

Object Oriented Programming Object Oriented Programming Project



- 🗣 เป็น Library GUI ของ Python ที่พัฒนามาจาก TKinter
- https://ttkbootstrap.readthedocs.io/
 - Features

✓ Built-in Themes

Over a dozen curated dark and light themes

✓ Pre-defined Styles:

Loads of beautiful pre-defined widget styles such as outline and round toggle buttons.

✓ Simple keyword API:

Apply colors and types using simple keywords such as **primary** and **striped** instead of the legacy approach of **primary.Striped.Horizontal.TProgressbar**. If you've used Bootstrap for web development, you are already familiar with this approach using css classes.

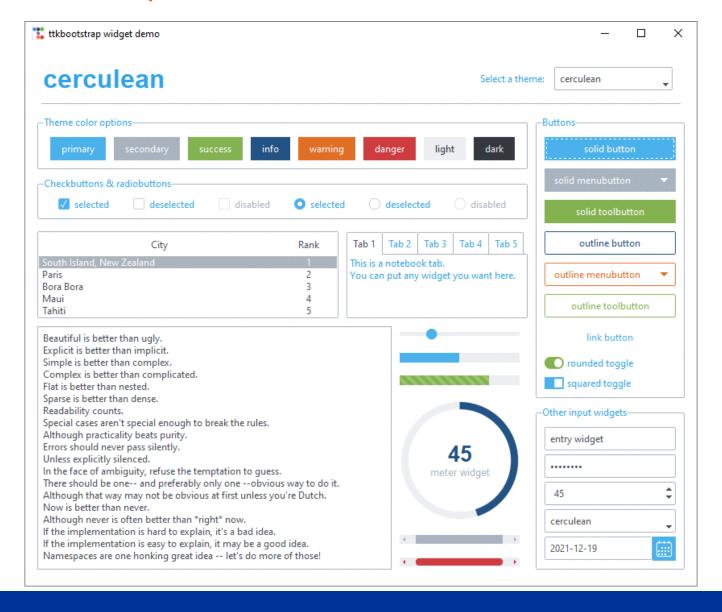
✓ Lots of new Widgets:

ttkbootstrap comes with several new beautifully designed widgets such as Meter, DateEntry, and Floodgauge. Additionally, dialogs are now themed and fully customizable.

✓ Built-in Theme Creator:

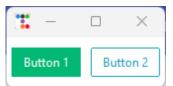
Want to create your own theme? Easy! ttkbootstrap includes a built-in theme creator that enables you to easily build, load, expore, and apply your own custom themes.







- การติดตั้ง
 - python -m pip install ttkbootstrap



```
import ttkbootstrap as ttk
from ttkbootstrap.constants import *

root = ttk.Window()

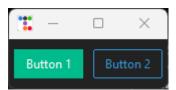
b1 = ttk.Button(root, text="Button 1", bootstyle=SUCCESS)
b1.pack(side=LEFT, padx=5, pady=10)

b2 = ttk.Button(root, text="Button 2", bootstyle=(INFO, OUTLINE))
b2.pack(side=LEFT, padx=5, pady=10)

root.mainloop()
```



- การเลือก Theme
- ให้ป้อนชื่อ theme ลงใน windows ตามตัวอย่าง



```
import ttkbootstrap as ttk
from ttkbootstrap.constants import *

root = ttk.Window(themename="darkly")

b1 = ttk.Button(root, text="Button 1", bootstyle=SUCCESS)
b1.pack(side=LEFT, padx=5, pady=10)

b2 = ttk.Button(root, text="Button 2", bootstyle=(INFO, OUTLINE))
b2.pack(side=LEFT, padx=5, pady=10)

root.mainloop()
```

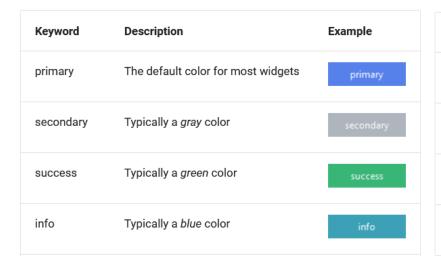


• Label คือ ส่วนที่แสดงข้อความ มี 2 แบบ คือ default label มีสีตามนี้ (สีจะเปลี่ยนไปตาม theme)



