

# CS150 - More Tinker

Note Title

4/20/2012

## Announcements

- HW is due tomorrow

- New HW up today  
(take a look at it / over the weekend -  
no extensions on this one!)

May work with new partner  
(which I recommend)

- Office hours today 10-11

# Tkinter

Making GUI's.

We've seen several examples:

- Buttons
- Scrolled Listbars
- Events

Steps: `root = Tk()`

`root.mainloop()`

↙ main window

## Pack

Adds the widget to the window.

(See example TkEdit.py)

Always packs it in the indicated fashion.

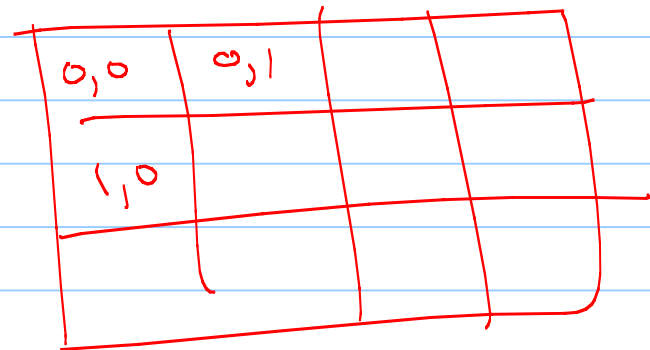
Somewhat limited in terms of layout capabilities.

## Grid layout

Lets you specify where it will go in row/column layout.

Also is easy to specify non-square buttons -  
use `columnspan` or `rowspan`

See `TkButtons.py`



## Geometry layout

Lets you specify exact positions  
(more like `cs|graphics`)

See TkPlace.py

## Having more windows

Can have actions create + destroy extra windows.

Our example: (tk2win.py)

- Creates a window in the main script. A button in that window calls a function.

- That function creates an instance of a class which makes a second window (using Toplevel)

Toplevel - like frame, but new window.

## Text Widget

This is an internal text editor.

Lets the user enter text, which you can then "grab".

Ex: TkText.py

## Final Example: Stopwatch

Two classes:

- First tracks data
- Second makes the window



Quiz : email to me by end of class!

Make a GUI.

Requirements :

- At least 2 different widgets.

- Some action to happen.

(so each widget has a command,  
& command calls a function).