make new label
lbl2 = Label(fr2, text="Hello2", fg="white", bg='red')

# determine the position of the label
lbl2.place(x=10, y=44)


# to appear the window
root.mainloop()
```

```
from tkinter import *

root = Tk()
root.title("Main window")
root.resizable(False, False)
root.geometry("800x500+300+100")
root.config(bg="white")

fr1 = Frame(width='390', height='499', bg='blue')
fr1.place(x=1, y=1)

fr2 = Frame(width='390', height='499', bg='red')
fr2.place(x=393, y=1)

# ============
# === rule ===
# ============
# variable = tool(master, option)

# padx, pady: to make space around the element
# bg: this is the background color
# fg: this is the font color
# text: this is the text that will appear in the element
# font: this used to determine the type, size of the font
```

```
# cursor: to change the cursor type
# ==> man, arrow, circle, clock, cross, dotbx, star, trek,
# tcross, target, spider, mouse, heart, fleur, exchange, ...
# width: determine the width of the button
# height: determine the height of the button

btn1 = Button(fr1, text='this is button 1',
              fg="yellow", bg="black", cursor="spider", width='30', height="2")

# determine the position of the Button
btn1.place(x=10, y=10)

btn2 = Button(fr2, text='this is button 1', cursor="heart",
              fg="yellow", bg="black")

# determine the position of the Button
btn2.place(x=10, y=10)


# make new label
lbl1 = Label(fr1, text="Hello", fg="white", bg='blue')

# determine the position of the label
lbl1.place(x=10, y=55)


# make new label
lbl2 = Label(fr2, text="Hello2", fg="white", bg='red')

# determine the position of the label
lbl2.place(x=10, y=44)

# make TextBox
# jusify: determine the justify(place) of the text in the TextBox
# font: determine the size of the font
en1 = Entry(fr1, justify='center', fg='red', font=15)

# determine the position of the text box
en1.place(x=10, y=100)



# to appear the window
root.mainloop()
```

```
from tkinter import *
from tkinter import ttk

root = Tk()
root.title("Main window")
root.resizable(False, False)
root.geometry("800x500+300+100")
```

```
root.config(bg="white")


# create Combobox
# value: this are the values that exist on the ComboBox
# state="readonly": to disable the writing in the combobox
combo = ttk.Combobox(root,
    value=("male", "female"), state="readonly",
)

# determine the position of the element
combo.place(x=10, y=10)


# to appear the window
root.mainloop()
```

```
from tkinter import *
from tkinter import ttk

root = Tk()
root.title("Main window")
root.resizable(False, False)
root.geometry("800x500+300+100")
root.config(bg="white")


# create ListBox
list1 = Listbox(root, width=22, height=10)

# add element to th list
# insert(position, the_thing)
list1.insert(0, "Egypt")
list1.insert(1, "Yaman")
list1.insert(2, "Syria")
list1.insert(3, "UK")
list1.insert(4, "US")


# determine the position of the element
list1.place(x=1, y=1)

# to appear the window
root.mainloop()
```

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

root = Tk()
root.title("Main window")
root.resizable(False, False)
root.geometry("800x500+300+100")
root.config(bg="white")

# ==============
# ==== Note ====
# ==============
# value: --
# is a unique identifier option
# When the user selects a radio button, the value of
# the selected button is returned, which can then
# be used in your code to perform some action based on
# the user's choice.

# create radio button
# value: this is the value of the radio button
# text: this is the text that appear beside the radio button
btn_radio1 = ttk.Radiobutton(root, value=1, text="male")
btn_radio1.place(x=10, y=10)


# create radio button
# value: this is the value of the radio button
btn_radio2 = ttk.Radiobutton(root, value=2, text="female")

# determine the position of the radio button
btn_radio2.place(x=10, y=55)

# to appear the window
root.mainloop()
```

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

root = Tk()
root.title("Main window")
root.resizable(False, False)
root.geometry("800x500+300+100")
root.config(bg="white")

# ==============
# ==== Note ====
# ==============
# [1] in radio button: can select one item (using different value)
# [2] in check button: can select more that one item, or select one
```

```python
# create check button
c1 = Checkbutton(root, text="male")