• และ Inverse Label





Keyword	Description	Example
warning	Typically an <i>orange</i> color	warning
danger	Typically a red color	danger
light	Typically a <i>light gray</i> color	light
dark	Typically a dark gray color	dark



```
import ttkbootstrap as ttk
from ttkbootstrap.constants import *
root = ttk.Window()
# default label style
11 = ttk.Label(root, text = "primary", bootstyle="PRIMARY.Inverse")
11.pack(side=LEFT, padx=5, pady=5)
12 = ttk.Label(root, text='secondary', bootstyle="SECONDARY.Inverse")
12.pack(side=LEFT, padx=5, pady=5)
13 = ttk.Label(root, text='success', bootstyle="SUCCESS.Inverse")
13.pack(side=LEFT, padx=5, pady=5)
14 = ttk.Label(root, text='info', bootstyle="INFO.Inverse")
14.pack(side=LEFT, padx=5, pady=5)
root.mainloop()
```



- 11 = ttk.Label(root, text = "primary", bootstyle="PRIMARY.Inverse")
- คือการสร้าง Object Label
- 11.pack(side=LEFT, padx=5, pady=5)
- Pack มีความหมายว่าให้นำ Label ไปใส่ใน Window
- side = มีความหมายว่าให้ตรึงด้านซ้าย เช่น ถ้าแก้ secondary ให้ตรึงด้านขวาจะได้ (ถ้า ไม่ใส่จะอยู่ตรงกลาง



- padx คือ เติมช่องว่างในแกน x
- pady คือ เติมช่องว่างในแกน y



• Button คือ ปุ่ม แต่สามารถใช้แสดงข้อความเช่นเดียวกับ Label ได้

```
ttkbootstrap
import ttkbootstrap as ttk
from ttkbootstrap.constants import *
                                                     secondary
root = ttk.Window(themename="superhero")
b1 = ttk.Button(root, text='primary', bootstyle=PRIMARY)
b1.pack(side=LEFT, padx=5, pady=5)
b2 = ttk.Button(root, text='secondary', bootstyle=SECONDARY)
b2.pack(side=LEFT, padx=5, pady=5)
b3 = ttk.Button(root, text='success', bootstyle=SUCCESS)
b3.pack(side=LEFT, padx=5, pady=5)
b4 = ttk.Button(root, text='info', bootstyle=INFO)
b4.pack(side=LEFT, padx=5, pady=5)
root.mainloop()
```

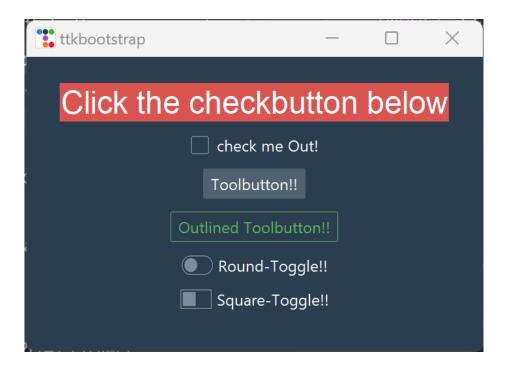


• Button สามารถใส่ command ได้ โดยจะเป็น function ที่ถูกเรียกมาทำงานเมื่อกด

```
import ttkbootstrap as ttk
                                                       ttkbootstrap
from ttkbootstrap.constants import *
                                                                  Hello World!
root = ttk.Window(themename='superhero')
root.geometry('500x350')
counter = 0
def changer():
    global counter
    counter += 1
    if counter % 2 == 0:
        my label.config(text="Hello World!")
    else:
        my label.config(text="Goodbye World!")
my_label = ttk.Label(root, text="Hello World", font=("Helvetica", 28), bootstyle="danger,inverse")
my_label.pack(pady=50)
my_button = ttk.Button(text="Click Me!", bootstyle="info, outline", command=changer)
my button.pack(pady=20)
root.mainloop()
```



