ScrollBar In Tkinter GUI | Python Tkinter GUI Tutorial In Hindi #22

The Scrollbar () widget provides a slide controller used to implement vertically scrolled widgets, such as Listbox, Text, and Canvas. Horizontal scrollbars can also be used with the Entry widget.
To connect a vertical scrollbar to such a widget, you have to do two things:

- Set the widget's **yscrollcommand** callbacks to the **set** method of the Scrollbar.

```
widget(yscrollcommand = scrollbar.set)
```

- Set the Scrollbar's **command** to the **yview** method of the widget using config().

```
scrollbar.config(command=widget.yview)
```

Attributes:

- **bg:** It is used to set the color of the slider and arrowheads when the mouse is not over them.
- **bd:** The width of the 3-d borders around the trough's entire perimeter and the width of the 3-d affects the arrowheads and slider. Default is no border around the trough and a 2-pixel border around the arrowheads and slider.

- **orient:** It is used to set orient=HORIZONTAL for a horizontal scrollbar, orient=VERTICAL for a vertical one.
- **width:** It sets the width of the Scrollbar (its y dimension if horizontal, and its x dimension if vertical). Default is 16.

Code is described below:

```
from tkinter import *
root = Tk()
root.geometry("455x233")
root.title("Scrollbar tutorial")
# For connecting scrollbar to a widget
# 1. widget(yscrollcommand = scrollbar.set)
# 2 scrollbar.config(command=widget.yview)
scrollbar = Scrollbar(root)
scrollbar.pack(side=RIGHT, fill=Y)

listbox = Listbox(root, yscrollcommand = scrollbar.set)
for i in range(344):
     listbox.insert(END, f"Item {i}")

listbox.pack(fill="both",padx=22)
#text = Text(root, yscrollcommand = scrollbar.set)
#text.pack(fill=BOTH)
scrollbar.config(command=listbox.yview)
#scrollbar.config(command=text.yview)

root.mainloop()
```

- Importing *Tkinter* is the same as importing any other module in the Python code. Note that the name of the module in Python 2.x is '*Tkinter,*' and in Python 3.x, it is '*tkinter*'.

```
from tkinter import *
```

- To create the main window, Tkinter offers a method, 'Tk'. To change the name of the window, you can change the className to the desired

one.

```
root = Tk()
```

- To set the dimensions of the Tkinter window and to set the position of the main window on the user's desktop, the geometry() function is used. As in the example: the width is 455 pixels, and the height is 233 pixels, so we can write the function as *geometry(455x233).*

```
root.geometry("455x233")
```

- To set the title of the GUI window, the title() function is used. Here the title is "Scrollbar Tutorial".

```
root.title("Scrollbar tutorial")
```

- A variable of the Scrollbar () widget is taken as "scrollbar" and is packed at the right-hand side of the window using fill=Y (so that whenever the window will be expanded, the Scrollbar will also be expanded in Y direction).

```
scrollbar = Scrollbar(root)
scrollbar.pack(side=RIGHT, fill=Y)
```

- A ListBox() variable is created, and the scrollbar variable is set with the label vertically using "yscrollcommand=scrollbar.set".

```
listbox = Listbox(root, yscrollcommand = scrollbar.set)
```

- In the Listbox 0-343, list items are inserted (as the range is 344, it will take items 0 to (range-1)). END index is used to append the list.

```
for i in range(344):
     listbox.insert(END, f"Item {i}")
```

- The Listbox is packed using the pack() method along with the fill and padx attributes.

```
listbox.pack(fill="both",padx=22 )
```

- The Scrollbar's **command** is set to the **yview** method of the Listbox using config().

```
scrollbar.config(command=listbox.yview)
```

- There is a method known by the name *mainloop(),* which is used when your application is ready to run. This is an infinite loop used to run the application, wait for an event, and process the event as long as the window is not closed.

```
root.mainloop()
```

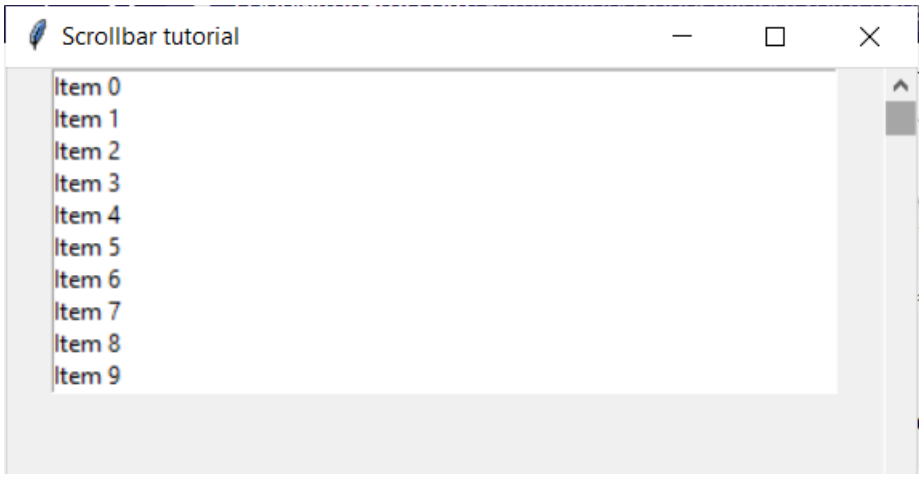
Note: We can use scrollbar with Text() and Canvas() widgets also. One example is shown below with the Text() widget.

```
scrollbar = Scrollbar(root)
scrollbar.pack(side=RIGHT, fill=Y)

text = Text(root, yscrollcommand = scrollbar.set)
text.pack(fill=BOTH)

scrollbar.config(command=text.yview)
```

Output: The output of the code (or the GUI window) is given below:



Code as described/written in the video

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from tkinter import *
root = Tk()
root.geometry("455x233")
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# For connecting scrollbar to a widget
# 1. widget(yscrollcommand = scrollbar.set)
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# listbox = Listbox(root, yscrollcommand = scrollbar.set)
# for i in range(344):
#     listbox.insert(END, f"Item {i}")

# listbox.pack(fill="both",padx=22 )
text = Text(root, yscrollcommand = scrollbar.set)
text.pack(fill=BOTH)
# scrollbar.config(command=listbox.yview)
scrollbar.config(command=text.yview)

root.mainloop()
```

Previous Next

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