# determine the position of the check button
c1.place(x=1, y=1)

# create check button
c2 = Checkbutton(root, text="female")

# determine the position of the check button
c2.place(x=55, y=1)


# to appear the window
root.mainloop()
```

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

root = Tk()
root.title("Main window")
root.resizable(False, False)
root.geometry("800x500+300+100")
root.config(bg="white")


# ============================
# === What is CheckButton ===
# ============================
# -> that allow the user to select one or more options from list of choices

# ==> some attributes:
# text: Specifies the text to display alongside the check button.
# variable: Specifies a Tkinter.Variable object to bind the check button state to.
# onvalue: Specifies the value to set the variable to when the check button is
selected. By default, the value is 1.
# offvalue: Specifies the value to set the variable to when the check button is
deselected. By default, the value is 0.
# command: Specifies a function to call when the check button is clicked.
# state: Specifies the initial state of the check button. The possible values are
"normal", "active", "disabled", and "readonly".
# bg or background: Specifies the background color of the check button.
# fg or foreground: Specifies the text color of the check button.
# font: Specifies the font to use for the check button text.
# padx and pady: Specifies the horizontal and vertical padding of the check button.
# selectcolor: Specifies the color to use for the check mark when the check button is
selected.
# highlightthickness: Specifies the thickness of the highlight border around the
check button.
```

```
# create menu button
# relief: this is the border of the menu button
# text: this is the text of the menu
mn = Menubutton(root, text="Back End", relief="groove")

# determine the position of the menu button
mn.place(x=1, y=1)


# create menu, and add this to the menu button
ss = Menu(mn)

mn['menu'] = ss

# add item to the menu button
ss.add_checkbutton(label='HTML')

# add item to the menu button
ss.add_checkbutton(label='CSS')

# add item to the menu button
ss.add_checkbutton(label='JS')

# add item to the menu button
ss.add_checkbutton(label='PHP')

# add item to the menu button
ss.add_checkbutton(label='MySQL')


# to appear the window
root.mainloop()
```

```
from tkinter import *

root = Tk()
root.title("Main Window")
root.geometry("800x500+222+100")
root.resizable(False, False)


# create menu bar, and assign it to variavble
menubar = Menu(root)

# create menu and assign it to variable
# "tearoff=0": the menu cannot be torn off from its parent menu,
#              and a dashed line is not displayed at the top of the menu.
# f.add_separator(): make separator line
f = Menu(menubar, tearoff=0)
```

```
# add new item to the menu "f"
# The "label" parameter specifies the text that will be displayed for this menu item
# command: this the action that the button do (the action of the button)
f.add_command(label="New")
f.add_command(label="Open")
f.add_command(label="Save")
f.add_command(label="Save As")
f.add_separator()
f.add_command(label='Exit', command=root.quit)



# add title to this menu
# add_cascade: this mean title of the menu
# label: this is the title of the menu
# Menu=f: means add this to menu "f"
menubar.add_cascade(label="File", menu=f)

# sets the "menubar" as the main menu of the main window
root.config(menu=menubar)

root.mainloop()
```

```
from tkinter import *

root = Tk()
root.title("Main Window")
root.geometry("800x500+222+100")
root.resizable(False, False)

# from_ : start of the scale
# to: end of the scale
# orient: direction of the
scl = Scale(root, from_ = 1, to= 100, orient=HORIZONTAL)

# appear the element
scl.pack()


# from_ : start of the scale
# to: end of the scale
# orient: direction of the
scl = Scale(root, from_ = 1, to= 100, orient=VERTICAL)

# appear the element
scl.pack()


root.mainloop()
```

```
from tkinter import *

root = Tk()
root.title("Main Window")
root.geometry("800x500+222+100")
root.resizable(False, False)

# create scroll bar
sc = Scrollbar(root, orient=VERTICAL)

# determine the position of the scroll bar
# fill: take all area
sc.pack(side=RIGHT, fil=Y)

root.mainloop()
```

```
from tkinter import *