 Button ใน TTKBootstrap มีหลายแบบ ได้แก่ Button ปกติ Tool Button, Tool Button Outlined, Round Toggle, Square Button





```
#Toolbutton
var2 = IntVar()
my_check2 = ttk.Checkbutton(bootstyle="danger, toolbutton",
                           text="Toolbutton!!",
                           variable=var2,
                           onvalue=1,
                           offvalue=0,
                           command=checker)
my_check2.pack(pady=10)
#Toolbutton outlined
var3 = IntVar()
my check3 = ttk.Checkbutton(bootstyle="success, toolbutton, outline",
                           text="Outlined Toolbutton!!",
                           variable=var3,
                           onvalue=1,
                           offvalue=0,
                           command=checker)
my check3.pack(pady=10)
```



```
#Round Toggle
var4 = IntVar()
my check4 = ttk.Checkbutton(bootstyle="info, round-toggle",
                           text="Round-Toggle!!",
                           variable=var4,
                           onvalue=1,
                           offvalue=0,
                           command=checker)
my check4.pack(pady=10)
#Square Toggle
var5 = IntVar()
my_check5 = ttk.Checkbutton(bootstyle="info, square-toggle",
                           text="Square-Toggle!!",
                           variable=var5,
                           onvalue=1,
                           offvalue=0,
                           command=checker)
my_check5.pack(pady=10)
```



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เราสามารถเปลี่ยน style เองได้

```
Click Me!
from tkinter import *
import ttkbootstrap as ttk
root = ttk.Window(themename='superhero')
                                                                 Click Me!
root.title("Resize Button")
root.geometry('500x350')
#Style
my style = ttk.Style()
my_style.configure('my.TButton', font=("Helvetica",18), width=10)
my style.configure('success.Outline.TButton', font=("Helvetica",24))
my button = ttk.Button(text="Click Me!", bootstyle="info", style="my.TButton")
my button.pack(pady=40)
my2 button = ttk.Button(text="Click Me!", bootstyle="info", style="success.Outline.TButton")
my2 button.pack(pady=40)
root.mainloop()
```

Resize Button

https://ttkbootstrap.readthedocs.io/en/latest/styleguide/button/



 \times

• Combobox สำหรับเลือกข้อมูลที่มีหลายค่า

```
from tkinter import *
                                                                Monday
import ttkbootstrap as ttk
                                                                      Click Me!
root = ttk.Window(themename='superhero')
root.title("Combo Box and Binding")
root.geometry('600x350')
my label = ttk.Label(root, text = "Hello CE !", font=("Helvetica",14), bootstyle="PRIMARY")
my label.pack(pady=30)
def clicker():
        my label.config(text=f"You Clinked on {my combo.get()}!")
days = ['Monday','Tuesday','Wednesday','Thursday','Friday','Saturday','Sunday']
my combo = ttk.Combobox(root, bootstyle="info", values=days)
my combo.pack(pady=20)
# set default value
my combo.current(∅)
my button = ttk.Button(text="Click Me!", bootstyle="danger", command=clicker)
my button.pack(pady=40)
root.mainloop()
```

Combo Box and Binding

Hello CE!



Combobox สามารถ bind กับ function โดยไม่ต้องกดปุ่มได้

```
from tkinter import *
import ttkbootstrap as ttk
root = ttk.Window(themename='superhero')
root.title("Combo Box and Binding")
root.geometry('600x350')
my label = ttk.Label(root, text = "Hello CE !", font=("Helvetica",14), bootstyle="PRIMARY")
my label.pack(pady=30)
def click bind(e):
        my_label.config(text=f"You Clinked on {my_combo.get()}!")
days = ['Monday','Tuesday','Wednesday','Thursday','Friday','Saturday','Sunday']
                                                                 Combo Box and Binding
my combo = ttk.Combobox(root, bootstyle="info", values=days)
my combo.pack(pady=20)
                                                                             Hello CE!
# set default value
my combo.current(0)
                                                                         Monday
#bind combo box
my_combo.bind("<<ComboboxSelected>>", click bind)
root.mainloop()
```



