



Intro to Computer Science

Summer 2020

August 4th to August 20th, online

GUI - Interactors

Adopted from Stanford Uni's [CS108](#) course slides by Kate Lee and Sarah Johnson, by and [Code as Poetry](#) by Frank and Sabari; Koc Uni's [Comp102](#) course by Ayca Tuzmen

Interactors

- **Interactors: graphical element that the user can interact with or view**
 - Presented by a GUI program
 - Also called widget

Table 13-1 `tkinter` Widgets

Widget	Description
Button	A button that can cause an action to occur when it is clicked.
Canvas	A rectangular area that can be used to display graphics.
Checkbutton	A button that may be in either the “on” or “off” position.
Entry	An area in which the user may type a single line of input from the keyboard.
Frame	A container that can hold other widgets.
Label	An area that displays one line of text or an image.
Listbox	A list from which the user may select an item
Menu	A list of menu choices that are displayed when the user clicks a <code>Menubutton</code> widget.
Menubutton	A menu that is displayed on the screen and may be clicked by the user
Message	Displays multiple lines of text.
Radiobutton	A widget that can be either selected or deselected. <code>Radiobutton</code> widgets usually appear in groups and allow the user to select one of several options.
Scale	A widget that allows the user to select a value by moving a slider along a track.
Scrollbar	Can be used with some other types of widgets to provide scrolling ability.
Text	A widget that allows the user to enter multiple lines of text input.
Toplevel	A container, like a <code>Frame</code> , but displayed in its own window.

Interactors in graphics.py

- **Button** - widget that the user can click to cause an action to take place
 - When creating a button can specify:
 - Text to appear on the face of the button
 - Location of the button
- **Text Field** - widget that the user can type in
 - When creating a text field can specify:
 - Name of the text field
 - Text appear before the text field
 - Location of the text field

Interactors in graphics.py

- **Button**

```
canvas.create_button("Text and name of the button",  
location of the button)
```

```
e.g canvas.create_button("Create Rectangle",  
Canvas.TOP)
```

Interactors in graphics.py

- **Text Field**

```
canvas.create_text_field("name and text of the  
textfield", location of the textfield)
```

e.g

```
canvas.create_text_field("Color", Canvas.TOP)
```