from tkinter import ttk

root = Tk()
root.title("Main Window")
root.geometry("500x400+222+100")
root.resizable(False, False)


# create Notebook
nb = ttk.Notebook(root)
nb.pack()

# create frame in the Notebook
f1 = Frame(nb, width='500', height='100', bg='blue')

# add to frame ,in the Nootbook
nb.add(f1, text='Home')

# create frame in the Notebook
f2 = Frame(nb, width='500', height='100', bg='red')

# add to frame ,in the Nootbook
nb.add(f2, text='Tools')


# make the frame "f2" appear first
nb.select(f2)


root.mainloop()
```

```
from tkinter import *

root = Tk()
root.title("Main Window")
root.geometry("500x400+222+100")
root.resizable(False, False)


# create Spinebox
# from_: this start from the Spinbox
# tp: this end of Spinbox
sp = Spinbox(root, from_=0, to=100)

# appear the element
sp.pack()


root.mainloop()
```

```
from tkinter import *

root = Tk()
root.title("Main Window")
root.geometry("500x400+222+100")
root.resizable(False, False)

# create button image

# get the image (image.png)
photo = PhotoImage(file=r'D:\images\wallpaper\png.png')

# determine the resolution of the image
res = photo.subsample(2, 2)

# create button, and put the image
# image: this is the image
# width: determine the width of the button
# height: determine the height of the button
# compound=TOP: determine the position of the image
btn = Button(root, image=res, text='Learn Python', compound=TOP, width=150,
height=100, padx=10, pady=5)

# appear the image
btn.pack()

root.mainloop()
```

```python
from tkinter import *
import tkinter as tk

root = Tk()
root.title("Main Window")
root.geometry("500x400+222+100")
root.resizable(False, False)

# create text area
text_area = Text(root)

ex ="""
==> Back End:
- PHP
- LARAVEL
- MYSQL
-------------
==> Front End:
- HTML
- CSS
- JS
- Bootstrap
"""

# insert the text to text area
text_area.insert(tk.END ,ex)

# appear the text
text_area.pack()



root.mainloop()
```

```python
from tkinter import *
import tkinter as tk

root = Tk()
root.title("Main Window")
root.geometry("500x400+222+100")
root.resizable(False, False)


# create function that open new window
def open_window():

    # create window
    window1 = Tk()

    # title the window
    window1.title("opened window")
```

```
    # determine the size of the window
    window1.geometry("500x400+222+100")

    # unable to resize the window
    window1.resizable(False, False)

    # create button
    btn = Button(window1, text="exit", command=window1.destroy)

    # appear the button
    btn.pack()

    # appear the window
    window1.mainloop()


# open window from other window using button
btn = Button(text='Open Window', command=open_window)

# appear the button
btn.pack()


root.mainloop()
```

```
from tkinter import *
import tkinter as tk

root = Tk()
root.title("Main Window")
root.geometry("500x400+222+100")
root.resizable(False, False)


# ==============
# === bitmap ===
# ==============
# is a small buttons, with specific characteristics


# make error button
B1 = Button(root, text='error', bitmap='error')

# appear the button
B1.pack()


# make hourglass button
B2 = Button(root, text='hourglass', bitmap='hourglass')
```

```
# appear the button
B2.pack()

# make info button
B3 = Button(root, text='info', bitmap='info')

# appear the button
B3.pack()

# make warning button
B4 = Button(root, text='warning', bitmap='warning')

# appear the button
B4.pack()

# make question button
B5 = Button(root, text='question', bitmap='question')

# appear the button
B5.pack()

# make gray12 button
B5 = Button(root, text='gray12', bitmap='gray12')

# appear the button
B5.pack()

# make gray25 button
B6 = Button(root, text='gray25', bitmap='gray25')

# appear the button
B6.pack()

# make gray50 button
B7 = Button(root, text='gray50', bitmap='gray50')

# appear the button
B7.pack()


root.mainloop()
```

```
from tkinter import *
from tkinter import messagebox

root = Tk()
root.title("Main Window")
root.geometry("500x400+222+100")
root.resizable(False, False)
```

```
# ==================
# === messagebox ===
# ==================


def info():

    #messagebox.showinfo(title, the_message)
    # message with normal message
    messagebox.showinfo('normal message', 'Hello World')


    # message with warning message