• ช่องป้อนข้อมูล รับข้อมูลได้ และ กำหนดให้แสดงเป็นอักษรอื่นได้

```
from tkinter import *
                                                               Entry Widget
                                                                                               X
import ttkbootstrap as ttk
root = ttk.Window(themename='superhero')
root.title("Entry Widget")
root.geometry('600x350')
def speak():
    my label.config(text=f"You typed : {my entry.get()}")
                                                                         You typed: Hello CE
my_entry = ttk.Entry(root, bootstyle="success",
                     font=("Helvetica",18),
                     foreground="red",
                     width=20, show="*")
my entry.pack(pady=50)
my button = ttk.Button(root, text="Click Me!", bootstyle="danger, outline", command=speak)
my button.pack(pady=20)
my label = ttk.Label(root, text = "")
my label.pack(pady=20)
root.mainloop()
```



Progress Bar

🕨 สามารถทำ Progress Bar ได้ เรียกว่า Floodgate

```
from tkinter import *
                                                                                            Pos: 47%
import ttkbootstrap as ttk
root = ttk.Window(themename='superhero')
root.title("Progress Bar")
root.geometry('600x500')
def starter():
    my gauge.start()
def stoper():
    my gauge.stop()
def incrementer():
    my gauge.step(10)
                         มี Progressbar ใช้คล้ายกัน
my gauge = ttk.Floodgauge(root, bootstyle="success", font=("Helvetica",14),mask="Pos: {}%",maximum=80,
                          orient="horizontal",value=0, mode="determinate") # try indeterminate
my gauge.pack(pady=50,fill=X,padx=20)
start button = ttk.Button(root, text="Start", bootstyle="danger, outline", command=starter)
start_button.pack(pady=20)
stop button = ttk.Button(root, text="Stop", bootstyle="danger, outline", command=stoper)
stop button.pack(pady=20)
increment button = ttk.Button(root, text="Increment", bootstyle="danger, outline", command=incrementer)
increment button.pack(pady=20)
root.mainloop()
```



Date Picker

```
2/20/2024
from tkinter import *
import ttkbootstrap as ttk
from datetime import date
                                                                 You picked: 2/20/2024
root = ttk.Window(themename='superhero')
root.title("Date Entry")
root.geometry('600x500')
def datey():
    my label.config(text=f"You picked: {my date.entry.get()}")
my date = ttk.DateEntry(root, bootstyle="danger", startdate=date.today())
my date.pack(pady=30)
my_button = ttk.Button(root, text="Get Date", bootstyle="danger, outline", command=datey)
my button.pack(pady=20)
my label = ttk.Label(root, text = "You Picked: ")
my label.pack(pady=20)
root.mainloop()
```

Date Entry



• กรณีที่มี widget มาก เราอาจต้องจัด UI ออกเป็นส่วนๆ เรียกว่า Frame

```
from tkinter import *
                                                 Frame
import ttkbootstrap as ttk
from datetime import date
root = ttk.Window(themename='superhero')
root.title("Frame")
root.geometry('500x400')
                                                                         Click Me!
def speak():
    pass
                                                                       Hello CE!
my frame = ttk.Frame(root, bootstyle="light")
my frame.pack(pady=40)
my_entry = ttk.Entry(my_frame, bootstyle="success",
                     font=("Helvetica",18))
my entry.pack(pady=20, padx=20)
my button = ttk.Button(my frame, text="Click Me!", bootstyle="dark", command=speak)
my button.pack(pady=20, padx=20)
my label = ttk.Label(root, text = "Hello CE !", font=("Helvetica",14), bootstyle="inverse success")
my label.pack(pady=20)
root.mainloop()
```



