

Geometry Manager : pack

- They are 3 geometry manager or layout manager in tkinter they are

Pack

Grid

Place

- They help us in arranging the widgets inside the window
- Pack is used to make the widget visible on the window screen
- The options available for pack method is as follows

Option	Values
side	LEFT, TOP, RIGHT, BOTTOM
fill	X, Y, BOTH, NONE
expand	1 / 0 (or) Yes / No
anchor	NW, N, NE, E, SE, S, SW, W, CENTRE
Internal padding	ipadx, ipady, padx, pady

- By using the side options we can fix the widget to any one of the boundary I.e, L,R,B,T

```
l1 = Label(win, text='Label 1', bg='red', fg='yellow')
l1.pack(side=LEFT)

l2 = Label(win, text='Label 2', bg='red', fg='yellow')
l2.pack(side=TOP)

l3 = Label(win, text='Label 3', bg='red', fg='yellow')
l3.pack(side=RIGHT)

win.mainloop()
```

- The values which are allowed by anchor option is N,S,E,W,NW,NE,SE,SW,CENTRE

```
l1 = Label(win, text='Label 1', bg='red', fg='yellow')
l1.pack(anchor=NW)

l2 = Label(win, text='Label 2', bg='red', fg='yellow')
l2.pack(anchor=SE)

l3 = Label(win, text='Label 3', bg='red', fg='yellow')
l3.pack(anchor=S)

win.mainloop()
```

- The difference between side and anchor is side is if you want the widget to be fixed to the border then used side and if you just want to place the widget at different position the use anchor
- Internal Padding meas the gap given between the border of the widget and the text of the widget

```
l1 = Label(win, text='Label 1', bg='red', fg='yellow')
l1.pack(padx=2, pady=2, ipadx=5, ipady=5)

l2 = Label(win, text='Label 2', bg='red', fg='yellow')
l2.pack(padx=2, pady=2, ipadx=5, ipady=5)

l3 = Label(win, text='Label 3', bg='red', fg='yellow')
l3.pack(padx=2, pady=2, ipadx=5, ipady=5)
```

- The fill and expand options will go hand in hand, using this we can arrange the widget as follows

```
l1 = Label(win, text='Label 1', bg='red', fg='yellow')
l1.pack(side=LEFT, fill=Y, padx=2, pady=2, ipadx=15, ipady=15)

l2 = Label(win, text='Label 2', bg='red', fg='yellow')
l2.pack(side=TOP, fill=X, padx=2, pady=2, ipadx=5, ipady=5)

l3 = Label(win, text='Label 3', bg='red', fg='yellow')
l3.pack(side=LEFT, padx=2, pady=2, ipadx=5, ipady=5)

l4 = Label(win, text='Label 4', bg='red', fg='yellow')
l4.pack(side=LEFT, padx=2, pady=2, ipadx=5, ipady=5)
```