    messagebox.showwarning("warning message", "Hello Wordl")

    # message with error message
    messagebox.showerror("error message", "Hello World")

    # message with ok or cancel
    messagebox.askokcancel("ok or cancel ", "Hello World")

    # message with ask question
    messagebox.askquestion("ask question", "Hello World")

    # message with ask yes no
    messagebox.askquestion("ask yes no", "Hello World")

    # message with ask retry or cancel
    messagebox.askquestion("ask retry or cancel", "Hello World")

# create new button
B1 = Button(text="info", command=info)

# appear the button
B1.pack()


root.mainloop()
```

```
from tkinter import *
from tkinter import messagebox

root = Tk()
root.title("Main Window")
root.geometry("500x400+222+100")
root.resizable(False, False)

# create label
# font(font_type, font_size, font_decoration)
lbl1 = Label(root, text="this is label 1", font=("arial", 12, "underline"))
```

```
# appear the label
lbl1.pack()

# create new label
lbl2 = Label(root, text="this is label 1", font=("arial", 12, "bold"))

# appear the label
lbl2.pack()

# create new label
lbl2 = Label(root, text="this is label 1", font=("arial", 12, "italic"))

# appear the label
lbl2.pack()


root.mainloop()
```

```
from tkinter import *
from tkinter import messagebox

root = Tk()
root.title("Main Window")
root.geometry("500x400+222+100")
root.resizable(False, False)


# create new Button
B1 =Button(root, text="button 1")

# appear the button
B1.pack()


# create new Button
# activebackground: while press on the button -> change the background color
# activeforeground: while press on the button -> change the font color
B2 =Button(root, text="button 2", activebackground='black', activeforeground='white')

# appear the button
B2.pack()


root.mainloop()
```

```python
# get the primary screen resolution

from tkinter import *

# create new form
frm = Tk()

# winfo_screenwidth(): used to get the width of the window
psinfo1 = frm.winfo_screenwidth()

# winfo_screenheight(): used to get the height of the window
psinfo2 = frm.winfo_screenheight()

# concatenate the width and height
psinfo = str(frm.winfo_screenwidth()) + "X" + str(frm.winfo_screenheight())

# set size to the form
frm.geometry('500x500')

# put title to the form
frm.title(psinfo)

# to appear the window
frm.mainloop()
```

```python
# get size of my_form


from tkinter import *

frm = Tk()
frm.geometry('500x400')

# after geometry update the window to get the size of the window
frm.update()

# get the width of the form
width = frm.winfo_width()

# get the height of the form
height = frm.winfo_height()

frm.title(f"{width} x {height}")

# to appear the window
frm.mainloop()
```

```python
from tkinter import *

frm = Tk()

# width of the form
w = 500

# height of the form
h = 400

# get the screen width
sw = frm.winfo_screenwidth()

# get the screen height
sh = frm.winfo_screenheight()

# set the form in the center screen [in the width]
x = (sw - w) / 2

# set the form in the center screen [in the height]
y = (sh - h) / 2


# apply the form at the center screen
frm.geometry("%dx%d+%d+%d"%(w, h, x, y))

# to appear the form
frm.mainloop()
```

```python
import tkinter
from tkinter import ttk

frm = tkinter.Tk()
frm.title("Hello")
frm.geometry("700x500")
frm.config(background="white")
the_font = ("consolas", 22)

# ============
# === Note ===
# ============
# style used to style all specific elements that will determine
```

```
# ================================================================================
# ==== if you want to change all labels you can change all in one code by using "style" =====
# ================================================================================

# make style for all labels
lbls = ttk.Style()
lbls.configure(
    "TLabel", font=the_font, background="white", foreground="blue", padding=10
)

# make new label for name
lblname = ttk.Label(frm, text="Enter Your Name", style="TLabel")
lblname.pack()

# create text box for name
txtname = tkinter.Entry(frm, font=the_font)
txtname.pack()

# create label for address
lbladdress = ttk.Label(frm, text="Enter Your Address", style="TLabel")
lbladdress.pack()

# create text box for address
txtaddress = ttk.Entry(frm, font=the_font)
txtaddress.pack()

frm.mainloop()
```