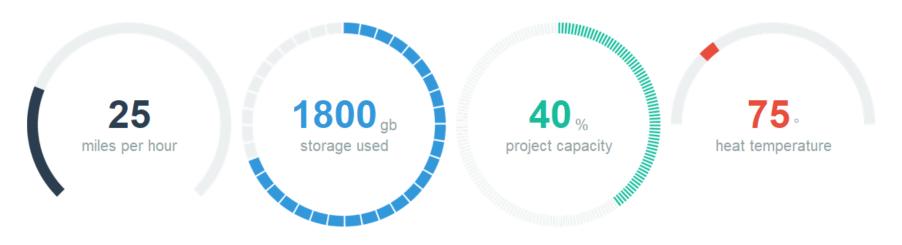
Menu Button

สามารถสร้างเมนูได้

```
root = ttk.Window(themename='superhero')
root.title("Menu Button")
root.geometry('500x400')
def stuff(x):
    my_menu.config(bootstyle=x)
    my_label.config(text=x)
                                                                                         danger
my menu = ttk.Menubutton(root, bootstyle="warning", text="Hello")
my_menu.pack(pady=50)
inside menu = ttk.Menu(my menu)
# add item to menu
item var = StringVar()
for x in ['primary', 'secondary', 'danger', 'info', 'outline primary',
          'outline secondary', 'outline danger', 'outline info']:
    inside menu.add radiobutton(label=x, variable=item var, command=lambda x=x: stuff(x))
# associate the inside menu with menubutton
my menu['menu'] = inside menu
my label = ttk.Label(root, text="")
my label.pack(pady=40)
root.mainloop()
```



- Meter Widget
- ใช้ในการเลือกข้อมูลในแบบวงกลม สามารถปรับแต่งได้หลากหลาย

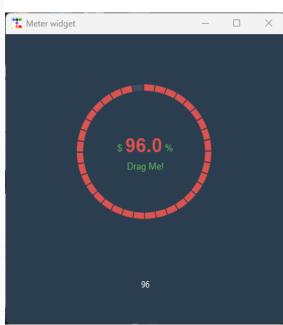


https://ttkbootstrap.readthedocs.io/en/latest/api/widgets/meter/#ttkbootstrap.widgets.Meter. init





```
from tkinter import *
import ttkbootstrap as ttk
root = ttk.Window(themename='superhero')
root.title("Meter widget")
root.geometry('400x500')
def update_label():
    my label.config(text=my meter.amountusedvar.get())
my_meter = ttk.Meter(root, bootstyle="danger",
                     subtext="Drag Me!",
                     interactive=True,
                     textleft="$", textright="%",
                     metertype="full", # try semi
                     stripethickness=10,# แสดงแถบในวงกลม
                     metersize=200, padding=50,
                     amountused=20, # ค่าเริ่มต้น
                     amounttotal=100, # ค่ามากสุด
                     subtextstyle="success"
my_meter.pack(pady=20)
my_label = ttk.Label(root, text=my_meter.amountusedvar.get())
my label.pack(pady=10)
update label() # Set the initial label text
my_meter.amountusedvar.trace_add('write', lambda *args: update_label())
root.mainloop()
```





Notebook Tab

Tab Notebook ใช้สำหรับสร้างพื้นที่ทำงานในรูปแบบ Tab

```
root = ttk.Window(themename='superhero')
                                                                Tab One Tab Two
root.title("Notebook Tab")
                                                                 Awesome Label!
root.geometry('400x300')
my notebook = ttk.Notebook(root, bootstyle="dark")
my_notebook.pack(pady=20)
tab1=ttk.Frame(my notebook)
tab2=ttk.Frame(my_notebook)
my label = Label(tab1, text="Awesome Label!", font=("Helvetica",14))
my label.pack(pady=20)
my_text = Text(tab1, width=70, height=10)
my label.pack(padx=10, pady=20)
my_button = ttk.Button(tab1, text="Click Me!", bootstyle="danger outline")
my_button.pack(pady=20)
my notebook.add(tab1, text="Tab One")
my notebook.add(tab2, text="Tab Two")
root.mainloop()
```



🕨 การใช้ grid เพื่อจัดองค์ประกอบ

```
root = ttk.Window(themename='superhero')
root.title("Progress Bar")
root.geometry('500x300')
def starter():
    my progress.start()
def stoper():
    my progress.stop()
def incrementer():
    my progress['value'] += 20
    my label.config(text=my progress["value"])
my_progress = ttk.Progressbar(root, bootstyle="danger", maximum=100, length=300,
                              value=0, mode="determinate") # try indeterminate
my progress.pack(pady=40)
my frame = ttk.Frame(root)
my_frame.pack(pady=20)
increment button = ttk.Button(my frame, text="Increment 20", bootstyle="info", command=incrementer)
increment button.grid(column=0,row=0,padx=10,pady=5,sticky="news")
increment_button = ttk.Button(my_frame, text="Start", bootstyle="info", command=starter)
increment button.grid(column=1,row=0,padx=10,pady=5,sticky="news")
increment button = ttk.Button(my frame, text="Stop", bootstyle="info", command=stoper)
increment_button.grid(column=0,row=1,padx=10,pady=5,sticky="news")
increment button = ttk.Button(my frame, text="Auto", bootstyle="info", command=incrementer)
increment_button.grid(column=1,row=1,padx=10,pady=5,sticky="news")
my_label = ttk.Label(root, text="", font=("Helvetica",14))
my label.pack(pady=20)
```

