Tkinter Place

Summary: in this tutorial, you'll learn about the Tkinter `place` geometry manager to precisely position widgets within its container using the (x, y) coordinate system.

Introduction to Tkinter place geometry manager

The Tkinter `place` geometry manager allows you to precisely position widgets within its container using the (x, y) coordinate system.

To access the `place` geometry manager, you use the `place()` method on all the standard widgets like this:

```
widget.place(**options)
```

Absolute and relative positions

The `place` geometry manager provides you with both absolute and relative positioning options.

- Absolute positioning is specified by the `x` and `y` options.
- Relative positions is specified by the `relx` and `rely` options.

Specifying width and height

To set the absolute width and height of the widget in pixels, you use the `width` and `height` options.

The `place` geometry manager also provides you with relative width and height using the `relwidth` and `relheight` options.

The `relwidth` and `relheight` has a value of a floating-point number between 0.0 and 1.0. This value represents a fraction of the width and height of the container.

anchor

To specify the exact position of the widget, you use the `anchor` option.

The value of `anchor` can be N, E, S, W, NW, SE,or SW.

The `anchor` defaults to `NW` which is the upper left corner of the parent container.

When to use the place geometry manager

In practice, you'll rarely use the `place` geometry manager. The reason is that if you make a minor change to the position of a widget, you need to change the position of other widgets, which is very cumbersome.

The `place` manager is only useful when you want to build applications that allow end-users to decide where to place the widgets on a container.

Tkinter place geometry manager example

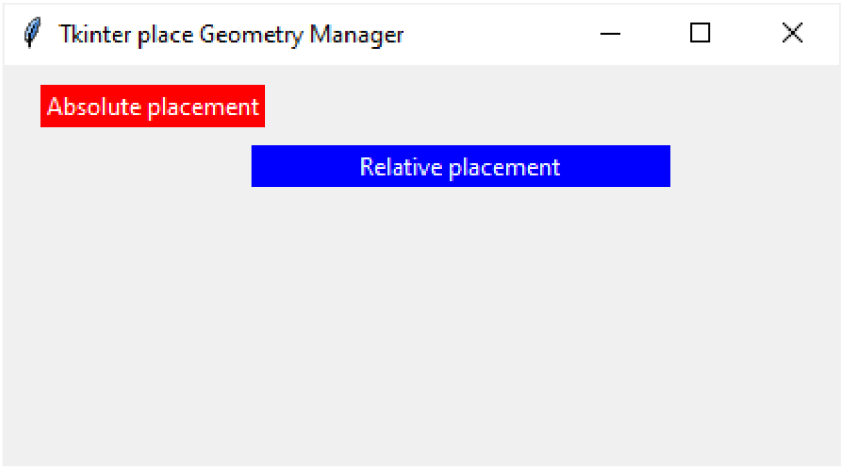
The following program illustrates how to use the `place` geometry manager:

```
import tkinter as tk

root = tk.Tk()
root.title('Tkinter place Geometry Manager')

# label 1
label1 = tk.Label(
```

```
    root,
    text="Absolute placement",
    bg='red',
    fg='white'
)

label1.place(x=20, y=10)

# label 2
label2 = tk.Label(
    root,
    text="Relative placement",
    bg='blue',
    fg='white'
)

label2.place(relx=0.8, rely=0.2, relwidth=0.5, anchor='ne')

root.mainloop()
```

Output:

Resize the window:



How it works.

First, this program places two labels on the root window using both absolute and relative positions.

Second, if you change the size of the window, you'll see that the first label with the absolute position doesn't change its coordinate. However, the second label with relative position changes its coordinate to accommodate the new size of the window.

Summary

- Use Tkinter `place` geometry manager to precisely position widgets within its container using the (x, y) coordinate system.