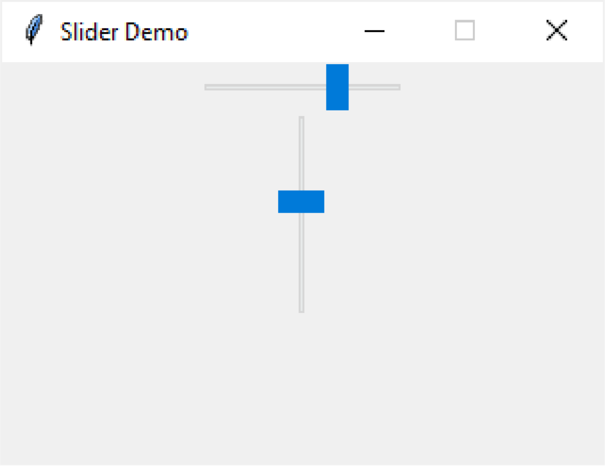
# Tkinter Slider

**Summary**: in this tutorial, you'll learn how to create a slider using the Tkinter Scale widget.

## Introduction to Tkinter slider widget

A slider allows you to enter a value by moving an indicator. A slider can be vertical or horizontal:



To create a slider, you'll use the `ttk.Scale()` constructor as follows:

```
ttk.Scale(container,from_,to)
```

In this syntax, the `container` specifies the parent component of the slider.

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 `orient` option which can be horizontal or vertical. For example:

```
slider = ttk.Scale(
    root,
    from_=0,
    to=100,
    orient='vertical',  # horizontal
)
```

## Getting current value

To get the current value of the slider, you can assign a `DoubleVar` to the `variable` of the slider like this:

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

Another way to get the current value of slider is to call the `get()` method of the slider object:

```
slider.get()
```

## Executing a callback

To run a function whenever the value of the slider changes, you can assign it to the `command` option as follows:

```
def slider_changed(event):
    print(slider.get())

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

Notice that calling a function when the value of the slider changes can cause performance problems.

## Disabling the slider

To disable the slider, you set its state to `'disabled'` . To re-enable it, you set its state to `'normal'` .

```
slider['state'] = 'disabled'
slider['state'] = 'normal'
```

By default, the slider's state is `'normal'` .

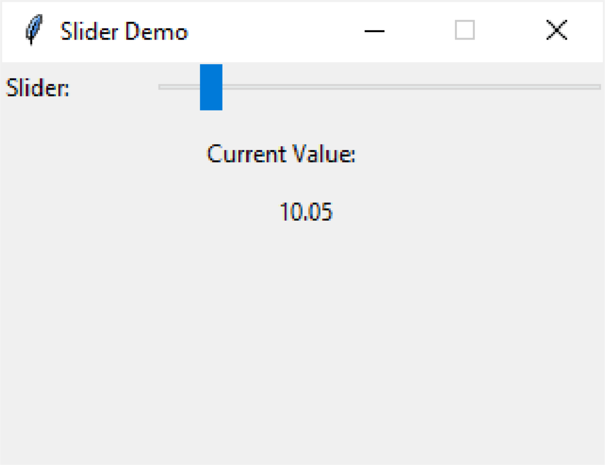
# Tkinter slider example

The following program illustrates how to use a Tkinter slider widget. The label will update the current value of the slider when you change the slider's value.

```
import tkinter as tk
from tkinter import ttk


# root window
```

```
root = tk.Tk()
root.geometry('300x200')
root.resizable(False, False)
root.title('Slider Demo')


root.columnconfigure(0, weight=1)
root.columnconfigure(1, weight=3)


# slider current value
current_value = tk.DoubleVar()


def get_current_value():
    return '{: .2f}'.format(current_value.get())


def slider_changed(event):
    value_label.configure(text=get_current_value())


# label for the slider
slider_label = ttk.Label(
    root,
    text='Slider:'
)

slider_label.grid(
    column=0,
    row=0,
    sticky='w'
)

#  slider
slider = ttk.Scale(
    root,
    from_=0,
    to=100,
    orient='horizontal',  # vertical
    command=slider_changed,
    variable=current_value
)

slider.grid(
    column=1,
    row=0,
    sticky='we'
)

# current value label
current_value_label = ttk.Label(
    root,
    text='Current Value:'
)

current_value_label.grid(
    row=1,
    columnspan=2,
    sticky='n',
    ipadx=10,
    ipady=10
)

# value label
value_label = ttk.Label(
    root,
    text=get_current_value()
)
value_label.grid(
    row=2,
    columnspan=2,
    sticky='n'
)


root.mainloop()
```

Output:



Slider:

Current Value:

10.05

## Summary

- Use the `ttk.Scale()` to create a slider widget.
- Use the `scale.get()` or the `variable` option to get the current value of the slider.
- Use the `command` option to assign a function that will execute when the slider's value changes.