Progress Bar

25

60



Radio Button

```
Radio Button
root = ttk.Window(themename='superhero')
root.title("Radio Button")
root.geometry('500x200')
                                             pepperoni Cheese Veggie
                                                                          pepperoni
def clicker():
    my_label.config(text=my_topping.get())
toppings = ["pepperoni", "Cheese", "Veggie"]
my topping = StringVar()
                               ทดลองเปลี่ยนเป็น danger toolbutton
for topping in toppings:
    ttk.Radiobutton(root, bootstyle="danger", variable=my topping, text=topping,
                    value=topping).pack(side="left",padx=5,pady=5)
my button = ttk.Button(root, text="select", bootstyle="info", command=clicker)
my_button.pack(side="left",padx=10,pady=5)
my_label = ttk.Label(root, text="", font=("Helvetica",14))
my label.pack(side="left",padx=10)
root.mainloop()
```



Slider

```
from tkinter import *
import ttkbootstrap as ttk
                                                            45
root = ttk.Window(themename='superhero')
root.title("Slider")
root.geometry('500x200')
def scaler(e):
    my_label.config(text=int(my_scale.get()))
my_scale = ttk.Scale(root, bootstyle="warning", length=200,
                     orient="horizontal", from_=0, to=100,
                     command=scaler)
my scale.pack(pady=50)
my_label = ttk.Label(root, text="", font=("Helvetica",14))
my label.pack(pady=10)
root.mainloop()
```

📜 Slider



Scrollbar

```
CE
from tkinter import *
                                                    KMITL
import ttkbootstrap as ttk
                                                    OOP
root = ttk.Window(themename='superhero')
root.title("Slider")
root.geometry('500x200')
my frame = ttk.Frame(root)
my_frame.pack(pady=20)
my_scroll = ttk.Scrollbar(my_frame, orient="vertical", bootstyle="danger round")
my scroll.pack(side="right", fill="y")
my_text = Text(my_frame, width=20, height=25,
                yscrollcommand=my_scroll.set, wrap="none", font=("Helvetica",14))
my text.pack()
my scroll.config(command=my text.yview)
root.mainloop()
```

Slider



Separator คือเส้นคั่น, Sizegrip คือ ส่วนที่ไว้ขยาย window

```
Saparator and Sizegrip
                                                                            - 🗆 X
from tkinter import *
import ttkbootstrap as ttk
                                                                     label 1
root = ttk.Window(themename='superhero')
root.title("Saparator and Sizegrip")
                                                                     label 2
root.geometry('400x250')
label1 = ttk.Label(root, text="label 1", bootstyle="light", font=("Helvetica",14))
label1.pack(pady=40)
my_sep = ttk.Separator(root, bootstyle="info", orient="horizontal")
my sep.pack(fill=X, padx=20)
label2 = ttk.Label(root, text="label 2", bootstyle="light", font=("Helvetica",14))
label2.pack(pady=40)
my sizegrip = ttk.Sizegrip(root, bootstyle="info")
my sizegrip.pack(anchor="se", fill="both", expand="true")
root.mainloop()
```

The same of the sa

Spinner

```
Phuket
root = ttk.Window(themename='superhero')
root.title("Saparator and Sizegrip")
root.geometry('400x250')
                                                               Phuket
def spiny():
    my_label.config(text=my_spin.get())
stuff = ["Bangkok", "Phuket", "Chonburi", "Chiang Mai"]
my spin = ttk.Spinbox(root, bootstyle="success", font=("Helvetica",14),
                      from =0, to=20, values=stuff, state="readonly")
my spin.pack(pady=20)
my spin.set("Bangkok")
my_button = ttk.Button(root, text="Click Me!", bootstyle="success", command=spiny)
my_button.pack(pady=20)
my label = ttk.Label(root, text="", bootstyle="light", font=("Helvetica",14))
my_label.pack(pady=20)
root.mainloop()
```

Saparator and Sizegrip



email1@address.com

Treeview

```
First 2
                                                      First 4
                                                                    Last 4
root = ttk.Window(themename='superhero')
                                                      First 5
                                                                    Last 5
                                                                                  email5@address.com
                                                      First 6
root.title("Tree View")
                                                                    Last 7
                                                      First 8
                                                                    Last 8
root.geometry('400x250')
                                                      First 10
                                                                                  email10@address.com
columns = ("first name", "last name", "email")
my_tree = ttk.Treeview(root, bootstyle="success", columns=columns,
                          show="headings")
my tree.pack(pady=20)
my_tree.heading("first_name", text="First Name")
my_tree.heading("last_name", text="Last Name")
my tree.heading("email", text="Email Address")
contacts = []
for n in range(1,20):
    contacts.append((f'First {n}', f'Last {n}', f'email{n}@address.com'))
for contact in contacts:
    my tree.insert('',END, values=contact)
root.mainloop()
```

Tree View



MessageBox

```
Title
                                                  Display message
from tkinter import *
                                                                  You Clicked Yes
import ttkbootstrap as ttk
                                                           No Yes
from ttkbootstrap.dialogs import Messagebox
root = ttk.Window(themename='superhero')
root.title("Message Box")
root.geometry('500x250')
                            ทดลองเปลี่ยนเป็น ok, okcancel, show info, show error, show guestion,
def clicker():
                            show warning, yesnocancel, retrycancle
    mb = Messagebox.yesno("Display message", "Title")
    my label.config(text=f'You Clicked {mb}')
my_button = ttk.Button(root, text="Click Me!", bootstyle="danger", command=clicker)
my_button.pack(pady=20)
my_label = ttk.Label(root, text="", bootstyle="light", font=("Helvetica",14))
my label.pack(pady=20)
root.mainloop()
```

Message Box



Color picker

```
from tkinter import *
import ttkbootstrap as ttk
from ttkbootstrap.dialogs.colorchooser import ColorChooserDialog
root = ttk.Window(themename='superhero')
root.title("Color Picker Box")
root.geometry('500x250')
def color_picker():
    my_color = ColorChooserDialog()
    my color.show()
    colors = my_color.result
    my label.config(text=colors.hex) # .hsl .rgb
    root.configure(background=colors.hex)
my button = ttk.Button(root, text="Click Me!", bootstyle="danger", command=color picker)
my button.pack(pady=20)
my_label = ttk.Label(root, text="", bootstyle="light", font=("Helvetica",14))
my label.pack(pady=20)
root.mainloop()
```



• Scroll frame ใช้ประโยชน์ได้มาก กรณีข้อมูลยาวเกินหน้าจอ

```
Scroll Frame
from tkinter import *
import ttkbootstrap as ttk
from ttkbootstrap.scrolled import ScrolledFrame
root = ttk.Window(themename='superhero')
root.title("Scroll Frame")
root.geometry('400x250')
my frame = ScrolledFrame(root, autohide=False)
my frame.pack(pady=15, padx=15, fill=BOTH, expand=YES)
for x in range(21):
    ttk.Button(my_frame, text=f"Click Me! {x}", bootstyle="info").pack(pady=10)
root.mainloop()
```



แสดง Icon

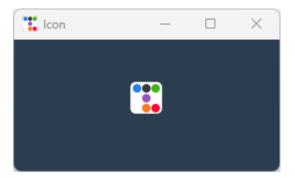
```
from tkinter import *
import ttkbootstrap as ttk
from ttkbootstrap.icons import Icon

root = ttk.Window(themename='superhero')
root.title("Icon")
root.geometry('400x250')

img = PhotoImage(data=Icon.icon)

my_label = ttk.Label(image=img)
my_label.pack(pady=40)
```

Name	Туре	Description
icon	str	The ttkbootstrap icon.
error	str	An error image.
warning	str	A warning image.
question	str	A question image.
info	str	An info image.







For your attention